The devaluation of the means of payment (in the form of a general rise in prices and a premium of up to 30 percent) forced the government to increase taxes in order to ensure that the funds flowed in as much as was necessary to cover public needs. On 4 and 5 May 1859, the Finance Minister *Baron Bruck* submitted two proposals to the Emperor for the introduction of a surcharge on certain taxes. These proposals were approved on 16 May and the Imperial Decree of 17 May 1859, Z.2941 FM, RGBl. No.89, V.Bl. No.26, was issued, which introduced an "extraordinary" surcharge on several taxes, including fees, "for the duration of the extraordinary circumstances brought about by the war events". This surcharge, which was introduced on June 1, 1859 (initially called the “war surcharge”), has been retained for some of the fees up to the present day. It amounted to 25 percent for some fees and 15 percent for others.

When applying it to stamp duties, it became necessary to carry out a normative implementation of the existing stamp classes.
It was not possible to leave the determination and allocation of the surcharge in the specific cases to the parties themselves. It was also possible that the addition of 25 percent to some stamp amounts in the Kreuzer category would have resulted in rates with various types of Kreuzer fractions.
Therefore, for the convenience of the contributors and for greater security of the state treasury, it seemed advisable to round the new tax rates down to manageable amounts, to quantify them directly and then to announce them. The ordinance of May 17, 1859 was therefore accompanied by an overview which placed the previous stamp classes and the new tax rates side by side.

The increase resulting from the surcharge was exactly 25 percent for four sets in the Kreuzer category and for all guilder amounts; for three sets, less was added, but for five sets, more than 25 percent was added. The stamp classes of 2, 4, 5, 6, 10, 12, 15, 25, 30, 50, 60 and 75 kr thus became the new sets of 2½, 5, 7, 7½, 13, 15, 19, 32, 36, 63, 72 and 94 kr. In order to incur as little cost as possible, a step was taken at the same time that was a novelty in the field of Austrian stamp law. By refraining from changing the value of the stamps in terms of their appoints (“denominations” in this sense), the previous traditional identity of the tax rates and the value levels of the stamp marks was dropped. The term “stamp class” was formerly used for both. Since all cases requiring a fee were distributed across the existing stamp classes, the subsuming of individual cases under a stamp class was called “classification” and referred to as a “class system”. This was a natural consequence of the type of stamp stamps used at the time, namely the stamp paper, which - at least as far as the stock stamp paper was concerned - was always only printed with

a single stamp on each sheet. The coincidence of the tax rate and the value of the stamp was also retained when the stamps were created, so that every tax that occurred could be paid using a single stamp. From the point of view of the stamp administration, it was desirable that the parties always use only one corresponding stamp, because in this way only the production costs for *one* stamp were lost with each taxation act. It could not, however, be prevented that in individual cases several stamps with the required total value were used by the parties. But the loss of state revenue as a result of the production costs involved in each stamp was of course multiplied in such a case to the detriment of the state treasury. This actual possibility of applying several stamps simultaneously to the same sheet and thus combining all conceivable fee rates was now officially adopted, i.e. made a legal possibility in order to avoid the costly restructuring of the stamps that had only recently been introduced for the Austrian currency. An official list of the stamps that could be combined to form each fee rate was even published in the Finance Ministerial Decree of May 26, 1859, Z.26161-1569, RGBl. No.98, V.Bl. No.28, according to which list *three* stamps were required for six sets, while all others could be corrected with one or two stamps. In this list, the stamp values of 10 kr, 4 fl, 8 fl, 14 fl, 16 fl and 18 fl are not mentioned at all. Since it was also decreed that a deviation from this list could not constitute a disadvantage and that not only other combinations of the stamps mentioned therein could be used, but also the five types of stamps not mentioned could be included in them, the publication of this list was probably quite pointless. Its compilation only had a *pro foro interno* purpose, in that it gave an overview of the stockpiling requirements and the necessary additions to the inventory.

From now on, it is no longer possible to speak of stamp classes, and the rates and appointments of the stamps follow their own path. In fact, the term “stamp classes” disappears and the term “category” becomes common. Stamp category usually means the individual value category; but sometimes this term also refers to the currency levels (kreuzer, guilder). In this less common sense, there were only *two* stamp categories: the kreuzer stamp category and the guilder stamp category. In the usual sense, however, people spoke of kreuzer categories and guilder categories (in the plural). Because of this ambiguity, it is advisable to use the term “value” in the latter sense, i.e. equivalent to “class” (for example: the 7 kr value). The terms type or genus refer to the contrast between general and special stamps in both stamps. The term “category”

was later also applied to the gradations of the size of the stamps (“size categories”) - i.e. in geometrical sense.

Even before the Imperial resolution was passed on May 16, 1859, the Ministry of Finance had ensured that all the necessary preparations for its implementation were made in good time. The Court and State Printing Office was instructed on May 10, 1859, to take the necessary steps so that a new stamp of ½ Nkr could be put into use on June 1, 1859.
This stamp had become necessary due to the proposed postage rates of 2½ and 7½ kr. Also before the Supreme Resolution was issued, the State Printing Office was informed on 13 May of the future approximate annual requirement for the individual stamp categories and mentioned that a new stamp of 7 kr had to be introduced in order to avoid having to use *four* stamps to combine individual stamp sets.

At the same time it was noted that the 10 kr, then 4, 8, 16 and 18 fl (the 14 fl was overlooked here) denominations would no longer be needed in the future. This second communication (dated 13 May) to the State Printing Office appears to have arisen from considerations that only emerged after the most humble submission had been made. The proposal to the Emperor therefore only mentioned the new ½ kr stamp, but not the introduction of a new 7 kr stamp. This is why the Imperial Decree of 17 May 1859, when ordering that the existing stamps were to remain unchanged, only added that new ½ kr stamps would be issued. In the implementing regulation for this Imperial Decree on 26 May 1859, Z.26161- 1569, RGBl. No. 98 (which contained the aforementioned list of officially desired stamp combinations) then announced the new issue of the 7 kr stamp from June 1, 1859. These two additions to the inventory thus came into effect on the same day, although based on different standards. In a decree issued to all state finance authorities on May 20, 1859, it was ordered that the 10 kr, 4 fl, 8 fl, 16 fl and 18 fl stamps were no longer to be ordered. They were to remain in use, but if a wear-out stamp wanted to return it because of the rare sales, it was to be exchanged for other stamp material without further ado. Since only a very short time was available for the production of the ½ and 7 kr stamps, and the annual requirement of the ½ kr stamp was estimated at 2,369,000 pieces, and that of the 7 kr stamp at 17,000,000 pieces, of which a considerable part had to be distributed to the wear and tear by June 1, 1859, there was naturally no question of introducing a new design for these stamps. In fact, the entire technical side of the matter was not touched upon at all, and it was left to the Court and State Printing Office to help itself in this urgent situation as best it could. The stamps of these two values available in the stamp collections show that the

resorted to the tried and tested method of using complete finished plates and adding the new legends by means of letterpress printing.

For the ½ kr stamp, the old 6 kr CM design was chosen and for the 7 kr stamp, the old 3 kr CM design, or more precisely: to produce the former stamp, ready-made “blanket” plates were used, which had been used for the first printing of the 5Nkr and 12Nkr stamps and which perhaps became superfluous at that time because the adaptation of the old 6 kr CM plates was completed by grinding out the old legend one plate at a time and engraving the new one; to produce the 7 kr stamp, however, the blank plates were used analogously, which had been used for the first printing of the 2 and 4Nkr stamps with auxiliary letterpress. This genesis of the ½ and 7 kr stamps with the legend printed in letterpress makes it possible to understand a fact that is striking when looking at these stamps: namely, that the stamp plates (especially on the 7 kr stamp) are quite unclear, which is due to the fact that the plates used were already quite worn out and therefore almost ready for destruction.

The choice of designs for these two new stamp categories appears to be inappropriate, because the smaller design was used for the higher value and vice versa. This was probably because for the ½ kr stamp, which was discussed and tackled first, only plates with the 6 kr CM design (with empty stamp plates) were available. When the new 7 kr stamp was ordered to be printed, only plates with the smaller design were available.

These two stamps once again disrupted the increasing size system of the stamp series, as the ½ kr stamp was larger than the 2 and 4 kr stamps and the 7 kr stamp was smaller than the 5 and 6 kr stamps. Both stamps were produced with vandyk brown natural self-printing for the old Austrian provinces and with madder lake red natural self-printing for Veneto. They are unlikely to have been used in Lombardy.

The typographical overprint on both values shows the irregularities and small deviations that are inevitable when the same legend is repeated 90 or 120 times in one printing form and is composed of letters that may have been cast in the same way but certainly show a different degree of wear. On the ½ kr stamp, several deviations in the position and shape of the fraction line can be seen, which have attracted the attention of collectors.

The auxiliary printing of these two values was subsequently, as still
will be explained in more detail, replaced by full copper printing.

B. HAUSNER'S PREPARED PAPER

1. THE INTRODUCTORY NEGOTIATION

In November 1856, the Zagreb Finance Directorate reported to the Finance Ministry that the pharmacist *Anton Hausner* from Krapina in Croatia had invented a mordant with which he could prepare writing paper in such a way that it was impossible to remove ink writing on it using acids or clover salt solution. *Hausner* had demonstrated his invention in advance; it seemed to be practical for stamp stamps. *Hausner* would come to Vienna himself for the commission's examination and would only specify his conditions if it was successful. This report, together with samples of prepared paper, was sent to the Vienna Polytechnic Institute for assessment. The same happened with another application *by Hausner* in April 1857. The report submitted by the chemistry professor Dr. *H. Schrötter* in July 1857 shows that

Hausner had presented yellow and apple green sheets of paper. *Schrötter* claims to have removed the colouring mordant using alcohol and water, then written on the sheets, removed the writing using the usual method with chlorine water and finally coloured the paper back to its original colour. He seems to believe that the *colour* of the paper is the most important thing in *Hausner's* proposal and points out that such a protective agent would be unlikely to work, as it would be difficult to achieve the same colour every time during paper manufacture. *Schrötter* also notes that the idea of "putting a reagent in the paper for the ink and the reagents used to apply the writing" is not new, but that sufficiently reliable results have not yet been achieved. *Hausner's* reagents are too sensitive, so that a change in the appearance of the paper, even through innocent accidents (for example contact with vinegar or soap), could raise suspicions of malpractice. Finally , *Schrötter* pointed out that *Hausner's* preparation did not offer any protection against the detached stamps being transferred to another paper while preserving the overwriting and the writing being added to. To expect such an effect from a mordant invented to protect *against ink spillage* was, however, somewhat exaggerated! It also seems that *Schrötter* had not even considered the chemical composition *of Hausner's* preparation.

Finally, his re-dyeing of the discolored papers was probably not a valid argument, because it would not have been difficult to prove this re-dyeing as such, since it in no way led back to the original constitution of the prepared paper.

On *Schrötter's* authority, *Hausner's* proposal was rejected. The latter, however, did not calm down. He came to Vienna and presented the Finance Minister *Bruck* with a new petition on 19 October 1858, in which

he specified his rejected project by saying that the paper he had prepared made it impossible for writing made with gall ink to be taken away without leaving clear traces. He also announced that he had meanwhile obtained a privilege for his invention and that he had drawn the public's attention to the fact that ink writing could be destroyed by etching with acids. So that this would not have any negative consequences for the state treasury, he was offering his improved paper for testing. It is remarkable how naively open *Hausner* is when he describes how he himself tried to make his offer more desirable for the financial administration.

This time the matter was taken up in serious negotiations. *Hausner* came to the right place with Baron *Bruck .* Given his disposition and past, he was inclined to make progress and was also an independent and determined person. *Bruck* had also remembered from the negotiations about the *Black Forest's* move against the revenue stamp system, which were cut short by his decisive statement in July of the same year, that everything had come down to the question of whether it was possible to prevent the stamps from being used again. The discovery of an effective means of achieving this would have removed all grounds for objections to the revenue stamps.

On 21 October 1858, on the instructions of the Minister, a commission met in the chemical laboratory of the Vienna Main Mint under the leadership of the head of section Dr. *Karl Ritter von Hock ,* which, in addition to *the Black Forest ,* also included the Chief Mint Master *Johann Ritter von Hassenbauer,* the head of the Imperial and Royal
General Land and Main Coin Assay Office *Max Lill von Lilienbach,* and finally *Auer* and *Worring* from the State Printing Office participated. *Hausner* was also called in.
Lill took the samples as an expert. Several sheets of *Hausner's* paper were written on with gall apple ink and alizarin ink. Chlorine water and hydrochloric acid turned the writing blue without making it disappear, and also left blue or blue-edged spots on the paper. Caustic potash destroyed the writing, but left orange-brown spots. Finally, tin chloride had a less intense effect on gall apple ink. Red spots appeared; the writing turned red, but remained visible. Alizarin ink, on the other hand, could be destroyed almost without a trace. In view of this observation, *Hausner* declared that now that he had learned about the effect of tin chloride, he wanted to change his preparation accordingly. *Hock* then ordered that the state printing office should send the proponent two sheets of the paper used to produce the stamps, with the appropriate label and a (dry) seal, for preparation, after which a new test would be carried out.

Hausner received this paper at the end of October and handed it over to the Ministry of Finance after it had been prepared on 29 December 1858. He also enclosed half a pound of a printing ink prepared by him with

and requested that stamps be produced for the tests to be carried out, for which the blue ink submitted should be used for natural printing instead of the usual brown ink.

Auer had twelve half sheets of the prepared paper printed with 90 5 kr stamps each and enclosed them with the rest of the paper and the remaining bottle of blue dye. All of this was handed over to the Director of the Testing Office, Lill, to carry out further tests, after which the commission met again on January 8, 1859. Instead of *Schwarzwald,* the ministerial draftsman *Franz Freiherr von Riefel* took part.

Lill reported to the commission that his experiments had shown that the writing on the blue stamps could not be removed without leaving a white spot and destroying the natural print, but that with care the blue tone could be approximately restored, so that if the stamp was then written over again, an untrained eye would not easily recognize the manipulation. The commission objected that the blue natural print on the test stamps appeared very poor, whereupon *Auer* remarked that he should have used the ink provided by *Hausner* for the experiments , even though it did not have the necessary preparation for a printing ink. *Hausner* explained that the ink was nothing but Prussian blue, which could easily be made suitable for letterpress printing by appropriate preparation. He made it clear that his intention was not so much to produce a suitable printing ink as to produce a paper on which traces would remain when writing was erased using acids, but on which the natural print would disappear along with the writing when caustic potash was used. Despite this reference to the actual subject of the negotiations, which seemed to have been pushed aside by the newly added question of an ink for natural printing, the commission continued to deal with natural printing. In the presence of the commission, *Lill* carried out an experiment by watering an overwritten blue stamp, drying it and running it over with a diluted caustic potash solution, which decomposed the underprint but gave the ink writing a brownish-red color (iron oxide). The newly washed stamp was soaked in chlorinated water until the writing and the underprint disappeared completely. *Lill* then dried the stamp and, using soluble Prussian blue, roughly recreated the lines of the natural print. *Hock* emphasized that the retouching of the leaf veins was made easier by the fact that the sharp pressing during printing creates deep grooves in the paper, which remain visible after decolorization and enable the vein network to be tinted. *Worring,* whose acumen was also evident at many other turning points in the field of branding and from whom the most important proposals in this field date up to the 1960s, was the first to suggest, initially very cautiously and generally, that the invention

Hausner's paper, a certain value cannot be denied. *Auer* agreed with this opinion and said that stamps on *Hausner's* paper, if its production were successful and inexpensive on a large scale, and if both the paper and the blue ink produced good graphic printing results, and finally if the prepared paper did not damage the copper plates, would in some cases offer greater guarantees than the stamps produced to date.

In response to *Lill's* claim that a stamp retouched by hand in his manner would be capable of deception after being rewritten, both printing experts emphasized that they would immediately recognize such a forgery. *Hock* concluded the hearing with the order that the State Printing Office should produce new stamps on the prepared paper with the well-prepared Berlin blue printing ink that it uses and report on the results of the tests carried out with them in consultation with *Hausner .* Only when these tests had been successful would an investigation be carried out into the question of whether the preparation of the stamp paper could be carried out easily and cheaply on a large scale.

Auer immediately had new stamps made and reported on January 11, 1859 that the natural print had been produced using the dye “Berlin blue” specified by *Hausner* after the printing ink had been prepared correctly, and that a clear and pure image of the leaf network had been achieved. In the state printing office, Paris blue was usually used for blue-colored printing, which produced a strong and fiery tone. However, this had now been abandoned, as *Hausner* had made Berlin blue a condition because of the effect of the caustic potash solution. The director of the testing office, *Lill,* had repeated his experiment of erasing the writing and natural print, retouching the latter and rewriting it with three of the new stamps. *Auer* was somewhat evasive about this, saying that it had been shown that it was not absolutely impossible for a layman to be deceived. He expressed his own opinion that the application of *Hausner's* invention would "make the forgery of stamps *a* degree more difficult", whereby by forgery he evidently meant fraudulent manipulation. He therefore advised the acquisition of *Hausner's* privilege in the event that no technical obstacles should arise in the mass production of paper and stamps, but at the same time pointed out that only a very modest price would be appropriate, because the transfer of stamps with the obliteration of the writing is rarer than that *without* such obliteration, and in the latter cases nothing would be gained by *Hausner's* means.

Hausner was then questioned in the Finance Ministry on 14 January 1859. It turned out that he first intended to have his invention privileged. For the release of the invention for use by the state administration in such a way that his future exclusive privilege would not be effective against them, but would be granted to him.

the right to pass on his invention to other persons, they agreed on a price of 1000 fl on the condition that the paper production and printing would proceed without any problems on a large scale. In this respect, the statement *of Auer,* to whom *Hausner* had already disclosed the secret and who would have to carry out the necessary tests, should be decisive.

This turn of events, which evidently stems from a decision *by Bruck ,* is almost an isolated occurrence in the history of the Austrian stamp system. The method of commission examinations, which regularly reach unfavourable conclusions because the question is usually not whether the project represents progress compared to the previous state of affairs, but whether it meets *all* the ideal requirements of the stamp system, is still used more frequently and sometimes even resulted in months of trial work by the inventors. In the end, however, the purchase for payment never materialised. When the individual cases are objectively assessed, however, it cannot be dismissed that this traditional method developed of its own accord as a protective measure against the inventors' claims, which tended to grow excessively if some concessions were made. This was also a precautionary measure to ensure that the further improvement of the trademark system by the state institution responsible for maintaining and developing improved methods was not neglected, especially since there had been no lack of attempts to prevent this activity of the State Printing Office by asserting alleged priority rights.

On 15 January 1859 , on *Bruck's* instructions, a decree was sent to *Auer ,* informing him that, in view of his positive comments on *Hausner's* invention , the intention was to acquire it for the state, as it would undoubtedly contribute to the easier detection of the misuse of stamps and, with the expert implementation and perfection by the Schlöglmühle paper factory and the state printing works, might also be of importance for the production of state debt certificates and some official forms. *Auer* was therefore commissioned to try to produce the prepared paper on a large scale in the manner that *Hausner* had verbally communicated to him.

Auer, who was unable to attend due to official commitments, sent the senior factor *Andreas Worring* to the Schlöglmühle paper factory for this experiment . *Worring's* report of January 26, 1859 is of great importance, as it provides clear and authentic information about the nature of *Hausner's preparation .*

On January 24, 1859, *Worring* and *Hausner* arrived at the Schlöglmühle, where the factory management had already prepared the required paper pulp and materials. It was now no longer a secret that *Hausner's* method essentially consisted of impregnating the paper with *yellow prussiate* (potassium ferrocyanide). *Hausner* first made a

Experiment with a small quantity of paper pulp in a glass to see whether the color would change when it was mixed with prussiate of blood. With the help of the factory foreman *Pleniger* (often written *“Pleninger”),* a small piece of prussiate of blood was dissolved in the paper pulp diluted with water. It turned out that the paper pulp took on a *greenish* color.
In order to neutralize this greenish color, it was decided to mix "a little more" dissolved Prussian blue into the paper mass (which suggests that a small amount of this dye was already added to the Schlögl mill for the purpose of the "blueing" of the paper stock, which is common in paper manufacturing). It is obvious that *Hausner's* experiments up to that point had only ever been carried out with ready-made paper and had never had the opportunity to impregnate it during production. Hence his tentative approach. The next day, the required whole stock mass was poured into three Dutch mashers. When the paper mass was ready for further processing, a side of dissolved Prussian blue was poured into one of the Dutch mashers using *Hausner's* instructions and the mass was processed for another hour. In the meantime, 20 pounds of prussiate of potassium hydroxide were dissolved in a bucket of warm water in a tub. In order to save as much as possible with this solution, which caused higher costs, *Pleniger* suggested not mixing it with the paper pulp in the Dutchman, but allowing it to flow into the pulp immediately at the scooping device attached to the paper machine. A vessel with a fine outlet opening was attached above the inlet tube of the scooping device, from which the blood-lye salt solution slowly flowed into the moving paper pulp.

First, thinner paper was produced; then the paper machine was regulated so that the paper was exactly the same in quality and weight as ordinary stamp paper. The Dutchman produced about five reams of paper. *Hausner* took test pieces from the first and last batch of paper, which, when trying to etch out ink writing on them, showed that the impregnation of the paper pulp had been achieved completely. *Pleniger* explained that this production presented no difficulties and did not damage the paper machines. He believed that he could save even more on large-scale production by collecting the impregnation liquid dripping from the paper web in a wooden box placed under the machine and then using it again for impregnation. Half a pound of prussiate of potassium hydroxide would thus be sufficient for one ream of paper. *Worring* then stopped the test production. *Pleniger* himself repeated the experiment on a larger scale the following day in order to gain an indication of the delivery price to be charged to the stamp gradient. The test production in *Hausner's* presence resulted in a price of 9 fl 24 kr ö. W. for the ream. *Pleniger* produced 25 reams and calculated the price at 5 fl 50 kr ö. W. Since the price of stamp paper at that time was 4 fl 15 kr CM = 4 fl 46 kr ö. W.

The additional cost for the impregnation was approximately 1 fl ö. W. per ream.

Auer then reported to the minister on January 28, 1859, that the trial production had been successful and had shown that large-scale production would be possible without any problems and would neither endanger the health of the workers nor be detrimental to the machine components. The additional costs would be reduced to a minimum when producing larger quantities and would in any case correspond to the expected benefits. He therefore requested that this paper be chosen for the stamps and asked for instructions as to when production of the paper and printing should begin.

With regard to this request, it must be noted that *Auer* had already been entrusted with the supervision of the Schlöglmühle paper factory in 1857 and had been given the task of reorganizing its administration. Immediately after the negotiations described here, he was given the final management of the factory.

The Ministry of Finance approved the agreement with *Hausner* and paid him the agreed sum of 1,000 fl. *Auer* was informed of this on January 29th and instructed to use this invention from now on in the ongoing production of the paper required for the stamps and to use only this paper for printing the stamps from now on. This introduction was therefore seen as an insignificant modification of the existing stamps, which could be implemented at any time without further ado, in particular without an announcement, just as was the case with the transition from auxiliary book printing to full copperplate printing or when changing papers of different provenance or production methods *(Reichlesches* and Schlöglmühler hand paper, Schlöglmühler machine paper).

In view of the direction that the commission negotiations had taken, *Auer* considered it necessary to draw the attention of the Finance Ministry to the change in the color of the natural print that had been discussed, using the not entirely correct phrase that "the effective use of the preparation requires the blue color". Such a change in the appearance of the stamps would require the withdrawal of the stamps with brown underprints and the beginning of the military or solar year 1860 should therefore be considered for this. The Ministry then pointed out the inconvenience of recalling the brown stamps, which had only been in use since November 1, 1858, so soon and instructed *Auer* to give special consideration to whether the use of *Hausner's* preparation was absolutely tied to the blue color of the underprint. This would have caused difficulties because two other different natural printing colors were required for Lombardy-Venetia and for the consumption stamps. The question therefore arose whether there were such colours that, like blue, had the required sensitivity

against application experiments. *Auer* had 5 kr stamps printed on *Hausner* paper again for this order and then carried out further experiments, which could now be carried out more appropriately now that the chemical nature of the impregnating agent was known. According to the report submitted by *Auer* on March 6, 1859, impregnated paper of two different colors was used, namely a lighter one, "which was only slightly colored with Prussian blue in the paper mass, so it still appeared white," and a second one, which "as the bluish color showed, contained a larger addition of the aforementioned dye."

It is possible and even probable, but not certain, that the two types mentioned above belonged to the test productions carried out on January 25 and 26, 1859. In any case, it can be seen from this that the peculiarity which the stamping industry continued to exhibit throughout the entire period during which *Hausner's* preparation was used, namely the variety of shades of the blue paper tone from light white to strong blue, was based on the manufacturing method and to a certain extent existed from the very beginning, and indeed, as cannot be overlooked, as a result of a misunderstanding on the part of the official bodies involved. *Hausner* had only used the impregnation of the paper pulp with Prussian blue as a fining agent and (from the point of view of the stamp gradient) unnecessarily in order to "neutralize" the green coloring of the paper caused by the prussian salt. Since the arrangement for the large-scale production was such that the paper pulp was *first* soaked in Prussian blue and only much later impregnated with prussiate, there was no way of knowing how much of the blue color was needed to obtain the whitish tone. As a result, it was easy to go too far, resulting in a more or less intense blue coloring of the paper. The "blueing" of the paper stock to conceal the otherwise noticeable yellowish tint is a common feature of paper manufacturing. Even though this bluing had to be intensified here because the prussiate supposedly caused a greenish tint, it should not have been taken too far. The green tint - if it occurred at all - would not have done any harm; but the excessive bluing was downright ineffective. During the new experiments, it was already clear to the State Printing Office that the principle of *Hausner's* impregnation was that when acids were used as etching agents, the iron that was always present in the ink of the time was dissolved, formed Prussian blue with the prussiate of blood and thus colored the stamp an intense blue. This coloring was intended to reveal that the etching had taken place. However, if the stamp had already been colored blue from the start, this would thwart the very intention: the blue coloring as a result of the etching was no longer clearly visible because the stamp paper was blue anyway and its coloring therefore concealed the reaction act. Thus, by a certain slavish adherence to *Hausner's procedures,* without taking them into account in the

The excessive blue colouring of the stamp paper may also have something to do with the fact that at that time, heavily blued paper was generally popular, as the older generation will remember and is also easy to see from the records of that time. Under the influence of this practice, the blue colouring of the paper was accepted as something normal, as an unimportant side effect, which was not consciously used - at least not at first - but which was not avoided either, because no one gave it any thought.

It is understandable that *Hausner* allowed this turn of events to happen without intervening to clarify the situation. For him, the matter was settled with the receipt of the 1000 fl.; he was indifferent to *how* his invention was used.

From a later period (1866) detailed information has been obtained about the procedure observed in the Schlöglmühle during the ongoing production of this prepared paper, from which it can be seen that some modifications had been made over time. Afterwards, in a bucket (= 100 pounds)
6 pounds of yellow prussiate (potassium ferrocyanide), 5 pounds of animal glue and ¼ pound of Prussian blue were dissolved in water and mixed proportionally into the paper pulp during paper production. The word “proportional” probably means that this solution was not poured all at once (into the pulper), but was gradually added to the pulp as it entered the paper machine in an amount sufficient to saturate it. The difference from the first procedure according to *Pleniger's* instructions lies in the transfer of the blue dye from the pulper into the running paper pulp.

Hausner's suggestion to use Prussian blue for the overprint was based on a series of ideas that he did not clearly indicate, but which were probably as follows. *Schrötter's* unfavourable report was based on the idea that the yellow colour of the paper could be removed and restored after the writing had been etched out. This could not be prevented because the malversant could easily (decolour) the whole paper just as easily as before when the manufacturer produced this paper.
A piece of paper could be dipped into a coloring liquid. *Hausner* then came up with the idea of using the sensitive dye to color something that could not be easily restored after the dye had disappeared when the writing was etched away, namely part of the printed image. For this reason, he expanded his project by suggesting that the natural print be made using Prussian blue. However, when *Lill,* on the other hand, produced the manual tracing of the leaf network and the commission became obsessed with this minor matter and in particular with the quite secondary point that *Hausner's* Prussian blue did not have the right consistency for letterpress printing, *Hausner* let this

part of his project. However, the matter had come up during the negotiations and was viewed by Auer as an integral part of the proposal.

In order to carry out the testing of dyes other than Berlin blue required as described above, *Auer* had 5 kr stamps printed (in addition to the Berlin blue stamps, there were also others) and used ten different colors used in the state printing office for the natural printing. From the report he submitted on March 6, 1859, two important facts emerge, as should be mentioned here in passing: namely, that, as was already concluded above from the different degrees of moistening required for copperplate and letterpress printing, when producing stamps, the stamp plates were printed first with letterpress ink and only then the leaf veins with the colored color, and furthermore, that the natural printing of the consumption stamps was produced with Paris blue because this was the only blue dye that was mentioned here as being common in the state printing office. *Auer* also specifically noted with the colors Van Dyk brown, red lacquer and Paris blue that these three colors were used for the stamps in circulation. The other seven colours listed here were: dark and light Prussian brown, iron brown, minium, red vermilion, Caesar's varnish and unfired *Terra de (!) Siena.*

The State Printing Office's experiments were arranged in such a way that overwritten stamps were treated with diluted sulphuric acid or tin chloride, which made the lettering appear reddish and caused intense blue spots to appear on the stamp. This Prussian blue was removed using caustic potash, as all alkalis have a vigorous destructive effect on Prussian blue. The remaining traces of writing were then removed from the whitened stamps by further treatment with sulphuric acid or tin chloride, which, as it turned out, also destroyed the natural print, regardless of which of the ten colours mentioned had been used. It was therefore concluded that the production of the natural print in Prussian blue was not absolutely necessary, as the three colours already used had shown sufficient sensitivity to caustic agents.

Auer now clearly emphasized for the first time what the protection provided by *Hausner's* paper preparation was based on: the etching of the ink writing produced Prussian blue stains; if the malversant were to remove these stains with caustic potash solution, he would destroy the natural print, which he could no longer restore.

Auer did not mention the blue colouring of the paper caused by the Prussian blue added to the paper pulp as a fining agent , presumably because even the darker type of paper used at the time was not noticeably blue. Since the blue colouring had to play the most important role as an indicator of etching, he would have ignored this indicator.

This circumstance would certainly not have been ignored if the blue colour had been so intense that the Prussian blue newly formed during the etching had been lost in it. would have.

The result that *Auer* had reached in his report of March 6, 1859 (namely that the three colors previously used for natural printing were also destroyed when the writing was etched out and the blue spots created were removed and could therefore be retained without affecting the purpose intended by the impregnation of the stamp paper, which then made the situation much easier in a further way, since it was now possible to refrain from making a change of issue) led the Ministry of Finance to simply instruct the State Printing Office on April 9, 1859, Z. 1380 FM, to use exclusively *Hausner* paper for stamp printing from now on and to announce the start of this use.

In the relevant file of the Court and State Printing Office there is a note written by *Prey,* the factor in charge of stamp printing , which explains the reason why the actual use of the prepared paper was delayed for some time despite the peremptory order received. In this note, dated August 3, 1859, it is stated that the old stamp paper would run out in two days and that on August 4, printing of two types (2 fl and 7 kr) on the prepared paper would begin. The aim was therefore to first exhaust the existing stocks of the previous stamp paper in order to avoid any losses. It now seems that an even more urgent need for the 6 kr stamp arose in recent days, so that the printing of the 2 fl stamp was temporarily postponed. On August 16, 1859, *Auer* reported that the paper previously used for stamps had been completely used up and that printing on prepared paper had already begun; the printing works had been able to deliver 500 sheets (45,000 pieces) of 6 kr stamps and 500 sheets (60,000 pieces) of 7 kr stamps on prepared paper to the central stamp warehouse on the day of the report.

The Ministry of Finance tacitly acknowledged that the delay was sufficiently justified by the need to use up the old stamp paper. Without taking any further notice of this, all the regional finance directorates, the four regional finance directorate departments in Hungary and the Venetian finance prefecture were informed on 20 August 1859, Z. 5051 FM, that in order to secure the revenue, it had been decided to use a specially prepared paper for the production of stamps, which had the property of making any attempt to etch out the writing recognizable.

These stamps would be supplied by the central stamp warehouse. No announcement would be made because the previous colours of the natural print had been retained. However, since the prepared paper had a *bluish* colour, whereas white paper had been used previously, the official bodies - but without issuing any announcement - had to take note of these

To draw attention to this fact so that no objections are raised to the new stamps. The wear and tear of the existing stamps would continue unabated until stocks were exhausted.

This admission of further wear and tear and consumption of stamps printed on (whitish, yellowish and light mauve) unprepared paper alongside those on impregnated paper remained in place (at least in the old Austrian provinces) until the end of the issue. Even in documents dating from the last days of this issue, there are still stamps on the former papers that had remained unsold in some area until then or had already been in private hands for a long time.

2. IN THE LOMBARDI-VENETIAN KINGDOM IN PARTICULAR

The peculiarity of the currency in Lombardy-Venetia, where the circulation of hard currency was maintained while banknotes circulated in the rest of Austria, meant that the price to be paid for a red rose stamp there was in effect higher by the premium than the purchase price for the same stamp with a brown natural print. Since brown and red are so closely related colors that the use of brown stamps in Lombardy-Venetia was not necessarily conspicuous, the possibility arose that speculative minds bought such stamps in the neighboring crown lands with banknotes and then used them in the Italian parts of the empire instead of the rose-red stamps. The Finance Inspectorate of Vicenza even wanted to know that this was happening on a larger scale and was noticeable in a decrease in the number of stamp versions.

She then suggested that a clearer color difference should be introduced. On June 29, 1859, it was decided that in the Lombardy-Venetian kingdom, documents bearing brown stamps should be treated as unstamped and that the monitoring of wear and tear should be strictly enforced. The suggestion to increase the color difference was not addressed at all, since the existing color difference of brown and pink was obviously considered sufficient.

If necessary, a notice should have been issued to alert taxpayers to this difference in color and the consequences of using brown stamps. However, this notice was never issued. The war events, which ended with the loss of Lombardy (except for the district of Mantua), also led to a calamity in the stamp system.

In the evacuated areas, the stamp seals for playing cards, calendars, announcements and newspapers remained. There were also considerable stocks of stamps left there. The Vienna Central Stamp Wear and Tear Department

Between October 1858 and June 1859, the magazine had sent stamps to Milan with a nominal value of 1,290,000 fl. This brought in a profit of 500,000 fl, so that there must still be around 790,000 fl stamps in the country. The only stamps saved were stamps worth 9,666 fl 43 kr and 669 fl 21 kr, which the troops brought to safety during their retreat from Cremona and Crema, and stamps worth 2,382 fl 46 kr which the Milanese salt merchant *Josef Kraus* took with him during his escape and brought to Vienna. As the Finance President (and later Finance Minister) Dr. *Ludwig Ritter von Holzgethan* reported from Venice, there was now a danger that the stamps left behind could be secretly brought to Venice and sold there to the detriment of the state treasury. This danger would be all the greater since the victors would have left the Austrian norms in force in the acquired territories, but at the same time would have abolished the stamps and introduced a stamped paper in order to ensure the full receipt of the revenue from the sale.

The existing stamp stocks in those areas had become worthless and were therefore all the more suitable for fraudulent attempts at smuggling. An exchange of issues with devaluation of the existing stamps could not provide effective protection against this danger. The inevitable announcement of such a measure would only arouse awareness of the possibility of such smuggling and it would be almost impossible to prevent the Lombard stocks from being brought in and exchanged during the obligatory period for exchanging the stamps in private hands. *Holzgethan* therefore recommended a more innocuous measure that could be carried out without attracting attention and had already been decided and initiated, namely the accelerated depreciation of the stamps on *Hausner* paper. Up to that point, such stamps had not yet become depreciated in the Italian provinces and the entire stock that was lost in Lombardy consisted entirely of stamps on unprepared paper. *Holzgethan* mentioned in his report of October 10, 1859, that the Venice wear and tear magazine had just received 7 kr stamps on prepared paper, which were clearly distinguishable from the previous stamps at first glance due to the darker tone of the paper.

A survey at the central warehouse in Vienna revealed that the state printing office had previously only produced rose-red stamps on bluish paper in the 7 kr category (which had already been sent to Venice) and in the 50 kr category.
On October 21, 1859, the State Printing Office was instructed to produce a supply of all types of such (red rose) stamps on prepared paper within three weeks, namely 600 sheets of 20 fl to 6 fl, 1000 sheets of 5 fl to 1 fl, 30, 15 and 6 kr, 2000 sheets of 50 kr and 7 kr, and 3000 sheets of all other types. These stamps were to be handed over to the central warehouse at once and

to send it to Venice at once, to the disposal of Finance President *Holzgethan . Holzgethan,* for his part, was given the task of withdrawing the stamps on unprepared paper from all worn-out areas in one fell swoop and replacing them with the prepared stamps; all those who wore out stamps were to be prohibited, under penalty of law, from wearing out any stamps other than the new ones.

The confiscated trademarks should be destroyed and a close watch should be kept on their continued existence, and in particular on any unauthorized sale of the older trademarks. There should be no public announcement.

This measure cannot be described as a change of issue because it lacks the essential criterion of such a change, the mutually exclusive relationship between the older and new stamps, the devaluation of the former and the valorization of the latter. In both the (reduced, but still retaining its previous name) Lombard-Venetian kingdoms and in the other crown lands, the introduction of prepared paper was a mere modification of the stamp equipment in an area that was not considered essential. While in the latter areas this measure was merely associated with a cessation of stamp production on unprepared paper, in the southern provinces the situation was further exacerbated by the fact that the wear and tear of the older stamps also came to an end, not in the normal way by an announcement and call-in of the remaining stocks for return, but by an official and unexpected de facto withdrawal and substitution of the wear and tear material (withdrawal from wear and tear, not setting out of wear and tear). In all crown lands, however, the stamps on white paper in the hands of the contributors remained valid and could continue to be used without further ado.

Of course, this measure did not completely eliminate the danger of the stamp stocks remaining in Lombardy being smuggled in, but it was reduced to a level that was considered harmless. Only by exchanging them on the occasion of a change of issue could large quantities of these stamps be put to good use. With wear and tear strictly monitored, the direct use of these stamps for individual fee cases or by exchanging spoiled stamps could not reach any significant extent, so that the state treasury was not exposed to any particularly significant danger.

The Court and State Printing Office hastened to prepare the stock of stamps required to carry out the planned measure and delivered it to the central warehouse on 18 November 1859. The next day the stamps (packed in 54 boxes) were sent to Venice. At the same time, the Finance Prefecture was informed by the Vienna Finance Directorate that the printing office had not printed stamps of 10 kr, then 4 fl, 8 fl, 16 fl and 18 fl on the prepared paper because the Ministry of Finance had indicated to the State Printing Office when introducing the extraordinary surcharge that

these stamp classes were no longer to be produced. This is an inaccuracy, since when announcing the changes in demand for the individual stamp categories of the printing works that would probably result from the award, the Ministry had merely noted that the stamps for 10 kr, 4, 8, 16 and 18 fl "were no longer required", and because the state authorities were later simply instructed *not to order such stamps any more.* In the absence of such orders, printing was *ipso facto cancelled.* It would therefore be almost an exaggeration to say that these categories were *suspended .* The fact that the State Printing Works had actually stopped producing these categories and, in particular, did *not* print these five categories when producing the stamps for Veneto on prepared paper is evident from the above-mentioned communication to President *Holzgethan* and from a slip of paper enclosed in the relevant State Printing Works file, in which these categories appear to have been deleted.

The State Printing Office had also neglected to produce calendar and announcement stamps on prepared paper and to include them in the shipment for Venice, as the production order it had received only mentioned general stamps. The Vienna Finance Directorate reported this to the Ministry at the same time and asked for instructions to do so. When questioned, *Holzgethan* declared it unnecessary for the planned total withdrawal of stamps from stock to extend to these three categories of stamps, as they were not subject to general wear and tear and were therefore subject to fairly strict controls, and as consumption was so low that the risk of smuggling from Lombardy was not a major concern. The Ministry then decided that these stamps should not be produced *ad hoc* and that the prepared paper should only be used for them when the need for new stocks arose as a result of increasing wear and tear. It now seems that this has never happened, since collectors have not yet come across stamps from these three categories with blue natural printing on bluish prepared paper.

The withdrawal of red rose stamps on unprepared paper was carried out throughout Veneto on December 31, 1859, and from January 1, 1860, only the blue-tinged stamps were allowed to be offered for sale. The stamps withdrawn from small and large collectors and from the stamp magazines in the individual provinces were destroyed in the country itself.

C. THE THIRD ADDITION TO THE INVENTORY

In the chronicle of the changes to which the issue of Austrian currency was subject, a brief interlude is necessary here. Among the factual communities in which the all too numerous German

A German passport card association was also part of the alliance, which sought to unite individual states in order to create larger and therefore more powerful interest groups. Instead of the more cumbersome and expensive foreign passports, passport cards with a one-year period of validity without compulsory certification and without written record of border crossing were introduced for the communication between the countries linked by this association (Ministerial Decree of 30 October 1859, RGBl No.

199). The blanks for these passport cards were produced by the Court and State Printing Office, in a fairly small format (12 centimeters wide, 8½ centimeters high) for the sake of portability. Since almost half of the stated height was taken up by the printed legend “Passport card for the year 1800 and ... Sixty”, there was not much space left for the written entry. In this situation, it was a real embarrassment that, in view of the existing stamp values, at least *two* stamps had to be used to affix the required stamp amount of 72 Kreuzer, which further restricted the remaining space. Since the Ministry of Finance rejected the information method used in the analogous case of the identification cards (1857) of allowing, as an exception, that the stamps should not be attached and written on the front of the card, but should be glued and stamped on the back, the introduction of a new stamp for 72 kr was decided at the suggestion of the Ministry of Police. On November 19, 1859, the State Printing Office was instructed to immediately produce such a stamp, the size of which would be chosen taking into account the format of the passport cards, and to ensure that all relevant orders were processed by December 20. By a decree of November 20, 1859, Z. 55407-3286, V.Bl No. 58, published at the same time in the Imperial Law Gazette under No. 209, the beginning of the validity of this stamp was set at January 1, 1860.

Once again, the State Printing Office was forced into a difficult situation by the short time available to it. It therefore had to resort to the expedient of choosing one of the existing designs for the new stamp, using ready-made plates with the empty stamp plates for copperplate printing and casting new plates for the auxiliary printing of the new value legend. Taking into account the small format of the passport cards, the printing office chose the *smallest* design available for this stamp, namely the design that had been produced at the time for the 3 kr CM stamp and had since been used for quite a few other stamp categories. Since the 72 kr stamp was ranked quite high in the ascending order of stamp classes due to its amount and was followed by only the 75 kr stamp of the Kreuzer amounts, the small 72 kr stamp very noticeably disrupted the gradual increase in the size of the stamps in the ascending series of amounts.

When the order for the production of this stamp was sent to the Court and State Printing Office (on November 19, 1859) , the use of *Hausner* paper for stamp production had long since begun and the supply of the whitish-yellow paper had already been exhausted by August 4. Therefore, the 72 kr stamp does not appear at all on the unprepared paper.

The auxiliary letterpress printing initially used for this stamp was, as will be explained in more detail below, subsequently replaced by full copperplate printing
replaced.

D. PAPER COLORING AS AN ESSENTIAL ELEMENT

1. WHITE PREPARED PAPER

On December 31, 1859, the stamps on unprepared paper in Veneto and the district of Mantua were withdrawn from circulation and replaced by stamps on blue-tinted paper in order to ensure that the stamps lost in Lombardy were not secretly imported and used. As a result, this only protection of the stamp gradient against this secret importation now appeared to be significantly impaired when it emerged that at the beginning of April 1860, the stamp wear magazine in Venice had received large batches of 15 kr, 7 kr and 6 kr stamps from the Vienna Central Stamp Wear Magazine, which no longer had the blue tint of the new stamps, but appeared so light that the officials were of the opinion that these stamps were not printed on chemically prepared paper. In any case, there was now a risk of confusion with the unprepared stamps withdrawn three months previously. The Finance President *Holzgethan* was convinced of this fact by a report from the wear and tear magazine and on 8 April 1860 instructed all finance departments to arrange for the return of such light stamps to Vienna. As a result, large batches of stamps that had been sent to the commissary offices in Venice and Udine and to the finance prefecture in Milan were soon returned to the central warehouse with the request that blue-tinted stamps

of the same categories be delivered immediately in order to avoid delays in wear and tear. The state printing office, approached by the Vienna Finance Directorate, declared that it was a mistake that these “return stamps” were printed on the unprepared paper that had previously been used. The chemical preparation of the paper, which was completely independent of the blue colouring, had been carried out perfectly well and the only difference between the paper of these stamps and the prepared paper used for the first production was that the paper used now

a less bluish tint. Since the printing of the stamp image on the more blue paper of the first production was not as clear and distinct as on the less blue, the State Printing Office preferred the latter for printing all stamps for all crown lands. The printing office demonstrated on three enclosed sample sheets of the unprepared, then the prepared stamp paper of the first and second coloring that the difference between the new stamps and the stamps on unprepared paper was still quite easy to recognize. Incidentally, there is currently no paper with a strong bluish tint in stock and could

The returned material cannot therefore be replaced so quickly.

Holzgethan appealed to the decision of the Ministry of Finance, which was made on April 29, 1860, that the contested batches of stamps should, in view of the impossibility of replacing them, be taken to be worn out, but that the State Printing Office should be instructed to ensure that in future, when producing the stamps intended for Lombardy-Venetia, the paper used for this purpose has a more bluish sheen than that of the stamps of the contested batch.

2. LOMBARDI BLUE AND ROSE-COLORED PAPER

This order from the Ministry of Finance regarding the "more bluish shimmer" meant that Prussian blue, originally used only as a beautifying agent, became an essential factor in the external appearance of the stamps. As is often the case with innovations, the aforementioned order has been implemented here in an undoubtedly exaggerated manner. For stamps with rose-red natural printing, there is now a more or less dark paper in several varieties, all of which have a fairly pure Prussian blue - the darkest even a cornflower blue. This paper could only have been used after April 1860. Its use then ceased again in October 1861. Since relatively fewer stamps were produced for the remaining part of the Lombard-Venetian Kingdom, which still belonged to Austria at that time, the stamps on "Lombard blue" paper are also rarer and more sought after than the other varieties of red rose stamps. This probably explains why *“coloring forgeries”* (as collectors’ forgeries) occur in this case, namely stamps that were originally printed on white or bluish paper and were then colored with a dark blue dye. A trained eye can recognize these forgeries (if blue color grains are not already visible on the surface, which show that it was not the paper pulp that was colored, but the finished paper) by the perforated paper edges of the stamps. The jagged paper edge apparently absorbs the color.

more than the rest of the paper and the entire perforation is therefore bordered by a dark border - a phenomenon that cannot be seen if the paper is only perforated *after* it has been dyed (and dried). Another method for detecting these dye forgeries is based on *Dr. Krueg's* observation that with true-colored dark blue stamps, the color fades when dabbed with a solution of weak alkalis (for example sodium bicarbonate) and a light spot forms. With the pieces dyed by counterfeiters, stronger alkalis (such as caustic potash) are required to dissolve the color; these pieces react almost not at all to weak alkalis.

The reason for the above-mentioned withdrawal from use of the dark blue paper was as follows. The concern that stamps from the German-Slavic crown lands could be brought to Lombardy-Venetia because of the high silver premium naturally disappeared when the compulsory exchange rate of banknotes was extended to the latter area by the imperial decree of December 27, 1860, RGBl No. 64, but arose again when this inclusion of the Italian parts of the empire in the paper money economy was repealed by the imperial decree of March 26, 1861, RGBl No. 16. The higher the premium rose, the greater the reward for such importation. Since the strongly blue-colored paper used for Lombardy made it difficult to clearly distinguish the brown and rose-red natural print, the danger that the paper was intended to prevent was increased in another direction, namely against imports from other provinces. This was all the more significant as in 1861, fairly intensely blue-coloured paper was also used to produce stamps for the other parts of the empire. On 2 August 1861, the Finance Prefecture of Venice suggested not to leave the doubtful colour differences alone, but to make the stamps for the Italian regions noticeably and unambiguously different by giving them Italian legends, as they had been before 1858. It was claimed that the red natural print changed its appearance as a result of moistening when affixed.

The Ministry of Finance was not inclined to the suggestion of changing the legends, as this would have required the purchase of new plates and thus considerable costs, whereas up to that point it had been possible to make do with a uniform set of plates, with which stamps with brown or red natural printing could be produced as required. The Court and State Printing Office was therefore asked whether a colour of prepared paper could not be chosen for the Lombardy-Venetian region which would be more conspicuously different than before from the colour of the paper for the other regions, while at the same time avoiding any alteration of this colour through *Hausner's* preparation. *Auer* suggested (on the basis of a report from the Schlöglmühler paper-

On September 15, 1861, Auer's factory presented a *pink-colored* paper on which the natural print would appear in dark red. To justify this, he added the not entirely understandable sentence that pink paper had been chosen because only this, along with the bluish paper used previously, combined all the conditions for preventing the repeated use of the stamps, while the other colors only had some of the properties required for this. A ream of this paper costs 7 fl. 10 kr, while the bluish paper used previously costs 6 fl. 10 kr per ream. Auer's request was accepted, whereupon he promised the first partial delivery for October 19 and the complete delivery of a three-month supply (necessary for the withdrawal of the previous stamps) by November 15, 1861. Now the regulation of October 4, 1861, Z.43243-2364, was published in the Imperial Law Gazette under No. 99, whereby the previous Lombardy blue stamps in the Italian territories were to be withdrawn from use as of January 1, 1862 and at the same time the new stamps on pink paper were to be put into obsolescence. A three-month period was set for the exchange. The stamps for announcements, calendars and newspapers were to remain unchanged and not be affected by this regulation. The latter point seems to have been subsequently abandoned with regard to the calendar and announcement stamps, but without any normative announcement being made. Such stamps were in fact printed and delivered on pink paper. From their close perforation it is clear (as should be noted here in anticipation) that this printing took place before the autumn of 1863. However, even at the time when the red rose stamps had become superfluous and were destroyed due to the loss of the last Venetian territories, the Central Stamp Office still had in its stocks not only the consumption stamps on pink paper but also those on unprepared white paper.

All these stamps are quite rare: the ones on red paper are even more rare, since their area of validity was much more limited due to the loss of Lombardy and they were rarely used due to competition with the signature.

Collectors distinguish between various color variations in pink paper and in red natural printing. While the latter differences can be attributed to the greater or lesser concentration of the red varnish, one could almost assume that the different shades of the stamp paper are due to different chemical processes. There is a brick-colored paper, a bright red paper, a pure pink paper and a paper that is almost purple-red and has a slight bluish shimmer. Finally, some stamps have paper that is so light-colored that, where the stamp does not contrast with a pure white background, one could mistake it for a somewhat dirty white.

Contrary to the tendency of collectors to focus quite a lot on the
To create variant series based on color differences of the paper,

It should be emphasized that the extraordinary sensitivity of the pink coloring speaks against the justification of such a procedure. An irrefutable argument based on a later fact shows this clearly. As should be mentioned here in anticipation, after the introduction of an official watermark, such pink paper was only produced *once ,* and this was then used to print stamps. All stamps (with watermarks) therefore come from one and the same production process in terms of their paper.

Nevertheless, there are several very striking color variations here. Since one cannot attribute any significance to these in view of the completely unquestionable state of affairs, one also becomes suspicious of the color variations of the pink paper from earlier times. No matter how different two of these papers may be from each other, it cannot even be said with certainty that they come from different productions. This means that any attempt to distinguish them from one another loses all basis and justification.

In contrast to the uselessness of the red coloring of the stamp papers for a chronological arrangement, as already emphasized here, the blue coloring has proven to be a reliable means of classification, which allows the stamp papers for the years 1859 to 1870, i.e. for a fairly considerable period of time, to be arranged in a row with a fair degree of certainty. What is strange about some of the pink stamps is the strong visibility of the oil seeping out of the printer's ink on the sides. This seems to be connected with a decomposition of the red coloring of the paper and is therefore all the more conspicuous.

The fact that all older stamps were no longer valid when the horse paper was introduced - which of course also affected any stamps still in existence on unprepared paper - shows that this was actually a change of issue and a *new issue .* However, because it was only effective for part of the Reich, this can be described as a merely particular issue.

This does not cause any confusion in the continuous counting of Austrian issues. This offshoot of the Austrian stamp system did not last long and soon died out without further continuation. It took less than five years for the last remnants of the Italian provinces to disappear. With this, the special stamps valid in this area disappeared, and with them the pink stamp paper, which was used here until the end.

3. THE INTENDENCE OF A MEDIUM BLUE NORMAL PAPER

The introduction of paper prepared according to *Hausner's* method without general announcement and without a change of issue; the continued use of existing stamps on unprepared

pared paper; finally, the color tones of the stamps on prepared paper, which were created partly unintentionally by irregularities in paper production and partly intentionally by experiments by the court and state printing works, led to such a motley mix in the stamp system of the old Austrian provinces that this finally had to raise concerns among the administrative authorities. The impetus came from a confidential - but unverified - report to the Finance Directorate in Ofen that a consortium in London was forging Austrian stamps in a lithographic establishment and blackening them in bales of blotting paper imported to Hungary. As a result, the finance guards everywhere were instructed to keep a close eye on the authenticity of the stamp stocks found in the stamp shops. It now turned out that such monitoring was made considerably more difficult by the existing "diversity of color shades". This prompted the Vienna Finance Directorate to approach the State Printing Office with the question of whether it would be possible to produce all stamps on a uniformly bluish paper. The State Printing Office declared this to be perfectly feasible (26 April 1862) and noted that blue paper, such as had been used for Lombardy-Venetia (before the introduction of pink paper), would be suitable for this purpose.

However, the Ministry of Finance would have to issue instructions in this regard. On 1 January 1863, the Ministry, using a report from the aforementioned State Finance Directorate, asked the printers when the stocks of the existing paper would be exhausted and when they could begin using a uniformly coloured paper for stamping in countries outside Italy. They also asked whether this would require a change in the issue. The printers replied on 24 January 1863 that they still had 230 reams of the currently used blue-tinted paper in stock, which would be used up by the end of February. For future use, the printers also recommended the blue colour previously used in Venice, because this colour was easier to achieve in a uniform manner in paper production than the blue tint.

Furthermore, the State Printing Office proposed that in future the natural printing of general stamps should be carried out in blue, while the printing of consumption stamps should be carried out in grey or brown.

The Ministry of Finance did not respond until April 21, 1863, and then it refused to change the color of the underprint and asked the printer to report again whether it would still be necessary to draw the attention of the authorities and the public to the changed color nuances of the paper. The printer replied in the negative.

There was no longer any talk of changing emissions.

In these last-mentioned documents there are only hints about
contain what processes are taking place with regard to the differently coloured

Papers had actually played a role at that time; in this case, there must obviously have *been* several oral statements and instructions that are not recorded in the files. The Ministry of Finance mentions the use of a " new type of paper after the previous stock of paper intended for stamp production had been exhausted". It is not made clear what type of exhausted stocks and what type of new paper were, but this can be deduced from the earlier files and in particular the last report from the printing works. In this report, dated April 30, 1863, it is stated that "the stock of more blue-colored paper, which was previously used in part to produce stamps, has already been exhausted, and that it has recently only been used to print stamps of smaller denominations" and it is added that "for the most part and *for a long time now ,* less blue-colored paper has been used for the higher denominations". The latter type of paper would continue to be used and the paper mill had been strictly instructed to always supply this paper in the same color.

As for the "more blue colored" paper, it was probably leftover stocks of dark blue paper that were left over in October 1861 when pink stamp paper was introduced for Lombardy-Venetia. For this reason, the printer was able to produce sample sheets of this Lombardy blue paper, and then suddenly there is talk of the stock being exhausted, whereas previously there was no mention of any such stock being purchased. Finally, the fact that the dark paper used only for printing smaller denominations (2 kr, 5 kr, 6 kr, 7 kr and 12 kr) for the old Austrian regions has several shades indicates that it was leftover stocks from different productions: if a new production had been carried out, the paper color would probably have been more uniform.

A comparison of the vandyk brown stamps made on this paper with the dark blue stamps of the Lombard-Venetian kingdom shows that most of the shades are the same for both stamps. However, on the one hand, there seem to be no remaining stocks of the darkest pure cyan blue paper from Veneto, while on the other hand, there are some lighter, more grey-blue varieties of the brown stamps that are close to normal paper and were not used for Veneto. It could be argued whether they are to be counted as hypothetical remaining stocks or represent the darkest shades of the normal paper that is now in use. The most striking phenomenon is a paper that could be described as Lombard blue in terms of its colour, but is extremely thin (floral paper). This paper has not yet been found among the stamps with natural madder red self-printing.

In any case, the use of these remaining stocks did not begin until after January 24, 1863, because on that day, when the printer presented a sample of the Lombard blue paper, it only mentioned that it had *previously been used for* Italian stamps. Since the beginning of the use of this paper was planned for the beginning of March 1863, but by April 30 these remaining stocks had already been exhausted (and “in the recent period”), their use will have to be postponed to the months of March and April 1863 (and even more likely to the latter month alone). The printer did not wait for the authorization to do so - unless it received it verbally.

The other paper, which is not always mentioned in a very clear way, as the State Printing Office sometimes calls it “bluish” and sometimes “less blue”, is none other than the *medium blue,* which had been in use alongside other papers since the middle of 1861 and, as mentioned above, was the reason for the introduction of the pink paper because of its similarity to Lombard blue. The apparently intentional ambiguity of the State Printing Office’s reports shows that it was aware of its arbitrary actions and was trying to conceal the facts.

In fact, in the decree of April 21, 1863, the Ministry of Finance seems to have been of the opinion that nothing had happened except that after the stocks of the paper previously "intended" for stamp production - that is, a blue-tinged paper without a prominent blue color - had been used up, the dark Lombard blue paper would continue to be used. Without directly disavowing this opinion, the printing works tried to discreetly record the actual facts in the files. It is therefore mentioned that the medium blue paper (which naturally appears less blue than the dark blue paper) has already been used for *a long* time, and for the most part currently *alongside* other papers, and it is declared to be normal paper for the time being, while the used-up Lombard remaining stocks are treated as a passing episode. The Ministry of Finance took note of this. Whether or not the actual facts had been discovered remains to be seen.

Apart from the negotiations mentioned above, the only other comment from this period is one dated January 1863, stating that the stamps “are now produced on a *very fine* chemically prepared paper”. It is not entirely certain whether this comment could be related to the aforementioned dark blue pile paper.

This concludes the documented information and clues regarding the paper varieties of the *first* half of the 1858 issue, which half is distinguished from a *second ,* later batch by a reliable and easily verifiable feature - the different perforation.

This change in perforation, of which there is not the slightest mention in the files, was first discovered through observations by the Viennese stamp collector *Ignaz Mayr* and has proven to be the most reliable feature for distinguishing between the older and the younger period of the 1858 issue.
Based on dated specimens, it was possible to establish that stamps with new, coarser perforations came into use at the end of 1863. In the printing press, the use of these coarser perforations began in the second half of 1863, in any case before November of that year. While previously, from the creation of the stamps up to the specified date, the 1854 perforations (from 13½ to 17) were used, these now cease and the 1863 perforations begin, which consist of only two types: 12 and 12½ (namely 12 or 12½

Only very exceptionally and rarely can a combination of both types of perforation (namely **13½:12)** be seen on two stamps (25 kr and 1 kr) (mixed perforation). Of course, closely perforated stamps also occur on later documents, which originate from an earlier production.

The lack of any official mention of this change in perforation shows that, as already mentioned, perforation was not considered an essential part of the stamp industry. Rather, it was considered to be just as natural a finishing process as drying after moistening or smooth pressing and the like. Perforation had to be done: how? - that was considered irrelevant.

The silence in the files about the change of perforation also leads to the assumption that no completely new perforating machines were purchased at that time. Rather, it seems that only a more extensive repair (so-called major repair) of the old machines took place and that only the metal components most subject to wear, such as the throat plate, comb and needles, were replaced. The new components no longer had the fineness of the original device, which may not even have been due to any special intention but simply to the nature of the existing tools. The reason for the repair is not difficult to identify. It is clear from the stamp material of the time that the cutting parts of the perforating machines had become blunt. The round pieces of paper that were knocked out are often still stuck to the stamps because they were not completely and completely removed all the way around. Such repairs, which are part of everyday life in a large institution, could only be mentioned in the invoices, but not in the recorded proceedings. But the invoices were of course not kept for very long.

The mixed perforation of the two brand values mentioned above should now be applied to the Art may have arisen that the replacement of the needle plates and needles

was gradually brought about and therefore one or the other old narrow needle plate remained in use for some time alongside the already reworked machines, so that these two stamps were perforated partly on one of the old plates and partly on one of the new ones. In any case, these stamps were certainly produced at the time of the perforation change and therefore provide reliable information about which papers were used at that time.

It should also be emphasized that a perforation 13 has not yet been found on the stamps of the 1858 issue.

The perforation, which can be checked easily and precisely at any time - as long as one does not lose sight of the natural limits of error - is of particular importance for this issue because its change represents a kind of caesura in the middle of the validity period of the issue. This makes it possible to clearly distinguish between two large temporal groups of these stamps. This provides a welcome point of calm in the almost confusing variety and rapid change of phenomena in this issue.

E. OVERVIEW OF PAPER VARIETIES UNTIL THE CHANGE OF TEETH

1. GENERAL

If one tries to use the information given above on the coloring varieties of the first batch of *Hausner* papers to examine the stamps of this period (i.e. prepared and closely perforated) that are available in the collections, the data from the records seem inadequate. One finds a far greater number of paper varieties that are very noticeably different from one another than one would expect from the records. On closer inspection, however, it cannot be denied that the situation is essentially not much different now than it was previously with the unprepared papers. Even then, there were extremely numerous varieties; but their differences were not as striking as they are now, when the striking aspect of the color difference has been added. One must accept the fact that, as in the past, one rarely finds two or more stamps (not to mention complete series of all values) that are produced on completely identical paper, and one must take into account that it is not even certain whether *different* paper qualities were used side by side for one and the same print run of a value. There is evidence on several occasions that very different paper varieties were used in the printing works at the same time. In this situation, one must be content with grouping together larger *groups of papers* that can be distinguished from one another by clear and - what is even more important - directly

In distinguishing these larger groups, the aforementioned documentary data prove to be very valuable and, together with some technical aspects, make it possible to classify the paper varieties in time with a fair degree of certainty.

The inclusion of the data presented below in the previous chapters, where they actually belong, would have seriously disrupted the flow of the presentation. This would justify the separation of the current overview. However, it is in the nature of things that some things that have already been mentioned in earlier parts of this presentation must be repeated here. It is also unfortunately unavoidable that the variety of phenomena under consideration and the large number of reference points used (to obtain a chronological division) may make the following presentation appear to be a confusing jumble. However, the relevant stamp material would be an even more insoluble mess without such an analysis.

The most important preparatory work for an arrangement of the stamps on prepared paper is the precise separation of them from the stamps on unprepared paper, the latter of which were produced in the first year of issue in Austrian currency. As long as *Hausner's* paper has a distinctly bluish or blue color, or even just a bluish tinge, the distinction is not difficult. However, one finds some whitish and yellowish colors which, on the basis of appearance, one would like to attribute to unprepared papers, but which in reality belong to the second type. It is certainly very desirable to be able to use more reliable criteria than the easily erroneous judgment based on the color appearance. There are *two such methods,* one of which is simpler and can be used without any inconvenience and is sufficient for the great majority of cases, whereas the other requires an apparatus but gives an exact result in all cases.

The *first* of these means of differentiation is that the prepared papers almost without exception have small blue spots and splashes, which usually go through the paper so that they can be seen on both sides of the stamps. If you examine the stamp with a magnifying glass, you will rarely find a piece of this type that does not have such a splash. Some stamps have such spots in very noticeable numbers, while others are noticeably large, about the size of a hemp seed or even the size of a pea. These blue spots are caused by a reaction between the prussiate of blood and small iron particles contained in the body of the paper. It is known that all knives become blunt through use. This blunting occurs because small particles of the cutting edge are worn away during cutting. These particles stick to the cut object. The raw material of the paper is now processed several times and for a long time using cutting devices.

until the pulp suitable for paper production is ready. The iron fragments removed by the cutting machine are then mixed into this pulp. If the prussiate solution is added, it reacts to the iron fragments. Depending on their size and the duration of the reaction (until the paper is pressed out and dried), the iron is dissolved completely or at least to such an extent that a small iron grain remains visible in the middle of the blue spot. These spots do not change in the normal fate of the paper and the stamps.

Once you have become aware of these admixtures in the paper stock, it is not difficult to find such iron particles in older, unprepared papers, where they appear as rust-brown or blackish grains. This contamination of the paper stock was not even noticed in the less than perfect paper manufacture of the time. It was only with the production of photographic paper, in which these iron fragments formed a noticeable calamity, that we learned how to avoid this problem in the manufacture of paper stock by using knives made of other metals.

If, in exceptional cases, *no* reaction splash is found on a stamp of doubtful origin , a second method can be used to determine with certainty whether the paper is prepared. This method was already mentioned in the files from the time of the introduction of *Hausner* paper, but was rediscovered independently by the above-mentioned stamp collector, Medical Councilor Dr. *Krueg* . It consists of dabbing the stamp with hydrochloric acid. Even with the greatest dilution, a clear blue reaction occurs if the stamp paper has been prepared. The resulting blue stain is particularly unmistakable after drying. However, according to the findings of the above-mentioned person, this reaction only appears to occur if the paper contains at least traces of Prussian blue. This was always the case with the stamp stamps of that time. Using this reaction, it was possible to determine that quite a few stamps with whitish and yellowish paper coloring do not belong to the first year of issue in 1858, but to a later period.

It should also be noted here that sometimes blue dots the size of a needle or superficial, light blue spots (as if something blue had been wiped over them) appear on individual stamps and that when tested with hydrochloric acid it is then shown that the paper is *not* impregnated. In most cases these dots and spots are probably caused by blue obliteration ink, with which the stamps often come into contact. Anyone who has spent some time checking stamps for blue reaction splashes is so familiar with the appearance of the latter that he is not fooled by the blue dots and wiping spots mentioned.

Once the closely toothed stamps of the 1858 issue have been
in a reliable manner into prepared and unprepared, then

one is then understandably inclined to classify the former according to the shades of colour, according to the more or less intense blue colouring. This is particularly difficult because the eye tires easily and because certain contrast effects also come into play. One and the same paper looks different depending on whether the colour of the natural print is richer or duller.

In this case, the difference between the madder red veining of the Lombard stamps and the vandyk brown veining of the stamps for the other crown lands is particularly noticeable. The red print highlights the bluish colour of the paper and creates a slight light purple shimmer, while the brown print makes the blue greenish. When distinguishing between paper varieties, two things must be taken into account: the stamps must not be viewed from the printed top, but from the back (after having washed off the adhesive), although the colours of the natural print still influence the assessment a little, especially with transparent papers; furthermore, one must not limit oneself to examining individual pieces, but must place a large number of stamps next to one another. A single stamp may have undergone a change in colour as a result of its fate. Only when a considerable number of stamps have exactly the same colouring can this be regarded as a nuance that has existed from the beginning.

Once all these difficulties have been overcome and the stamps have been carefully sorted according to color nuances, one will find on closer inspection that the pieces of the same color do not necessarily all belong to the same paper production: rather, there are multiple and very significant deviations, so that an identity of the paper cannot be assumed without further ado simply because of the same color. The distinguishing factors to be considered here are: the greater or lesser *thickness,* which can be assessed almost more reliably with the touch of the fingers than with mechanical measuring instruments (due to the elasticity of the paper); *the structure* and *compactness that can be perceived when viewed against bright light;* the *pellucidity* (transparency), which does not always decrease with increasing paper thickness. The transparency can go as far as a completely glassy quality and can be clearly distinguished from the stronger bleeding through of thicker printing inks. Finally, the behavior when moistened comes into consideration, since some papers become almost transparent when wet, while others remain opaque *(impermeable) ,* which is probably related to the fillers incorporated into them during manufacture.

A special role in philately is also played by the *corrugation (defined differently by everyone),* the *papier rayé.* It is somewhat reminiscent of the *ribbing characteristic of handmade paper.* Just as the well-known corrugated paper is the opposite of vellum paper, which appears to be evenly dense when viewed through, corrugated paper is the opposite of paper that is smooth on the surface. Its origins are said to date back to

The unevenness of the so-called couching rollers, which press the water that has not dripped off and been sucked out of the paper web for the first time, is said to be due to the fact that the felt covering these rollers sometimes has “steps” similar to a badly shaved head. Something similar to the corrugation is also not uncommon in hand-made paper. Since the corrugation is usually only on one side of the paper, it is probably due to the special nature of the wire mesh of the mold and not to the felt plates used for couching.

Of the differences in paper quality listed, *thickness* is the only one mentioned in the documents. It has already been pointed out above that the thickness of the first stamp paper was one of the disadvantages of the new stamp system and that the use of thinner paper was expected to provide an effective remedy. In fact, there was repeated talk of instructions to use thinner paper to produce stamps; and, even more often than such mentions are recorded, stamps are actually made on thin and very thin paper. Philately also recognizes this phenomenon in postage stamps and refers to the stamp carrier in such cases as *papier pelure.* The translation of this expression as “fine paper” should be avoided because “fine” often also means good quality; in paper technology, fineness is understood to be the quotient of area and weight: this *can* - but does not have to - be proportional to the thickness. The term "tissue paper" is also not entirely appropriate, because it refers to an unsized or very lightly sized paper that is only slightly translucent. As a technical term, the word "thin paper" is already established in the graphic arts industry and would therefore be recommended for use in most relevant cases, while the very thinnest paper should be called "pile paper".

2. NORMATIVE AND TECHNICAL INDICATIONS

The greater or lesser thickness of the paper and the shades of colour are not sufficient in themselves to arrange the stamps on impregnated paper in chronological order. Both thin paper and certain colours have reappeared at different times. To be sure, we must take into account other factors, some of which belong to the normative and some to the technical side of stamping. The former are the more important because they also enable a very reliable dating. This includes the additions to the inventory, three of which (concerning the denominations of ½ kr, 7 kr and 72 kr) have already been mentioned, and, as a counterpart, the abolition of certain denominations and the suspension of the production of certain categories. Technical clues that offer valuable help here are:

1. Changes in the graphic production process, in particular the replacement of auxiliary book printing by full copperplate printing and

2. the changes associated with a new engraving that are made to the marks appear as a type change.

Those brand values in which these changes occurred could be described as *leading types* of branding, analogous to the index fossils of paleontology.

1. Here we will explain in more detail what was not particularly highlighted above in the case of the Italian stamps and the German calendar stamp of the first issue, because it was not so obvious at the time. It is a matter of the fact that with the transition from auxiliary letterpress printing to full copper printing with multiplicated plates (unlike when the newly selected full copper printing was carried out with adapted plates, as was the case with the values of 2 kr, 4 kr, 5 kr, 12 kr, 25 kr and 60 kr ö.W.) a formal *regeneration* of the appearance of the stamps becomes noticeable. The blank plates of the stamp plates used for auxiliary letterpress printing are usually plates that have been around for a long time and have usually been used many times, which therefore produce very poor and detailed impressions. If new multiplicated plates are to be produced, it is necessary to go back to the first original plate that still exists without any value engraving.

A deep copy is made from this by electroplating, into which the new value legend (previously produced by auxiliary printing) is engraved and this new original type is then duplicated and assembled to obtain the full plate size. If impressions are now made, they naturally differ considerably in their sharpness and wealth of detail from the earlier ones (of the blank plates).

In the case of the Italian stamps and the German calendar stamps of the *first* issue, *this* difference between the stamps in letterpress and copperplate printing was not so obvious, because at that time the stamp industry was only just beginning and the blank plates had to be made, but the still *completely unused* multiplication plates had to be reworked by grinding out the previous legends: the impressions from these plates were therefore just as sharp and detailed as those from the plates for full copperplate printing that were later produced. On the other hand, in the case of the stamps of the first and second additions to the inventory (for ½ kr and 7 kr) of the new second issue, the transition from the makeshift letterpress printing of the early period to the full copperplate printing that was later used is very obvious, because the blank plates used initially were already pretty much printed out beforehand and were of course not improved by the mass production required for these values. The point in time when this “regeneration with change of process” occurred can, as will be shown below, be determined quite precisely on the basis of the papers used for the red rose stamps.

The situation is somewhat different with the *third* addition to the inventory (the passport card stamp for 72 kr).

Collectors are aware of the difficulty of distinguishing the initial auxiliary letterpress printing from the later full copperplate printing. Two factors which, for example, make this distinction possible at first glance with the ½ kr and 7 kr stamps, namely the aforementioned lack or abundance of detail in the stamp plates and then the so-called inadequate aphoristic design of the letters produced in the letterpress printing, fail with the 72 kr stamp, since the stamp plates retain the lack of detail even with the full copperplate printing and, conversely, the auxiliary letterpress printing also has unusually precise letters. Therefore, when diagnosing whether one is dealing with an auxiliary letterpress printing or a full copperplate printing, one must first consider the various shifts which the value legend undergoes with the auxiliary letterpress printing, while with the full copperplate printing the typographical location of the legend naturally always appears to be precisely maintained. When comparing numerous pieces of the 72 kr value in letterpress and copperplate printing, one can also find an easily recognizable difference in that the upper arm of the seven looks different in both processes. Apart from this, however, the legends of both graphic processes are strikingly similar and it cannot be overlooked that both engravings for the full copperplate printing clearly attempted to capture the same external appearance of the stamp. One circumstance may have helped here, which can of course only be put forward as a guess, to explain the pure and almost copperplate-like design of the auxiliary letterpress printing for this stamp.

From a document that ran about six years later and also concerned the printing of legends for copperplate printing, it can be seen that the stereotype plates for these legends were not produced using plaster molds, but by means of galvanic copper deposits on the printing form composed of letters. This expensive and time-consuming process was probably chosen in order to achieve better graphic results, which the State Printing Office was particularly interested in with the stamps produced by combining two types of process, as the documents show. It can now be assumed with some probability that this new method was already used for the 72 kr stamp.

The difficulty in distinguishing between letterpress and copperplate printing in this value is not only due to the above-mentioned care in the production of the letterpress plates, but also to the strange circumstance that the stamp plates of stamps produced with full copperplate printing show just as few graphic details as those of stamps printed in letterpress printing. This leads to the conclusion that no new original type was engraved for the 72 kr value, but rather merely the adaptation of a complete plate by engraving the legends of plates to

This naturally had to mean that there could not be complete identity between the individual legends engraved in this way.
In fact, when comparing several brands, one finds such differences, the most striking of which is that the number 7 at the bottom sometimes appears shorter.

2. Another type of master type results from the above-mentioned type change (regenerating with type change) without changing the graphic production method.
Here the graphic process, full copperplate printing, remains unchanged. However, new printing plates are used, which have a new engraving of the legend. Since this new engraving can easily be distinguished from the previous one by careful observation, even if the engraver has tried very hard to make it as similar as possible to the previous one, it is referred to as a change of type. The reason for such a change is usually the impossibility of obtaining work plates with even sharper printing from the existing high plates in the galvanic process.

Because of the rapid wear of the copper plates and because of the mass production of some stamp categories, which runs into the millions every year, the work plates of these values will soon need to be replaced. If *several* work plates were not prepared in advance in advance in order to keep them in stock, the high plates that were produced at the start of the issue must now be used for this purpose. It was already said above (Chapter XII) that the proper activation of an issue requires the production of master plates (indentation plates) and samples (indentation plates) for each stamp class. Usually only one indentation plate is produced; one or more high plates, however, depending on the expected frequency of stamp use and production. If so many printing plates have been printed that the high plates used again and again to produce such indentation plates no longer produce clear and sharp imitations, the master plate must be used to produce one or more new high plates. All this is part of the regular operations of the printing works within the issue, because the available high and master plates were made available for such use.

If new printing plates are used to print stamps after worn-out printing plates, the prints are of course sharper and clearer than the older stamps. This is particularly noticeable when the later stamps are specially marked as a product of a later period, for example due to a change in the paper colour or something similar. If the stamp of a later production date has a more detailed design, this is referred to as a *regeneration.* To the extent that this took place in normal operation, i.e. either a new printing plate that was already ready from the start was used again or the high plates were printed on

or even if the mother plate was used to produce sharper printing plates: such a renewal can always be described as a first-degree *regeneration* .

If the master plate is no longer usable, one would have to go back to the original type to produce a replacement and use it to produce a duplicate plate. Such *second*- degree regeneration is not popular because the galvanoplastic process that has to be repeated requires so much time and money that it is better to go straight to a new issue. Only when there are very large differences in the frequency of use of individual stamp classes and only a few or very few classes require such regeneration is it decided to do so, so as not to have to replace the still usable plate apparatus of the other stamp classes at the same time.

There are also *third*- degree regenerations. In these, the original is returned to without a legend. A new legend is engraved in a deep plate made from this original and a new master plate is made from there. There were several such cases during the period of the first group of Austrian stamps, i.e. as long as *Leander Russ's* designs were used. They fell into *two* types:

A. For a number of values, after the mother plate had worn out, it was necessary to resort to the original without a legend, because there was no such thing with a legend (an original type). To name the cases in chronological order, this happened with the values of 6 kr, 5 kr, 12 kr, 2 kr and 4 kr, as will be shown in the appropriate place. For these values, the mother plate was the piece that went back the furthest and had a legend.

As far as the 6 kr value is concerned, at the beginning of the issue in 1858 a raised plate with the engravings in the convention coin was prepared by grinding out the letters CM and a deep plate was taken from this "mutilated" plate as a mother plate. There was therefore no mutilated original type. If another raised plate with CM had been kept, a new mother plate could have been taken from it when the need arose. However, since such cases had not been thought of and no provision had been made for them, a new original type had to be created with the help of a copy of the original plate without a legend and then a multiplicate mother plate had to be put together.

In the case of the 5 kr, 12 kr, 2 kr and 4 kr values, the lack of an original type was due to the fact that plate adaptations (with the legends engraved in small pieces) had been made for these to stop the auxiliary printing. When these adapted plates became insufficient and a new original type had to be produced, the newly engraved legend for each of these classes read the same as the previous one and was also reproduced as faithfully as possible in appearance. The

Observed but nevertheless perceptible differences in the appearance of both legends lead, as has already been repeatedly mentioned, to speak of a type change and to refer to the later legend as “the new type” or “the new type”.

A change of type differs - to express the matter differently than was already done in Chapter XVIII - from a change of issue, which can also be a merely partial one and therefore also only affect a single value, in that the former is an internal matter, the latter a public matter, which requires an announcement, which is lacking in the former case - and also in that in the case of a change of issue (apart from a possibly permitted short transitional period) the new and old stamps exclude each other, while older and new types can easily be used side by side.

In this respect, the change in type is similar to a cumulative new issue; only the publicity (of the change) makes the difference. One could also think of another factor, namely the greater or lesser similarity of the older and the newer stamps. With a new issue (even a cumulative one), the introduction of a significant change in the appearance of the stamps is self-evident; otherwise there would be no need to make a new issue. With a change in type, on the other hand, the differences are actually something unfortunate, since one naturally wants to keep the older form as faithfully as possible and deviations only arise involuntarily. With the above-mentioned values of 6 kr, 5 kr, 12 kr, 2 kr and 4 kr, it is also clearly noticeable that the Court and State Printing Office took greater care in the series of these regenerations to make the new engraving as similar as possible to the older one (or one of the older ones).

This makes it increasingly difficult for the collector to distinguish whether the older or the newer type is present, given the same order of values.

B. A third degree regeneration also occurred where an old design was used for a newly created value and the multiplicated copperplate printing was to take place. This occurred first with the values of ½ kr and 7 kr, where, however, a stage of makeshift letterpress printing was inserted between the choice of design and the application of the full copperplate printing; but then with the new values of the so-called stamp regulation (3 kr, 36 kr, 90 kr, 2 fl, 50 kr, 7 fl, 15 fl), which will be discussed later, where the full copperplate printing (with multiplicated plates) took place immediately.

The value of 72 kr cannot be included here because it only represents the transition from auxiliary letterpress printing to full copperplate printing with adapted plates.
but then the latter method was used permanently. In this respect it is equal to the 25 kr and 60 kr values that were produced with adapted plates until the end of the first group of stamp issues, i.e. until the departure from *Ruß's* stamp designs.

3. ATTEMPT AT A CHRONOLOGICAL ARRANGEMENT

To return to the extremely numerous color varieties of the impregnated paper and to the suggestion that this variegation was related to the preference for heavily blued paper at the time and the not yet particularly perfect manufacturing method, an illustrative fact from later times should be cited here. A document from the State Printing Office from the beginning of 1868 shows that the director of this state institution had noticed that the military schematism for the year 1868 consisted of paper of different colors, *sheet* by sheet. Just as the printers here had paid little attention to using uniformly colored paper for one and the same book, they also had no hesitation in using paper of different colors when printing the stamps. Hence the difficulty of establishing a halfway satisfactory chronological order. In the following attempt at such a order, we will begin with the representation for the Lombardy-Venetian kingdom, because here things are much simpler and the chronology is more certain and clear.

a) Red Rose Stamps.

If one carefully examines the block of stamps that was printed for Venice between October 21 and November 18, 1859, and then expired on January 1, 1860, one will find that several (perhaps six) different papers were used. They all have roughly the same coloring: whitish with a light bluish tint, the characteristic tone of Prussian blue, enhanced by the contrasting effect of the madder red natural print. Some values, such as the 7 kr, 15 kr and 50 kr, also appear on more intensely blue colored paper, so that it might seem that these darker stamps were not produced at the same time as the block. Whether this can be linked to the fact that, according to the records, the denominations of 7 kr and 50 kr were the first to be printed on *Hausner* paper, and even earlier than the printing of the block had been ordered and started, must remain an open question.

As mentioned above, the suspended values of 10 kr, 4 fl, 8 fl, 16 fl and 18 fl are missing from the block, as are the consumption stamps. The two new values created on 1 June 1859 (½ kr and 7 kr) still appear on these block papers in auxiliary book printing. The same applies to the stamp of 72 kr (third addition to the stock), the production of which was ordered on 19 November 1859, i.e. one day after the block was sent, and which had to be delivered before 1 January 1860. It also has the typographic value overprint and is on a completely

the same bluish paper. The use of paper of this colour must therefore have continued until the second half of December 1859.

Towards the end of December 1859 or in the first months of 1860, the use of other papers, the white-prepared ones, probably began, and these were objected to in Venice at the beginning of April. According to the files, this objection concerned the denominations of 6 kr, 7 kr and 15 kr. From the collectors' holdings, the denominations of ½ kr, 12 kr, 25 kr, 30 kr, 50 kr, 60 kr, 72 kr and then 6 fl can also be identified as appearing on these papers. The denominations of ½ kr and 7 kr in particular appear in both letterpress and copperplate printing - albeit on different shades of paper - the denomination of 72 kr only in letterpress printing. Here, too, we are not dealing with a uniform paper, but with a group of papers that are similar in color but different in structure. There are papers among them that still have a very slight blue tint, so that the difference in color from the block papers is more quantitative than qualitative. Other papers appear as pure white as some non-impregnated papers used to be. Finally, there are also some papers that have a yellowish tint. The fact that the values of ½ kr and 7 kr on these white-prepared papers appear not only in auxiliary letterpress printing but also in multiplicate full copperplate printing deserves special attention, because this shows that the change in the graphic production process took place under the dominance of the papers mentioned above. The use of these papers can in turn be dated fairly precisely. And since, as was emphasized above, the plate change for the rose-red and brown stamps must have occurred at the same time because no *separate* plate sets were kept in stock, it is then possible to draw a conclusion as to when the transition to copper printing must have taken place for the brown stamps of ½ kr and 7 kr, and this ultimately makes it possible to determine the time at which individual paper varieties were used for the brown stamps.

The fact that the printing of stamps for Veneto on white prepared paper could not have begun before the last days of December 1859 is evident from the fact that it can be safely assumed that only bluish block paper was used when the 72 kr stamps were first produced. If the light paper had also been used, the objection to this would have been raised when the impregnated stamp material was put into use under special measures on January 1, 1860. However, the printing of red rose stamps on this paper certainly did not last beyond the first days of April, when the objection was raised and the printer became aware of it.

As a final result, it can be stated that the white prepared papers for Veneto were hardly used for more than three months; that in the same period (second half of December 1859 to first half of April 1860)

the transition to full copper printing occurred at the values of ½ kr and 7 kr, and finally, that, because these values occur in copper printing on pure white paper, the light white ones are to be considered the later ones among the white-prepared papers.

If these white stamps of ½ kr and 7 kr were not printed in full copperplate, they would be easily attributed to the white shades of unprepared paper. However, the hydrochloric acid reaction makes it easy to prove that we are really dealing with *Hausner* paper. This observation gives rise to the suspicion that among the three sample sheets which the State Printing Office presented after the test in Venice to show that the white-prepared paper could easily be distinguished from the unprepared paper by sight, there was no sample of this completely white paper.

The 72 kr value was still produced on these papers by auxiliary letterpress printing. The collector should be cautious with this stamp, as it is suspected that pieces that were too white were subjected to artificial bleaching. Collectors, who did not know that this value was only created when the unprepared paper was no longer in use, looked for *white* 72 kr stamps in letterpress printing: it now seems that unscrupulous people endeavored to meet this demand by artificial means.

After the whitish paper, the State Printing Office began using dark blue (Lombard blue) paper as ordered, and this was not done until May 1860 at the earliest. Because this time there was no withdrawal of the earlier (blue-tinged and white-prepared) stamps, printing on this paper was only carried out in accordance with the orders that came in. Because the stamp stocks had been very generous when the blue-tinged block was ordered, they were sufficient for a long time for the less frequently used values and no reorders were made for these categories. Therefore, there are no complete series on either the white-prepared or dark blue papers - even in this case one must speak of a majority. On the dark papers, the values of ½ kr, 2 kr, 4 kr, 5 kr, 6 kr, 7 kr, 12 kr, 15 kr, 30 kr and 72 kr (i.e. all kreuzer categories except: 25 kr, 50 kr, 60 kr and 75 kr and the suspended 10 kr stamp) and of the guilder values those of 1 fl, 2 fl and 3 fl have become known.

Since these stamps are sought-after collectors' items because of their striking coloring and since it is obviously easier to darken a light stamp than to decolorize a dark one, there are, as already mentioned, a particularly large number of "collector's forgeries". Among these are the ½ kr stamps in *letterpress printing ,* since the printing of this value had ceased before April 1860. The values

The denominations of ½ kr and 7 kr, as well as the denomination of 72 kr, only appear in full copperplate printing on Lombard blue paper.

Now comes the fourth and final paper colour: *pink* paper. Printing on this paper began in October 1861, so that the Lombard blue paper was not even in use for a year and a half. Since a change in issue took place when these pink stamps came into existence on January 1, 1862, all (non-suspended) stamp categories had to be prepared for wear. Therefore, there are complete series with this paper colour. Of course, no auxiliary book printing can be found on this paper. On the other hand, now - and before the coarser perforation that occurred in the second half of 1863 - the 6 kr and 5 kr stamps were regenerated with a change in type, so that both the older and the newer types can be found on this pink paper (with close perforation).

Its varieties have been mentioned earlier.

Here we must discuss a phenomenon known to collectors and its explanation in the documents. There are stamps (especially higher-value ones) that have reddish paper, so that at first glance one would assume they were from Lombardy. On closer inspection, however, it becomes clear that the natural print of these stamps is *brown* . This coincidence of the reddish paper coloring introduced for Lombardy with the brown color of the natural print intended for the other crown lands leads to the suspicion of forgery. In fact, there is now a report dated June 1864 from the Venetian finance prefect *Baron Spiegelfeld* - the same one to whom the very first idea of stamps can be attributed, as explained in the first chapter of this presentation - according to which he had found out that lawyers and notaries there in particular were buying stamps in Tyrol at the banknote rate and, after they had been artificially colored red, using them for documents and in court. Since, according to the decree of June 27, 1862, No. 33760-1963, the use of German stamps is not prohibited per se, but when entering such stamped documents the tax amount is demanded in hard cash and the party is reimbursed the amount paid out in banknotes, the persons in question are avoiding all hassle by coloring the stamps and still profiting from the respective premium.

Spiegelfeld did think that, because he had the bluish (medium blue) stamps of the non-Italian provinces in mind at the time, *such* blue stamps had been dyed red. This would not have been easy to do. The collector's items that have become known in this case also show that these stamps were not used for this manipulation, but rather older, narrow-toothed stamps printed on unprepared paper. The higher values of these stamps produced on whitish and yellowish paper were still available in many places in the form of worn-out copies.

b) Vandyk brown stamps

ÿ) *The papers of the leading types.* From the introduction of the Austrian currency onwards there was only one uniform set of printing plates for the general stamps and this was used, depending on the need, sometimes for printing the red rose stamps and sometimes for producing the vanity brown stamps. This allows conclusions to be drawn from one type of stamp to another with regard to the time of the occurrence of changes in graphic methods or changed types. It would not be so certain to conclude that up until the first introduction of the dark blue paper (for Veneto), i.e. in the first nine months of the use of the prepared paper, the use of paper in the entire stamp production was more or less uniform, so that one shade of paper was used for printing both types of stamps at approximately the same time. Since even for stamps printed at the same time for the same purpose, even for one and the same value, there was no strict insistence on using completely identical paper, such uniformity is even less to be expected for German and Italian stamps, especially since the orders and production for both groups were treated separately. This is already shown by the fact that the dates of the beginning of the use of *Hausner's* paper for the Vandyk brown stamps (beginning of August 1859) and for the red rose stamps (second half of September 1859) are considerably far apart.

With regard to the paper varieties, it is also important to note that the production of stamps for the non-Italian provinces was many times greater than that for the Italian regions, which had also been considerably reduced in size since 1859. The phenomena of stamping in the former regions are therefore far richer and more varied. Even at a time when the special feature of pink paper did not yet exist for Veneto, there were many paper varieties here that are sought in vain among the red rose stamps.

Dated documents show that a prepared paper was initially used for the brown stamps, which is even lighter than the shades known from block paper and which really only has a “bluish sheen”. This could possibly be related to the fact that in the first experimental paper productions (“creations”, as the official term adopted from handmade paper was) according to the evidence of the files, sometimes lighter, sometimes more strongly blued impregnated papers were produced. Of course, all of these had to be used up. This had probably already happened when the block was printed. Therefore, it does not contain these lighter papers. In a “sample book for stamps” created by the Court and State Printing Office in February 1875, there is a handwritten note regarding the paper for the second issue: “From 16 August 1859

the first delivery on chemically prepared paper; from September 1, 1859 onwards on bluish prepared paper:" Since this first date is completely exact according to the surviving documents, the second date should also be exact.

The vandyk brown stamps also feature a grey, medium-thick, very thin paper on which the 6 kr, 7 kr and 72 kr values are printed, both of the latter in letterpress printing. Since the production of the 72 kr stamps only began in the last days of November 1859 and their printing on grey paper could not have taken place earlier, this paper was not used until December. The vandyk brown 7 kr stamp, however, already appears on several slightly more strongly coloured block papers, side by side in letterpress printing and in *copperplate printing .* The use of grey paper must therefore have been introduced at a later stage in the use of block papers.

The more heavily colored, later papers of the first production period, when viewed from the printed side, have a peculiar yellow-green appearance that is best described as reseda-colored. It seems that this is not just due to the contrasting effect of the brown natural printing, but that the papers of that time also had a certain yellow tinge.

If one compares these papers with stamps from later phases, which show approximately the same degree of blue coloration, what has just been said becomes much clearer than any detailed analysis: the later stamp papers are of such a pure blue that there is clearly no trace of yellow in them.

On these papers, which have more intense colors, the denominations of ½ kr, 7 kr and 72 kr are printed in letterpress. In addition, the denomination of 7 kr is found on several different papers both in letterpress and in copperplate printing. This means that these various papers were used side by side both before and after the change in the graphic process, and furthermore that the 7 kr stamp was the first of the leading types to leave the auxiliary letterpress printing system. It can also be concluded that at the same time that white-prepared papers and even the almost completely white type were already being used for the Lombard stamps, reseda-colored paper from the first group was still being used for the brown stamps. White-prepared paper therefore came into use earlier for the red rose stamps.

In order to use the "first-generation papers", as the State Printing Office called them - or the "block papers", as one could call them *a potiori ,* in order to gain an immediate clear idea by referring to the familiar appearance of the bluish red rose stamps - the Vandyk stamps were also printed on light-prepared papers, which was admittedly an experiment undertaken by the printing office for the sake of a better graphic appearance of the stamps.

Because of the much greater demand for brown stamps, the white-prepared papers play a much more important role here than in the Lombard-Venetian stamp system. Many more values were printed on these papers and the color and structure varieties are also incomparably more numerous.

If one tries to arrange these varieties according to their greater or lesser similarity and, if possible, to group them together, it becomes clear that here the same differences that were found *in nuce* in the white-prepared Lombards recur in a richer development. Here too, there are brands that have almost no blue tinge, but instead a sometimes fainter, sometimes more pronounced yellow tinge, so that they can sometimes only be recognized as belonging to this group on the basis of the hydrochloric acid reaction. Then there are other brands that have a bluish-green tinge, which makes them seem to be reminiscent of the papers of the first production. Their appearance goes up to almost pure white; the lighter it becomes, the more the tinge seems to go towards green. This second group could also be divided into two sub-groups, one of which includes the less transparent papers, the other the mostly thin papers, whose transparency goes up to a glassy appearance.

If one now asks about the occurrence of the leading types in these papers, the following results:

On the yellow-tinged papers, the 7 kr value can only be found in full copperplate printing, but the ½ kr and 72 kr values are still only found in letterpress printing. The first subcategory of white papers with a green line, the less transparent one, only contains the 7 kr value, and in copperplate printing. The thin-glass subcategory contains this value in copperplate printing, but also the ½ kr and 72 kr values, both also already in full copperplate printing. The papers of the last two values are clearly different, since the ½ kr stamp (with a number of other glassy stamps) again has the slight yellow tint of the first production (and not that of the first subcategory of white-prepared stamps). These stamps of ½ kr and 72 kr are of course quite far apart in time. Full copperplate printing of the ½ kr value on the Lombard stamps began at the time of white-prepared papers, i.e. at the beginning of April 1860 at the latest; for the value of 72 kr, he only started with the Lombard blue paper there, and therefore not before May 1860. This would then mean, as is already evident from the more numerous white-prepared varieties of the brown stamps, that these papers remained in use and were still used in the old Austrian regions longer than the dark blue paper was already in use in Venetia. It can also be concluded that the yellowish sub-division was the older one and that the glassy papers form the last part of the second sub-division.

With the full copper printing achieved in all three leading types, they stop, to provide detailed information regarding the chronology. You have

furthermore, it only has a negative meaning, so to speak, since the occurrence of the same in full copperplate printing indicates that the paper variety in question is to be classified *later* than those previously mentioned. This is not without value, since the intensity of the coloring fluctuated several times in the course of time and without such a tool one would be tempted to add later papers to similar older varieties as closely related.

If one wanted to briefly summarize the chronological results achieved, they would be the following:

1. The *order* in which full copper printing was introduced has been established *for the three leading types .* The 7 kr value was the first to reach this point, then the ½ kr value, and finally the 72 kr value. For the first two values, this step occurred before the middle of April 1860, but for the third, not before May 1860.

2. Regarding the paper varieties of the vandyk brown stamps: the use of the more vividly coloured block papers extended to such an extent that the 7 kr: value already reached the full copperplate printing, but the ½ kr value not yet; of the light-treated papers that follow, the yellow-tinged ones are to be ranked earlier than the green-tinged ones; the latter were still used here when the Lombard blue paper was already in use for Lombardy-Venetia.

This might be the appropriate place to note that there are also sample impressions on *brown* paper of the three aforementioned master types. All three are printed using auxiliary letterpress printing. The ½ and 7 kr values have a brown natural print, while the 72 kr value has a red natural print. An examination of the papers shows that they are clearly different from the paper on which the brown sample impression series mentioned elsewhere (Chapter XVII) was printed in one of the last two months of 1858. These three values did not even exist at that time. The sample impressions of 7 and 72 kr both have a brown paper of a strikingly rough texture and are certainly different from the paper of the ½ kr stamp. This leads to the probable conclusion that the ½ kr value was printed at a different time and the 7 and 72 kr values again at a different later time, but that the latter two were printed at the same time. The printing of the ½ kr pattern cannot have taken place before May 10, 1859, the day on which the printing house was given the order to produce stamps of this value.

Likewise, it cannot have been made after mid-April 1860, because at that time the auxiliary printing was abandoned.

The production order for the 7 kr denomination was issued on May 26, 1859, and that for the 72 kr denomination on November 19, 1859. If both sample impressions of these denominations were printed at the same time, as the paper makes it likely, then this only happened after the last date given, but also before mid-April 1860, because the 7 kr denomination had already reached full copper printing by then.

With regard to the printing of the ½ kr pattern, it can be concluded that it was also made before May 26, 1859 (and therefore in the two weeks between May 10, 1859 and the date just mentioned), because otherwise it would be incomprehensible why it and the 7 kr value were not produced at the same time and on the same paper. Finally, it can be assumed that with regard to the 7 kr value, the production of a pattern print was forgotten in the first period after its creation and only later made up for when the 72 kr value was added.

A further conjecture of this kind is not possible on the basis of the material known so far.

ß) Thin horn papers and increasing blue tones. In the next phases of the stamp industry, which we will now discuss, there is some uncertainty regarding the paper varieties, because there is no documentary evidence, the leading types for two years do not provide any details and, finally, the dated pieces only provide very approximate information. This uncertain period lasts from approximately the middle of 1860 to December 1862. However, one thing is certain: two distinct groups of paper that are now appearing belong to this period. However, further details can only be given by way of speculation.

These two groups of paper are: the *thin horn papers* and the *more strongly coloured* papers. The former seem to be directly related to the glassy white prepared papers. Certain thin horn papers are similar to them in colour and due to their high transparency and, when viewed from above, are reminiscent of the first-generation resedaton, but already have special, unmistakable characteristics: the *stiff* texture, independent of the greater or lesser paper thickness, which makes them crackle noticeably when touched, but above all the horn-like appearance of the surface, reminiscent of parchment paper, which is probably due to a change in the resin sizing due to excessive drying. The term “thin horn” does not mean that these are *thin* (horn) papers, but that the cloudy transparency and appearance of the papers is similar to that of thin horn plates. Without peeling them off and removing the glue, these brands are difficult to recognise. There are several types of them with slightly decreasing transparency and a fairly significantly increasing blue colour. *Without any error,* the beginning of this paper deposit would have to be placed in the middle of 1860.

The second group, which no longer shows the keratinization of the paper pulp, includes fairly thick and little (or almost not at all) transparent papers.
In its varieties, a rich range of increasingly intense blue tones can be found, so that this appears to be its characteristic feature. In its lightest varieties, lighter than the majority of thin horn papers, its colouring increases to a blue tone that

almost bordering on Lombard blue. Its lightest shades would be difficult to distinguish from the strongest colours of the block papers and the white-prepared papers with a green tinge if they were not clearly marked by the fact that *both* new types of 5 kr and 6 kr denominations, which will be mentioned later, appear on them, which indicates the time when they were used. The darkest shade of this paper would be described as medium blue. Based on the documents and the frequency of occurrence, it can be assumed that this was the normal paper that *Auer* had in mind. From some dated pieces it can be seen that these papers appeared, if not earlier, then almost certainly from October 1861 onwards. One should not imagine that the strong blueing that had become standard for Lombardy had also taken root in this area and that people gradually moved from light to ever stronger shades. Rather, it seems, as the products at the end of 1862 show, that several, and indeed very different, colour varieties were in use *side by side* at all these times.

It was the medium blue papers that, as already mentioned, gave rise to the switch to pink paper for Veneto. They were the only ones that were so similar to the Lombard blue paper and the only ones with which the contrast between the paper colour and the brown natural print was so slight that confusion with the Lombard blue stamps bearing a madder red natural print was possible, to the detriment of the state treasury.

A few examples of the medium blue stamps also show a peculiar phenomenon: the underside of the stamps alone retains the medium blue color, while the upper side has a lighter color that fades into a pale gray-yellow. This is probably a case of the upper side becoming discolored due to the decomposing influence of light. Since this was not noticeable up to then and it must be assumed that even such older, non-discolored *Hausner* papers were often exposed to the sun, it seems that a different blue preparation was used as a fining agent in the paper production.

F. THE TYPE CHANGE OF BOTH VALUES TO 6 KREUZER AND 5 KREUZER

The major fee amendment of 13 December 1862, RGBl. No. 89, was issued with the express intention of significantly increasing the state treasury's income from the fee differential. For this reason, numerous tariff provisions of the fee law were amended. The considerable financial impact that was expected from this can be seen from an order from the Ministry of Finance, which was sent to

the State Printing Office. It was stated that the annual demand for stamps would probably increase by about two thirds (66 percent) and that the 5 kr stamp in particular would increase by more than 50 million pieces. The printing office should make it a point to organize its work in such a way that all those who were wearing out could be provided with a six-week supply on January 1, 1863, when the new regulations came into effect. The special thing about the 5 kr value was that the amendment made the waybills and invoices of merchants and tradesmen, which had been exempt from duty under the Fees Act of February 9, 1850, subject to a 5 kr stamp. The development that traffic in general and postal and rail traffic in particular had achieved promised the state treasury not insignificant income from this source.

The postal authorities' obliteration of the stamps on the postal waybills meant that 5 kr stamps used for postal purposes could be found, which are a special collector's item. They also exist from later times, since the postal waybills created in 1871 with imprinted stamp marks (later known as "postal accompanying addresses") were initially introduced only optionally and anyone could produce a postal waybill by hand using a 5 kr stamp or use a private blank.

The task set for the State Printing Office seems to have been beyond its capabilities. Perhaps other retarding circumstances also came into play, but in fact the Ministry of Finance saw itself compelled to inform the State Printing Office in mid-January 1863 that

to remember, the The central stamp wear store was an insufficient for the number of deliveries. The printing works pointed out that they had been working with the greatest of effort since receiving the order and would "deliver" the ordered quantities in full by February 18, 1863. However, a contemporary statement shows that at that time even orders from September 1862 had not been fulfilled. Work now began all the more feverishly. It is therefore understandable that they used all the stamp paper that was available for printing and that they did not want to risk being late with deliveries due to fine differentiations in the paper shades. This haste during the accelerated production period and during the period immediately following it may explain why the printing works soon used up all the leftover Lombard blue paper without waiting for approval for this procedure.

The increased production of the 5 kr stamp is probably connected to the fact that a *new* type of this stamp has now appeared. When the Austrian currency was introduced in the autumn of 1858, the typographical overprint of the value legend was initially used for this stamp in addition to the blank print of the old 6 kr CM design. Then

At the turn of the year 1858, plates were adapted by engraving the value legend piece by piece. These plates have now disappeared. 5 kr stamps in full copper printing appear, which, due to the complete identity of the value legend on all pieces and the purity and richness of detail of the stamp plates, clearly show that the original engraving without legend was used, the new legend was engraved in a galvanic copy, and the number of multiplicates required to put together a complete plate was then taken from such a new original type.

In the case of the 6 kr denomination, such a third degree regeneration also occurred in the same phase of the 1858 issue. The difference between the two cases was that for the 5 kr denomination, an entire blank deep plate of the original 6 kr design had been prepared immediately beforehand by engraving 90 legends, while for the 6 kr denomination, the preparation of the plates had merely consisted of grinding out the letters CM (from a raised plate).

During the preparations for the law of 13 December 1862, RGBl.
No. 89, the 6 kr stamp was estimated at 48 percent of the total replacements required. A wear and tear report from 1863 shows that this value was in third place among the most used stamps (5 kr with 14 million, 15 kr with 9 million, 6 kr with 8 million, 7 kr with 7 million, 30 kr with 6 million and 50 kr with 4 million pieces annually), which together accounted for 48 million, more than two thirds of the total annual requirement of 62 million pieces . *The* most used stamps were of course also the most printed, and this resulted in the relatively faster wear and tear of the printing plates in these categories. The increased consumption of printing plates then led to a more frequent use of the raised plates (patterns) and, in turn, the master plate, and since every production of a galvanic deposit causes wear and tear on the plates used, these too, as has already been mentioned several times, gradually become unclear and unusable. Before the introduction of *Hausner* paper, 6 Nkr stamps (on non-impregnated paper) were printed in such poor quality that the worn condition of the relevant (mutilated) plates was obvious. The letters of the legend in particular show a similar aphoristic shape to that which appears to be characteristic of letterpress printing. At the bottom of the number 6, the two lines often no longer connect, which led collectors to distinguish between a "closed" and an "open" type. The absence of such a connecting piece of the letters in the printed stamp does not, of course, allow a reliable conclusion as to whether only the printing plate or the raised plate has lost the corresponding part of the engraving through wear and tear. Even in the latter case, under certain circumstances, sharp and complete impressions may be found again later, because one usually uses the most commonly used stamps (including the 6 kr value from the beginning)

He had heard of this), and as a precaution he prepared *several* raised plates as a supply, so that he was secure for a longer period of time. This is why the *Hausner* block papers no longer show such neglect in the printing of the 6 kr stamps. Even among the white-prepared papers there are still prints of this value with excellent sharpness. If they later lose precision, this probably indicates that over time the entire supply of raised plates and also the master plate had reached an unsatisfactory state.

This may have been the reason for a third degree of regeneration when the prospect arose that this stamp would be produced in even greater quantities from now on. It was necessary to think about making arrangements to ensure that the printed product looked neat and also met the requirements of protection against counterfeiting as completely as possible. Since the transition from the stamps of the Convention coin to those of the Austrian currency only
High plates of the 6 kr stamp were suitable for further use, from which the letters CM had been ground away, all other plates and individual pieces and probably also the galvanic plate with the copy of the stamp plate into which the engraver had engraved the legend 6 kr CM had been melted down as no longer usable. Only the original engraving of the stamp plate, which had no legend at all and therefore no reference to the convention currency, was still there. The legend 6 kr was now engraved again in a galvanic copy of this and used to produce multiplicate plates. This engraving is easy to distinguish from the older one, since the number 6 is considerably wider than before and the upper right arm of the letter k forms a noticeably wide opening.

With the new 5 kr type, a comparison with the earlier form of the legend - except with regard to the wealth of detail - cannot be carried out precisely, because there had previously been 90 different designs. With regard to the ligature kr, on the other hand, a comparison with the new 6 kr legend is obvious, since there is an unmistakable similarity here (especially in the letter k), so that the same engraver evidently produced both engravings.

Regarding the actions of the State Printing Office during this period of increased activity, there is a document which shows that for the supply per first quarter of 1863, two copperplate printing presses were in operation from October 3rd to November 22nd, 1862, each of which had an average output of 1000 half sheets per day. Starting from November 24th, when the agreement was received about the expected large increase in demand (as a result of the amendment already passed in the House of Representatives), three presses were put into service and from December 1st, four presses were put into service. In a report dated January 26th, 1863, the printing office even speaks of a

daily delivery of 5,000 half sheets, which shows that a fifth copper printing press was also used to produce stamps. The main contingent of the order was the 5 kr denomination with 104,000 sheets, the 6 kr, 15 kr, 30 kr and 50 kr denominations with 50,000 sheets each and the 7 kr denomination with 40,000 sheets. Of the two denominations in question, 84,000 sheets of 5 kr and 27,400 sheets of 6 kr had already been delivered by January 26, 1863. The rest of the former stamps were promised to be "delivered" by the end of January, and the latter by February 18. It is noteworthy that, in addition to a small order for 4,000 sheets on September 23, the printing works received an order for 50,000 sheets on December 15, 1862 and an order of the same size on January 3, 1863 for the 5 kr value. For the 6 kr value, it received an order for 31,000 sheets on November 8 and another for 20,000 sheets on December 15. Accelerated production of the 6 kr stamps could therefore begin as early as November 9, 1862. However, according to its report, the printing works did not begin producing the 5 kr stamps until it received information on November 25 about the expected level of demand for this stamp category, and without first waiting for the order.

If these circumstances alone were to show that the new type of 6 kr stamp must have been created *earlier* than that of the 5 kr stamp, then there are other factors which necessarily lead to the same conclusion.

In the case of the 6 kr stamp, which was one of the most used, the State Printing Office could have already succumbed to the need to refresh the engraving due to the degeneration of the plates and the constant high demand, even without knowing any details about the fee amendment and its consequences.

The stamp value of 5 kr, which had until then only led a modest existence, only came into their sights as important in the last days of November 1862. Now the engraving and the successive production of multiplicative plates by electroplating is something which, as already mentioned, takes a considerable amount of time. It can therefore be said to be impossible that the multiplicative plates with the new type would have been in use when the 104,000 sheets with a value of 5 kr were produced. This batch of stamp sheets must therefore still have the old type. The new 5 kr type could only be used in a further production.

This fact, which arises from technical considerations, is now not only supported by numerous dated pieces, which show that 6 kr- stamps of the new
Type already in the first months of 1863, 5 kr- stamps of the new type, however, only appeared in larger numbers around the middle of this year, in accordance with, but also with the conclusions that were drawn from the then-

used paper varieties. The collectors' stocks confirm the fact already mentioned that during stamp production at the turn of the year 1862, all stamp paper was used up that was only available if it did not correspond to the selected standard color. This is why several distinct color varieties with different light blue tints (down to very light) can be found, which were used both for 5 kr stamps of the old type and for 6 kr stamps of the new type. There are also some papers of a similar type that appear for 6 kr stamps of the old and the new type. All of these papers were in use during that period, and it is likely that the first production (as early as November 1862) of the 6 kr stamps of the new type took place on papers that had already been used for the same value (old type), and that later (from December 1862 onwards) 6 kr stamps of the new design and 5 kr stamps of the old design were printed side by side on several papers of the same type. It was even possible to identify a paper on which all three of these stamps (6 kr old and new, 5 kr old) were printed. The new 6 kr stamp also appears on other papers of the same (light blue) character, which it has in common with other denominations printed at that time. Since these denominations also include 4 kr stamps that were not even ordered at the time, the use of these papers must have either begun before November 1862 or continued well into 1863.

As there is no record of the date when the new multiplication plates for the 5 kr denomination were ready and put into use, it is not possible to say exactly. However, a sufficiently precise date can be given by the fact that when the Lombard blue paper stocks were used up, which is to be placed in April 1863, these new plates were already in use. On this paper, the 5 kr and 6 kr denominations are found exclusively in the new type.

The 5 kr value of the new type was also printed on other papers in 1863 that are worth mentioning. One of them has the medium blue standard tone, which had already been abandoned as a guideline during the preparations for the amendment. The printing of these medium blue 5 kr stamps must have taken place in the second half of 1863. For the same paper was also used for the values of 15 kr and 2 fl, and the latter value appears in both narrow and wide perforation, which means that this paper was still in use after October 1863, when wide perforation had already begun. In April 1864, a printing of this value (2 fl) is documented.

A second paper of the 5 kr stamp has a light blue tint, like the ones that were used to produce stamps at that time. However, it is noticeable due to its lack of transparency, its thickness and its yellow-green shimmer, which are characteristics of

make it so similar to the watermarked paper that will appear next year that it could safely be attributed to it if the close perforation did not reliably assign the mark its chronological position.

Most remarkable of all is a third paper, on which 5 kr stamps of the new type appear, but still with close perforation: it is an evidently very fine quality of perfect whiteness - a coloring that was not known in the stamp trade until then. This paper and its provenance will be discussed further below.

It should be noted here that, due to the use of the same plate set for the Lombardo-Venetian Kingdom, it seems reasonable to assume that the type change of the values to 6 kr and 5 kr also occurred at the same time for both stamps on pink paper (i.e. at the end of 1862 or in the spring of 1863). In fact, both of these values are found on pink paper and with close perforation in both the older and the newer types.

CHAPTER XX

EVENTS IN THE PERIOD FROM 1864 TO 1866

A. THE FOURTH ADDITION TO THE INVENTORY

1. The introduction of a new stamp rate. The strong tightening of the fee tax, which had been brought about by the amendment of December 13, 1862, RGBl No.89, V.Bl No.55, could not be maintained in all respects in the long term. First, concessions were made in those areas which were most important for trade and transport. The law of February 29, 1864, RGBl No.20, V.Bl. No.14, established a series of relevant reductions and mitigations. One of the most important of these for the stamp system was the reduction of the fee rate for waybills (other than postal waybills) from 5 kr to 1 kr if the transport distance was less than five Austrian miles (38 kilometers). The same reduction from 5 kr to 1 kr also applied to commercial invoices under 10 fl. For the newly created tax rate of 1 kr, ö.W., a new general stamp had to be introduced and care had to be taken that the parties everywhere would be able to stamp their consignment notes and invoices with 1 kr when the new law came into effect. The Ministry of Finance commissioned the Court and State Printing Office for this purpose.

on December 28, 1863, no. 63848-4949, “to have a new type of one-kreuzer stamp produced as quickly as possible and to deliver 2,000,000 German and 200,000 Italian stamps to the Central Stamp Office without waiting for an order from the Central Stamp Office.” All state financial authorities were informed of this order and the reason for it. However, no general announcement was made either then or later. This resulted in the strange consequence that the stock of stamps had increased without the binding standards providing any information about this and without even any non-binding information about it being found in the printed standard collections. As far as the technical implementation was concerned, the Ministry of Finance gave the State Printing Office complete freedom, as had been the case with the three previous additions to the 1858 issue. The only thing that was impressed upon the printers was that, in view of the low nominal value of the new stamp, they should produce this stamp as cheaply as possible so that a large part of the profits would not be taken up by the acquisition costs. At the same time, the Ministry of Finance issued a further order in order to be absolutely certain that no embarrassment would arise when the new law came into force. Since the fee amendment was to take effect on the day of publication, but this seemed uncertain in advance due to the still outstanding sanction, and since it had to be taken into account that the production and dispatch of the 1 kr stamps might not be carried out in time, an immediate special production of half a million German stamps and 100,000 Italian stamps at ½ kr was ordered as a temporary measure, so that stamps of this type would be available everywhere in sufficient quantities and everyone could use two such stamps at ½ kr for invoices and consignment notes in the lower fee class in the absence of 1 kr stamps.

In creating the new stamp, the Court and State Printing Office accommodated the requirements of rapid and inexpensive production. Both of these conditions ruled out the use of copperplate printing and made letterpress printing seem inadvisable.

A new square stamp design was created for the 1 kr stamp. This was the first time that the previous tradition of circular stamps had been abandoned, and the connection between the stamps and the old stamp paper had already ended. The choice of a square stamp design, which accentuated the space intended for overwriting (the writing field) even better than the round stamps had done, created a new tradition that has continued to this day.

The lower part of the image of the 1 kr stamp is occupied by a palm leaf arabesque cartouche, which alludes to the purpose of the

Stamp contains the rather primitive depiction of a steamship and a locomotive with trailer. The upper part of the image is filled with horizontal hatching, which encloses a freely suspended double-headed eagle. Below this, the hatching leaves a rather irregularly shaped space empty, in which the value legend 1 Kr is located. Since the legend was placed in the printing block itself, this is a full-book print. The stamp measures 9 lines high and 8 lines wide.

II. The origin of the new stamp design. It is not without interest that the square shape of this stamp was not the result of a deliberate fundamental deviation from the long-standing tradition, but, like many things in the Austrian stamp system, was prompted by the need of the moment and urgency. The new stamp had to be produced quickly and cheaply. The Court and State Printing Office therefore had to avoid having to ask an artist to create a corresponding design in order to save time and money. It therefore selected something from the drawings in its possession that seemed suitable for the present purpose. That this is actually what happened is evident from a comparison of the new stamps with an older trial print for 1 kr CM stamps. In an (extremely rare) series of such trial prints for 1, 2, 3, 6 and 9 kr, which was produced around the turn of the year 1851, the 1 kr value has exactly the same ornamental design as the new stamp. Only now the whole square appears framed with a second line, the post horn at the bottom of the drawing has been omitted and in the hatching in the upper part of the drawing, which in the proof (made in copperplate) represented clouds, the carrier pigeon floating in it has been replaced by the double-headed eagle. In return, the double-headed eagle occupying the middle of the proof with the legend “KK Post-Stämpel 1 Kr.” surrounding it had to be omitted and the new value legend 1 kr was added here. Steamship and train appear to have been the decisive factors in the choice of this older drawing for the new stamp value.

If one looks more closely at this older drawing, the asymmetrical cartouche with a kind of scroll edge and its terminating in palm leaves is very reminiscent of the drawing of the stamps for 4, 8 and 14 fl CM. One would therefore be tempted to consider Geander Ruß as the designer, which is also indicated by the execution of the double eagle, in particular the presence of the order chain and the absence of the tongues knocked out on the eagle heads.

Here we would like to make a few comments on the origin of this series of trial prints for stamps, as their genesis is not known in philately. The values of these trial prints (1, 2, 3, 6 and 9 kr CM) alone show that the latter were only issued after 16 May 1850. The first Austrian stamps, whose rather modest design intended for letterpress printing was accompanied by the Trade Ministerial Decree of

5 February 1850, Z.61 HM, was to be executed in the values of 1, 2, 3, 6 and 12 kr and the change of the value from 12 kr to 9
kr only on May 16, 1850. These experiments cannot therefore date from the time of the first preparations for the introduction of Austrian stamps. As soon as the designs for the first stamp issue were chosen, they were described as merely a provisional solution and a more suitable new design was envisaged. As in the classic country of tax evasion, the Italian provinces, there had also been repeated use of previously used stamps (i.e., replacing them and erasing the traces of obliteration) and, at the invitation of the Minister of Trade, *Baron Bruck,* the emeritus Viennese professor *Meißner* had drawn up a report according to which - as later also suggested by the painter *Franz von Zalder* mentioned above (page 156) - the most effective protection against such malversations could be found in using colors with the same binding agent for printing the stamps and the obliteration, because removing the obliteration would also remove the stamp image, Auer was *invited* to carry out relevant experiments. This decree of June 18, 1851, signed by *Baumgartner,* who had since become Minister of Trade, was not implemented by *Auer* until November 18, when he returned from a visit to the London World Exhibition. *Auer* evidently did not like *Meissner's* idea and the experiments ordered by *Baumgartner* on this basis to print stamps with glue, gum or gum surrogate inks. He had his own ideas that he wanted to implement in the field of stamps. The first stamps all had the same design, but different colors. *Auer* thought it would be more practical to print all stamps with the same color, but give them a different design. It is remarkable what arguments he used to make his own plans seem plausible when *Meissner's* suggestion presented itself . He assumed that what *Meissner* wanted had actually already been realized, because both the printing of the stamps and the obliteration were done with letterpress ink. If the obliteration had as much time to dry as the stamp print, it too could no longer be dissolved (as a result of oxidation). Auer then says that it would be "desirable to stick to *one* method , i.e. *one* color for the obliteration, namely printer's ink, which is still considered the most durable and cheapest. In order to make this possible, however, the different colors for the various categories of stamps would have to be eliminated, because otherwise every postal worker would need a different color for obliteration for each category or different color, or would come into conflict with the stronger, more durable color printed earlier, which has already dried out more."

There is no doubt that this is an exaggeration. But what *Auer* then goes on to say is interesting: “The most humble person believes that chalco- or chemigraphy should suggest a characteristic feature for the printing of the postmark and for each category of 9, 6, 3, 2 and 1 kr, e.g. the head of Mercury in different turns and sizes, because facial features are easy to remember and the directions of the physiognomy can be distinguished very characteristically.”

In this respect, *Auer* agrees with *Franz Xaver Wurm's* "new principles" of 1839, just as he implemented *Swabia's* initially opposed idea of adding a white relief print to the stamps in the first stamps of the Austrian currency (1858), which, since they contained the emperor's head in relief, also go back to *Wurm's* idea.

Auer's report then continues: "I have already had ten such heads engraved in copper in the size of the existing stamps (in antique form, namely five male and five female heads), and with this I also had the further idea of letting one row of heads reach the public in case any counterfeits turn up, while keeping the other row of five heads back. If there is any doubt about the authenticity of a stamp, one puts half of the female head on the other half and so the female head must become a male head and vice versa, which is impossible with a counterfeit because the dots and lines cannot fit together if the forger does not have the other head."

Here *Auer* does not express himself very clearly. To understand what he means, one must look at the ten heads he mentions, which are illustrated in the work “The Postage Stamps of the Austrian Empire and the Eastern Hungarian Monarchy” by H. *Kropf,* Prague 1908, based on a sheet in the Berlin Imperial Postal Museum. When *Auer* says that he had ten Mercury heads engraved in copper in various shapes and sizes, this is correct; however, it is less precise when he then divides the Mercury heads into five male and five female.
The latter are also Mercury heads with the wing attributes; only they are beardless, while the other five heads have rich full beards. The special feature is that the five bearded Mercurys have exactly the same faces as the corresponding figures. The engraver has evidently engraved the curly beard hair into galvanic copies of the beardless faces. This made the faces longer. In order not to change the graphic position of the heads in the square black images, the beardless heads appear pushed up into the upper part of the image in a somewhat asymmetrical manner. By cutting the stamps into two halves, *Auer* cannot have meant a division along the vertical central axis, but only along the horizontal central axis. If one does this, the result is that the two upper halves of the stamp are identical, while one of the two lower halves of the stamp (with the lower parts of the face) has the beardless drawing of Mouth

and chin, while the other contains the bearded design. So you could easily swap the lower halves. But what would be gained by that? If you are assessing a forgery (for example a beardless stamp), the lower half of a genuine stamp with a beardless face will not fit the upper half of the forgery any better than the lower half of a stamp with a beard. The assessment will be even more reliable if you do not take the stamp with the beard into account at all, because the engraver of the beards, as the ten illustrations show, also reached beyond the lower half and changed the connection slightly. The attachment of the beard was therefore a pointless gimmick.

The aforementioned Auer project, which was rejected by the Ministry of Trade, Industry and Public Works on February 2, 1852, had to be mentioned here because *on the same sheet* with the ten Mercury heads there are also three other copper engravings of planned stamps, namely the values of 1 kr, 2 kr and 3 kr, of which the 1 kr image is the design with a steamship and train mentioned above and which served as the model for the new 1 kr stamp. The fact that these three values were printed at the same time justifies placing the creation of these three values in the same period from November 18, 1851 to February 2, 1852 as that of the ten Mercury heads, which *Auer* only mentioned on November 18, 1851 but was not yet able to present.

The two other engravings of the whole series (the values of 6 kr and 9 kr) belonging to these three copperplate engravings (of the values of 1 kr, 2 kr and 3 kr), which must have been printed on a second sheet, have been preserved by a strange coincidence. In 1878, the Viennese Playing Card Manufacturers' Association proposed that instead of stamping the playing cards (which was done on a single sheet of cards), in which case the replacement of starch ink with oil ink had become questionable at the time, only stamps should be used that could be affixed to the envelope of the deck of cards. The Court and State Printing Office considered the introduction of sealing stamps - as was actually implemented in the reform of the Playing Card Stamping Act - to be a practical aid, but only in an accessory role *alongside* the corresponding "designation" of a sheet of cards; the latter designation could very well also be done using its own stamps. To illustrate this, the printer stuck a type of stamp onto some cards, which was printed on the finest paper using copperplate printing (in several different colors) and, after sticking it on - as already mentioned on page 153 - was satinized to the highest degree, while other cards were covered with a layer of varnish covering the entire card. In fact, the problem of the stamp not being perceptible to the finger at its edges - which is essential due to the nature of the card games - was solved satisfactorily.

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was not sure whether this would also apply to mass production, this project was not realized. On the card sheets that were adjusted with such stamps by the Court and State Printing Office on this occasion, there are now the two values (6 and 9 kr) of the stamp design series from the end of 1851, which are missing on the blue with the ten Mercury heads. The fact that the whole series belongs together is beyond doubt based on the type of design and the legends. This is also ruled out by the fact that on some card sheets, in addition to such colored stamps, Mercury heads of 1 kr (with and without beard) also appear glued on. The only deviation is that the print on the Mercury heads and the values of 1, 2 and 3 kr is black, while the 6 and 9 kr stamps used in 1878 are, as mentioned, made in various bright colors. It is therefore possible that in the latter year no prints in stock (dating back to 1851) were used, but that only the old, useless printing blocks were used to produce some prints on particularly thin copper printing paper.

Auer probably never submitted this series of designs from 1851 to the Ministry of Trade. According to his report of November 18, 1851 regarding the ten Mercury heads, he was informed on November 24, 1851 that the Section Councilor and General Postal Director *Wilhelm Böcking* had been instructed to negotiate quickly with the Court and State Printing Office about the nature of the new stamps that had been requested, which was almost tantamount to a rejection of the application - which was then made even clearer on February 2, 1852. In this situation, Auer probably abandoned all the preparatory work for the copperplate printing of the stamps, which then led to them only being known to philately in part and inaccurately.

As for the 1 Nkr stamp created from the planned 1 kr CM stamp, it emerges from a later comment by Worring (during negotiations on the production of special stamps for Hungary in 1867) that the design of the new 1 kr stamp was initially made in woodcut. This is reminiscent of the above-mentioned advice of the head of section *Baumgartner* (1849) regarding the production of stamp seals in woodcut and their electroplating. For electroplating work from woodcuts, it is usual to press the woodcut into wax or gutta-percha after dusting it with graphite dust, and to first hang the impression, not the woodcut itself, in the electroplating apparatus. The way in which one can get from the single piece to the full plate containing a large number of such pieces can be twofold in such a case: either one presses the woodcut into wax or gutta-percha as often as necessary and combines all these impressions into one plate,

from which the printing plates are then taken by electroplating, or a galvanic copy is made from the first individual wax impression and used as the starting point for further production, until the required number of such pieces can be soldered together to form a complete plate. The latter method will bring about greater uniformity of the individual stamps, because when pressing them multiple times in wax or gutta-percha, considerable deviations in individual details can easily emerge. If the differences in the 1 kr stamps are to be judged from the noticeable differences, the first-mentioned method seems to have been chosen in this case, and it seems that multiple impressions of this kind must have taken place here. The printing (high) plates were then produced using the finished copper matrix (full plate size) or plaster copies of it, for which type metal was used. This explains why 1 kr plates never appear in the subsequent melting down of “printed” copper plates.

The underprint of the stamp is a natural print of just over 13 lines high and over 9 lines wide. It cannot be said whether this natural print was made from a new leaf blue or whether a corresponding piece was simply cut out of a galvano that had been in existence since around 1854. The closest similarity here is to the mild natural print of the 4 fl. stamp. The botanical type of leaf has probably remained the same. In the upper part of the natural print, a square space has been left for the black stamp. The writing metal used for these natural printing plates was not able to withstand the large volume of production of this stamp in terms of durability.

This is why it most often happens with this value that the veins are no longer recognizable in the underprint. This then appears as an amorphous tone print (the latter term later became quite common in the state printing office for stamp underprints) in brown color.

III. Chronological clues. The 1 kr stamp is of particular importance for the chronology of the 1858 issue. It is one of the chronological clues for the dating of the new type of coarser perforation, which was referred to above as the 1863 perforation. It is documented that the first stamps of the new value were printed in January and February 1864. Since all 1 kr stamps have the new perforation and only very exceptionally do such stamps with mixed perforation (i.e. with the 1854 perforation on two sides and the new perforation on the other two sides) occur, and a 1 kr stamp with the old perforation on all four sides has never been found, one would be tempted to build a whole series of apparently quite undoubted conclusions on the basis of these observations. For example: that the change in perforation occurred in January 1864; Furthermore, the older narrow and the new wider perforation cuts only exceptionally and only for a very short time next to each other

were used; that the mentioned 1 kr stamps with mixed perforation belonged to the January production; and finally, that the paper used for this purpose (like the paper of three types of 25 kr stamps, which also have mixed perforation) was in use in January 18644. In reality, however, these conclusions lack complete coherence with regard to the temporal moment. Two documents have been preserved by chance which, in addition to other interesting information, also teach the lesson that one must exercise great caution when drawing conclusions from technical observations. From these documents it can be seen that the stamps with “mixed”

Perforation of 25 kr and 1 kr could not have been produced at the same time, but rather there must have been a period of several months between them. This then further shows that the change in perforation was not a matter of a few days and would have taken place in January 1864, when the first 1 kr stamps were printed: it actually began much earlier, but lasted until January 1864. Why there are even more stamp categories with mixed perforation cannot be said.

The first of the two documents mentioned is a certificate written on a type of printing paper showing the stamps delivered by the State Printing Office to the Central Stamp Wear Magazine in the months of November 1863 to April 27, 1864. Since the printing office did not keep any stocks, but delivered its products on an ongoing basis, the certificate also shows what the Court and State Printing Office had printed during this period.

The second piece is a certificate from the printing house dated 9 July 1864 about the Waste papers delivered to the Directorate of the National Debt for incineration.

The first document lists the printing of stamps of 20 fl, 2 fl, 1 fl, 60 kr, 50 kr, 30 kr, 15 kr, 12 kr, 7 kr, 6 kr, 5 kr, 4 kr and ½ kr and, in a handwritten addition to the type of printing, also the printing of stamps of 10 kr and 1 kr. The 10 kr value was one of the five values (10 kr, 4 fl, 8 fl, 16 fl and 18 fl) whose printing had been permanently suspended on the occasion of the introduction of the extraordinary surcharge and which were therefore no longer printed on *Hausner* paper. Its current reactivation is probably due to the fact that the fee amendment under negotiation at the time created a new scale based on the fee rate of 10 kr and multiples thereof, and also stipulated the rate of 10 kr for Lombard notes and inserts. For the 1 kr value, a production of 18,750 sheets of brown and 1,900 sheets of red stamps is recorded for January 1864, then 40,875 sheets of brown and 4,125 sheets of red stamps for February. Italian stamps are also mentioned for the values of 15 kr, 7 kr and ½ kr. For both values of ½ kr and 1 kr, the printing works went far beyond the approximate instructions of the Ministry of Finance mentioned above. Instead of half a million German and 100,000 Italian stamps, 1,109,250 German and 189,000 Italian stamps were printed.

The situation is more striking with the I kr stamps. Instead of 2 million German and 100,000 Italian stamps, the printing works produced 6,967,500 German and 704,000 Italian stamps.

The above-mentioned document only gains its true meaning when it is compared with the second-mentioned waste paper list. This is divided into two parts, because on June 1, 1864, the use of a completely new (watermarked) paper for stamps began, and therefore shows on the one hand the waste papers produced up to the end of May 1864 and on the other hand the waste papers produced in June 1864. The stamp categories listed here, printed on the older paper, correspond completely with the above-mentioned document, which covers up to April 27, 1864. In the period from April 27 to the end of May 1864, no other values were printed than those already listed. The only difference is that

Waste papers of Italian stamps of 60 kr, 30 kr, 12 kr, 10 kr, 6 kr and 4 kr are also listed. This leads to the assumption that either the first document failed to make the distinction in this regard or that these Italian stamps were not printed until May 1864. It is very remarkable that the waste papers of the 1 kr value appear first with the denomination 110 and then with the (still remaining) denomination 120.

The former occurred in the January production. Why the plates were not immediately set up for 120 pieces and why this change was then made cannot be said with certainty. If the manufacture of the matrix had been carried out by electroplating, it would not be impossible that, for reasons of haste, 110 appoints were initially made and printing plates of this size were taken, but then the electroplating process was continued until 120 appoints were reached. There are also reasons to assume that in 1854 the use of quarter sheets for stamps from 45 kr CM upwards during the *early period* was also caused by the haste to start printing these values in time.

Since the use of the new paper followed immediately after this printing, as evidenced by the waste paper (on old paper), the conclusion is inevitable that stamps on the older paper that do not belong to the categories mentioned here must have been printed *earlier,* that is, before November 1863. This older paper has for the most part some very characteristic, pure cyan blue shades, which can be easily identified because the first 1 kr stamps were almost always printed on paper that was only a little darker in blue, so that one could actually call them the single-cross papers. On exactly the same paper and also *with wide perforation,* there are now also stamps for 3 fl and 5 fl, which according to the above must have been printed before November 1863 and at the same time provide evidence that the wide perforation also began before November 1863. The same conclusion is also drawn by the fact that in both of the above-mentioned documents the value

25 kr does not occur. However, this does actually exist both with wide perforation on all sides and, as mentioned above, in three paper varieties with mixed perforation. The latter would fit well, as it would show that these 25 kr stamps were perforated in the transitional stage, when narrow and wide stitch plates could be used at the same time. However, this possibility must have lasted for several months and at least until January 1864: otherwise there could be no 1 kr stamps with mixed perforation, which definitely could not have been created before January 1864.

It should also be noted here that there was probably a longer break in the printing of stamps before November 1863. This is not yet clear enough from the above-mentioned first list of documents, because some other unknown reason could have caused the issue to only begin in November. However, since in July 1864 there were no other value categories among the waste papers than those printed since November 1863, all older waste papers must have already been destroyed when this printing period began. The beginning of the use of cyan blue paper therefore certainly goes back to the year 1863. The fact that there are a considerable number of easily recognizable varieties of this paper, five of which can be distinguished with 1 kr stamps with a fairly high degree of certainty, also speaks for a longer period of use. The first use of this paper is certainly older than the wide perforation, because 30 kr stamps with *narrow* perforation are also printed on it. The fact that the stamps with wide perforation appeared on dated pieces at the beginning of 1864 is consistent with the dates found, because the transition to wear and tear and to the consumers, which requires a longer period of time, must have occurred in between.

On the edge between the two types of perforation, there were several other papers besides the cyan blue. A medium blue colored paper was already mentioned above, on which the 5 kr, 15 kr and 2 fi. denominations appear with narrow perforation, but the third denomination also appears with wide perforation. Then there is also a very isolated, almost reseda green paper, on which the 15 kr denomination can be found with narrow and wide perforation. It is also strange that the same light blue-tinged paper, already known from the stockpiling campaign for the 1862 fee amendment, on which one of the 25 kr stamps is printed with mixed perforation, also appears on a 1 kr stamp. It therefore seems that parts of a paper production could remain in the depot and were later issued and printed alongside papers of a much more recent date.

The above expression that some paper varieties were “on the cutting edge” of both types of perforation should not be understood to mean that they were all in completely synchronous use when the time of the perforation change occurred. As can be seen from the 25 kr and 1 kr stamps, the perforation change was a process that took some time, so that cases of mixed perforations can be traced back to the time of the change.

Several months apart. Likewise, the use of the stocks of stamped paper in the printing depot could have taken a variety of forms and variations. A delivered type of paper could be consumed all at once, but there could also easily be a larger or smaller remainder left over, which was perhaps only used again after paper from other different-looking deliveries had been printed in the meantime. If this remainder was then used again for the same values, but perhaps with wider perforation, then objectively this is of course indistinguishable from the case in which sheets from the same print run were punched partly on an old perforator and partly on a new perforator. Such connections only allow a very approximate dating for all these phenomena.

Something remarkable can be seen on the cyan papers, namely the regeneration of the 12 kr stamp. The stamp value of 12 kr has played only a minor role since the introduction of the extraordinary surcharge. In the list of suggestions published in the Finance Ministry's decree of 26 May 1859, Z.26161-1569, on how the new rates could be combined using the stamps in order not to use up too many appoints, the amount of 12 kr appears only as an auxiliary value in order to be able to create the new fixed rate of 72 kr (which was created from the old rate of 60 kr and the extraordinary surcharge of 12 kr) in conjunction with the 60 kr stamp.

It was only the law of February 29, 1864, RGBl No. 20, that created a wider area of application for this value, by reducing the stamp to 12 kr for a whole series of legal petitions of minor importance. Given the large volume of correspondence before the courts, this naturally led to a very significant increase in demand for this category of stamps. This may have been the reason why the plates adapted in 1858 were also taken out of use for this stamp and multiplicate plates were produced based on a new original type, i.e. with a new value legend engraving. The new type is easily recognizable not only by the richness of detail on the shield but also by the longer stroke of the one.

To summarize, the law of 29 February 1864 created a completely new category of stamps (1 kr); then it reactivated a second one (10 kr) that had been suspended for a long time; and finally it regenerated a third one (12 kr).

B. THE INTRODUCTION OF OFFICIAL WATERMARKS

I. Preliminary negotiations. The Supreme Audit Office initiated the initiative to tighten control over the production of stamps in 1860. It was forced to request the Ministry of Finance to

To request information on what controls were in place when stamps and postage stamps were produced. The production of state credit securities (bonds, lottery tickets, paper money) was subject to precise and extensive monitoring. In view of the large volume that the production and sale of stamps and postage stamps, which also belonged to the "money-representing papers", had reached, it was therefore obvious to investigate whether the state treasury was protected by sufficient security measures in this case. The main accounting department, which had prompted the above-mentioned step by the Supreme Audit Office by reporting that stamps were being produced without *accounting* controls, probably went a little too far when it requested that a commission be set up which would constantly monitor the entire production process and which would also include accounting officers who would be responsible for all the relevant accounting. *Auer ,* on the other hand, was able to point out that there were already bodies in place for constant control and that a second control would therefore be superfluous and very expensive. He mentioned that the supervisory commission was tasked with monitoring the production and use of printing plates (i.e. the printing of stamps) and that it had become customary for them to intervene in paper control, which involved counting the sheets of paper each time they were handed over. This counting was repeated seven times: after the required quantity had been taken in the printing works' paper depot, the quantity taken over was counted over in the credit department, counted over to the printer, taken back sheet by sheet after printing, counted over to the bookbinders for gluing and perforating, then taken back sheet by sheet when finished and finally counted over again before delivery to the waste warehouse. There was nothing left to do but to specify the habitual intervention of the supervisory commissioners in these actions in their instructions as their normal task.

Negotiations on the proposal from the Supreme Audit Office dragged on for several years. It was not clear what else needed to be done in the interests of stricter control. The most important aspects of supervision had already been implemented. However, if one were to consider complete "accounting" control, as envisaged by the bodies that made the proposal, there was still a lot missing.

Of the elements of the stamp system, paper was particularly suitable for this type of control. In this respect, a well-developed control system was already available as a model, namely the procedure for state credit securities, including paper money. It was this important concern that had mainly prompted the state administration to set up the Schlöglmühler stamp paper factory. A special paper was produced for these securities, marked with a watermark as protection against forgery. A separate authority was also set up, which

The central authority, formerly known as the Redemption Fund Directorate and later as the Directorate of the National Debt, was entrusted with arranging and supervising the procurement of these papers, their safekeeping at the National Debt Office in the "Depot for Secret State Papers" (despite the meaningful-sounding name, only a warehouse for certain printing papers), then the use of the same for printing the valuables in the Court and State Printing Office and finally the safekeeping of the printed matter until it is issued. This example was clearly exemplary for the supervision of the new regulation regarding the production of stamps.

procedure

Until then, paper control in the stamp system had lacked the necessary rigor. An essential protection of the credit, and therefore one that should always be sought wherever possible, is to prevent someone else from obtaining the same paper as that used to produce stamps. This is because this possession is the first prerequisite for the creation of a successful forgery. However, at that time there was no specific guarantee that someone would not obtain such paper from the paper factory or from the State Printing Office's depot. *Auer* did believe that the periodic accounts of this depot would be suitable as a basis for maintaining the accuracy of the accounts. However, this suggestion was not taken up because this depot was too large and contained too many types of paper that did not require such a specialized and therefore laborious material control to be able to be used here.

A second point that has so far been lacking strict control is waste paper. There was no reliable, step-by-step audit of whether all waste paper from the State Printing Office was actually destroyed.

And here, since most of the printed products were at a very advanced stage, the risk to the stability of the paper was obviously even greater than with neon paper.

In addition to these two main points, a number of secondary points were discussed in the negotiations, which lasted until 1864. It soon became apparent that, in addition to the postage and stamps, provision had to be made for newspaper stamps, stamped bills of exchange and promissory notes, and envelopes with stamped stamps. When it was discussed that prepared paper was used for the stamps, so that this paper had a special feature that distinguished it from other types of paper, it was considered whether the postage and newspaper stamps could also be printed on such paper. However, this was not done. The preparation would have increased the price of paper without having any significance for the use of these stamps, since overwriting and etching away of these stamps was not an option here. *Auer* also attempted to eliminate all the accounting and storage difficulties that

resulting from the occurrence of waste paper (at all stages of the stamp production process) from the state printing office. Until then, in addition to the exact amount of paper corresponding to the order, the printer had to be given a 10 percent surcharge, the so-called technical paper allowance, in order to ensure that at least the full amount of the order was achieved with usable stamps. If the printers, gluers, etc. worked more carefully so that less than 10 percent of the paper was waste paper, it would be difficult to produce more before use. *Auer* wanted the matter to be arranged in such a way that the printing office would only take the exact amount of paper corresponding to the order from its paper depot and, after printing, would deliver an equal amount of printed products to the stamp warehouse or the post office, namely both the successful and the spoiled sheets. This would have made the process and billing for the printing office much easier. Auer could also refer to a model, namely the production of credit securities, where the printing works had to deliver all printed products, not only the usable ones but also the spoiled ones, to the Directorate of the State Debt.

Auer countered the objection that the wear and tear bodies would then not receive the required quantity of usable stamps by demanding that they keep their orders correspondingly higher, taking into account the percentage of waste that experience shows. This suggestion was not approved.

However, *Auer's* idea failed not because of the obvious concern that the delivery of the postage stamps and stamps would not take place to a control authority, which could dispose of the waste paper accordingly in order to avoid endangering the state treasury, but directly to the consumables' apparatus, and that it could only lead to inconveniences if the latter were to come into possession of waste paper, but because of the formalistic objection that the proposal would only be appropriate if the consumables' apparatus would provide the net paper itself and also have to account for it (including the waste paper).

In opposing *Auer's* above motion, the State Debt Directorate tried, for its part, and successfully, to resolve a question concerning the waste papers, contrary to the State Printing Office's intentions. In this detail, as in the whole of the negotiations, one can clearly feel that an "unfavorable wind was blowing" for the administration of the Court and State Printing Office and that an attempt was being made to place the printing office under as much control as possible and to make its previous arrangements appear inadequate or inappropriate. The specific question raised by the State Debt Directorate concerned the previously permitted division of such stamp sheets, which contained partly waste and partly usable stamps, as well as the delivery of the

the latter to the central warehouse. This procedure, which was suggested by the printing works to reduce the high percentage of waste and which itself caused a great deal of extra work, was opposed by the State Debt Directorate, pointing out that the stamp and tobacco court accounting department had stated to the cameral general accounting department that the possible loss of production costs was not proportionate to the costs of eliminating these individual stamps.

The decision was made on the basis of this entirely arbitrary assertion that if even just one stamp was unsuitable for issue, the whole of a stamp sheet should be treated as waste paper.

During the hearing it also emerged that the papers for the letter and
Newspaper stamps, then for the envelopes, there are no markings identifying their purpose; that, on the other hand, the papers for the
change blanks (including the impregnation) and the watermark on the promissory notes, like the coin notes

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(in five rows per sheet). To be more precise, as collectors know, these postal stationery items always only have one half of this legend in the watermark, since it probably ran across the entire width of the sheet, but was split in the middle for printing.

II. The new watermarks. The main result of the negotiations, which concluded with the decrees of February 18, 1864, Z.57187ex1863, and of April 29, 1864, Z.13254-566, as well as with the issue of an appendix to the two instructions (dd February 12, 1852, 2.12091 FM, and July 4, 1853, 2.7374 FM) for the supervisory commissioners, was the introduction of six types of paper *with watermarks* for the revenue stamps, the newspaper revenue stamps, the bill of exchange and promissory notes, then the postage stamps and envelopes.

These watermarks read literally:

STEMPEL-MARKEN
ZEITUNGS-MARKEN
BRIEF-MARKEN
WECHSEL
PROMESSE
BRIEF-COUVERTS

The typeface in which these watermarks appear could be described typographically as open Egyptienne title capitals, i.e. only the outlines of the letters are reproduced with lines. The font height is 12 Viennese lines (7 Cicero). With regard to the envelopes, it should be noted that their introduction was probably due to a suggestion by the Chief Financial Officer *Laurenz von Steinbüchel* on December 30, 1859.

The person mentioned performed the then experimentally introduced function of a

travelling central inspector and, on the occasion of the emergence of cases where the repeated use of postage stamps had been ascertained on a large scale, had proposed the “introduction of officially marked envelopes *in addition to* postage stamps”.

The watermarks were to appear in the following order: for stamps, newspapers and postage stamps , *once* in every half sheet “lengthwise” ; for bills of exchange, five times in every half sheet “widthwise” ; for promissory notes, *four times in every half sheet “lengthwise”;* finally, for envelopes, once in the middle of every half sheet “widthwise” , in such a way that the watermarks were to fall into the end parts of the envelopes’ closing flaps. The difference in these arrangements was based on the fact that for bills of exchange and promissory notes, each blank was to have the complete watermark, so that it simultaneously provided proof of the authenticity of the stamped postal item.

But the watermark played a different role for the other two papers. Here it was a matter of chance, so to speak, whether an individual stamp contained a piece of the watermark, because it belonged to the small percentage of stamps on a sheet that were in a place on the paper where the watermark ran over it. The presence of a particle of the watermark was therefore not one of the essentials of the individual stamp. Therefore the watermark had nothing to do with the authenticity and validity of the individual stamps and was only taken into account as an accidental factor when assessing them. Rather, the watermark only had a meaning and a purpose as long as its presence was immediately recognizable, and therefore only as long as the sheet of paper was still in its *entirety .* This was only the case during paper production and then during stamp production, but ceased when it was transferred to the wear and tear machine. Accordingly, the watermark was not a general indicator of the authenticity of the stamp, but merely an aid to paper control against the production machine. It was therefore a logical consequence that the introduction of this watermark was not announced in any way.

The first germ of the idea of using watermarks in this area can be found in a decision by the Ministry of Finance on January 7, 1863 (about a document received in February 1862). At that time, only stamps and postage stamps were under discussion and it was said that since the stamp paper was already prepared, it was only necessary to have a watermark applied to the stamp paper, as was the case with banknotes. After the number of items that could be considered for tightening controls had increased as the negotiations continued, the alternative of having the paper for postage and newspaper stamps impregnated was considered. The explicit suggestion to provide a watermark not only to the paper for postage stamps, but also to that for stamps and newspaper stamps came from *Worring.* He immediately made the following point :

pointed out that this paper would be more expensive because it would have to be cut in sheets and not in layers so that the watermark would not be cut; but if the watermark were to be made a mark of authenticity, so that each individual stamp would contain a different mark for each category, this would result in extraordinary complications, as there are 31 stamp categories of 22 different dimensions and at least 22 different papers would have to be produced. With regard to envelopes, he advised against using watermarks on them, as the paper would be thinner and more transparent where these marks would be, which, as the deputy director of the State Printing Office *Kaltenbrunner* (representing *Auer)* added, could give rise to the opinion that this had been introduced in order to be able to read the correspondence illegally. This objection evidently gave rise to the above-mentioned order regarding the position of the watermark on envelopes. *Kaltenbrunner* did not agree with *Worring's* suggestion to introduce watermarks on stamped papers, because these papers were already sufficiently protected from confusion during manipulation by their unusual format and the impregnation of the stamped paper. The Ministry of Finance, however, insisted on the need to clearly distinguish these papers (perhaps according to their purpose, but without any special expense), adding as justification that it was necessary to establish that no stock of these papers was left in either the paper factory or the printing works after the products had been delivered. *Auer,* who had since taken over the management of the office again and who, as the head of the Schlöglmühle factory, had a different view of this issue, submitted a motion on November 19, 1863 to apply the six watermarks in the wording, number and position as stated above (in the regulation). For envelopes, it is recommended that the “least harmful” solution is to run the watermarks lengthwise twice through the middle of the entire sheet so that they fall into the end parts of the envelope flaps. *Auer* also provided “sample sheets” on which the requested watermarks were probably only drawn, since the production of watermarked paper requires more complicated preparation. He did not accept *Worring’s* objection regarding the price increase due to the cutting of the watermarked paper sheet by sheet. Instead, he justified such an increase by saying that watermarked paper must be produced with greater care and that the thinness of the paper, which is aimed at preventing the stamps from coming off, delays the work and makes it more expensive. He therefore increased the price of the paper for the German stamps from 5 fl 30 kr to 6 fl 50 kr; for the Italian stamps from 6 fl 30 kr to 7 fl 50 kr.; for postage and newspaper stamps from 6 fl 45 kr to 8 fl; and for envelopes from 10 fl 35 kr to 12 fl. On the other hand, the paper for the

Bills of exchange and promise notes (at 50 kr per ream) at 10 fl. He preliminarily set a deadline of three months for the production of the six rollers for these watermarks. These rollers were to cost 80 to 100 fl each. On February 18, 1864, the Ministry of Finance approved these applications in a decree addressed to Auer, which almost exclusively concerned the paper factory, and at the same time issued the order (unrealizable given the volume of stamp sales and the categorical needs of the same) to suspend further production of such paper until the watermark rollers were completed, which was to begin immediately.

III. The new regime. The start of the new regime was originally planned for April 1, 1864, but was then set for June 1, 1864 by the decree of April 29, 1864, Z.13254. The future procedure, which was definitively standardized at the same time, was to be as follows:

The paper depot of the Court and State Printing Office was not allowed to store any of these types of watermarked paper under any circumstances. The State Debt Directorate had to place the paper orders with the Schlöglmühle factory on the basis of the suggestion made by the State Printing Office and set up in accordance with sales. The oddity arose in that Auer, as the printing office director, had to make the suggestion and, as the factory manager, had to accept the order. Each order and therefore each production ("creation") had to cover a nine-month requirement. Production could only take place in the presence of a representative of the State Debt Directorate. The representative had to take one of the keys of the triple lock under which the rollers intended for the production of watermarks were to be stored in the Schlöglmühle factory when he was sent from Vienna and to return it at the right time.

The usable product was to be sent to the depot for secret state securities at the Universal State Debt Office, where it was to be kept and accounted for. From there, the printing works had to collect the required quantity of paper based on the specific purchases of stamps it received. This went to the printing works' credit department, which had to keep records of its receipt and use and submit a monthly account to the State Debt Directorate. The receipts for the delivered usable stamps and all the waste paper generated in the individual stages of stamp production were to be enclosed as evidence of this. It was also expressly ordered that the waste paper generated during printing was to be immediately selected and put to one side and not used up for further procedures (gluing, edging, etc.).

The continuous communication between the State Printing Office and the State Debt Office, which was necessary as a result of these measures, could be carried out without any problems at that time because both were located in Singerstrasse, in fact in buildings opposite each other.

The State Printing Office was released from further dealing with the waste papers by handing them over with its monthly accounts. The waste papers were counted immediately or (after temporary storage under lock and key on both sides) at an appropriate time. After the correctness of the findings, the waste papers were sealed in packs and stored under the counter lock of the Credit Court accounting department until they were burned, which was to take place at the same time as the used banknotes.

To ensure a smooth transition to the new method,
Ministry of Finance has initiated two measures:

1. an order concerning the remaining stocks of the six types of paper used up to that point (for the six types of stamps mentioned above) in the paper depot of the State Printing Office at the end of May 1864, and

2. the first production of a nine-month supply of the six new watermarked papers.

1. Old paper stocks. The intention of the Ministry of Finance to introduce a new system of paper control with the involvement of the State Debt Directorate at once meant that the existing papers could not be gradually used up. Instead, on May 31, 1864, an inventory of all relevant paper stocks had to be taken and the remaining stocks had to be allocated for other use and taken over. This resulted in a not inconsiderable reduction in value for all papers subject to the stamp rate, which had to be borne by this rate. It should be emphasized that the promise paper, due to its watermark, could only be used to print the (strictly offset) consumption tax bills. The stamp paper could only be used for announcements because of its thinness and the Italian paper because of its red color.

Of interest is a batch of the relevant paper stock lists, which were first drawn up in November and December 1863 and then in May 1864. In all three lists, a batch of 3 reams 19 books 13 sheets of paper with German stamps appears evenly, and therefore without any changes in the meantime, and has the following addition: “1st grade received as a sample”, or “of better quality as a sample”. The quality of this paper must have been incomparably better than the normal one, since the latter cost 5 fl 30 kr, but the former 9 fl 24 kr per ream. It seems that the higher price was an obstacle to the more general use of this paper. How large the entire sample was could not be determined, as all surviving records are absolutely silent on this point. Eleven sheets were missing from four reams.

Either only these eleven sheets or one or more reams were used. In any case, the stamps printed on them must be particularly rare and also contrast strikingly in appearance with the stamps printed on normal paper at the same time.

It has now been mentioned above (page 254) that the new type of the 5 kr value with close perforation also appears quite singularly on a striking, completely white, but nevertheless prepared paper. In view of all the circumstances and in particular the time when the new type was created, the probable conclusion that we are dealing here with this paper used as a test seems to be well founded.

2. The first "creation". For the first production of watermarked paper, the Ministry of Finance itself prescribed the quantities, namely 399 reams for German stamps; 231 reams for Italian stamps; 237 reams for newspaper stamps; 276 reams for postage stamps; 90 reams for bills of exchange; 36 reams for promissory notes and 940 reams for envelopes: a total of 2209 reams. This arrangement of producing larger quantities at once was recommended because it reduced the monitoring costs, because officials from the State Debt Directorate (first one, then two and later three) had to be sent to Schlöglmühle for the "creations" and were subsequently permanently on display there, which caused considerable expenses. From the point of view of stamp collectors, this method also had a great advantage: the paper of the stamps is now much more uniform; The quality and colouring still vary from production to production, but since there are now far fewer "creations", a far smaller number of paper varieties results.

It should be noted that the impregnation with prussiate salt was retained for the stamps and the bills of exchange. The implementation of the first paper production proved to be very urgent. The delay between the two decrees of the Ministry of Finance of February 18, 1864, Z.57187 ex 1863, and of April 29, 1864, Z.13254, had embarrassed the State Printing Office, since bills of exchange in particular had to be printed immediately and the stock of the previous watermark paper was completely exhausted. The notification of this authorized the State Printing Office to continue to do the same with regard to the printing of stamps as before for the time being. However, this authorization did not help much: the old watermark roller for the bills of exchange had already been dismantled and fitted with the device for the new watermark. On the same day that the Ministry of Finance received notice of this, the decree mentioned above in the second place (dated April 29, 1864) was approved. The Directorate of the National Debt immediately went to work, appointed the Directorate's assistant *Heinrich Czermak* as the supervisory commissioner for paper production and sent him to Schlöglmühle on May 10, 1864 with the order to take over the three rollers for bills of exchange, promissory notes and envelopes that had been announced as ready and to place them under triple security, then (with the first roller mentioned) to immediately produce the bill of exchange paper, and then the paper for the promissory notes and envelopes in the quantity determined by the Ministry of Finance.

Some interesting details can be gleaned from the detailed reports submitted by this supervisory commissioner, which he felt compelled to do because this was a new development. When he arrived in Schlöglmühle, the remaining three rollers were already finished. He took over all six rollers; and as he found a seventh watermark roller in the factory, newly made for the coin notes, he also put this into storage. He then had paper production started.

There seems to have been only one paper machine installed at that time.
These machines have a continuous sieve (metal cloth) on which the paper stock (stuff) is evenly spread out. As it moves along, it gradually loses a lot of the water that drips off due to its gravity.

A lateral shaking movement promotes the evenness and uniform thickness of the paper sheet and the matting of the fibers. The latter purpose, as well as the more energetic displacement of the water, is also served by a special roller, the pressing roller (pre-press roller, screen roller, form roller, dandy roller, dandy roll), whose casing is made of a sieve-like brass wire mesh and which is the first of all the rollers under which the pulp, which gradually becomes the "paper web", has to pass. This roller is now also used to produce watermarks on machine papers, just as those produced on handmade paper by the raised features soldered onto the screen of the mold. Letters, drawings and the like are soldered or stapled onto the circumference of the roller, which are repeatedly pressed into the paper pulp as the roller rotates, so that the watermark repeats at regular intervals. Since the paste is still so rich in water at this stage that the material moves to the side at the points where the soldered-on characters hit, these watermarks, like those on handmade paper, are to be regarded as displacement watermarks; in contrast to the modern “satinized” compression watermarks, which are produced at a later stage of the manufacturing process by applying strong pressure to the already consistent paper. In the latter case, too, a reduction in volume occurs at the pressed point, linked to greater transparency. However, this is not accompanied by a reduction in mass, as in the first two cases. Here, not a particle of the mass moves away and only a compression of the mass takes place through the pressing. The soldered or stapled-on drawings, letters and the like consist of a type of more or less flat brass wire or narrow flat brass strips. They may only protrude a very small amount above the screen, so that even with thin paper, the areas of the paper that are even thinner above these raised areas do not become brittle.

A later document (concerning the introduction of special stamps for the Hungarian half of the empire) provides some more details about the roller for the stamp paper, which is of primary interest here.

It consisted of a metal axle, onto which the roller casing, consisting of a brass, cylindrically bent wire screen, was mounted by means of supporting and end disks. The two end disks had to be firmly attached and precisely centered because they determined the exact shape of the casing, which was attached to them by means of a clamping device. In later times, this was referred to as a coarse base screen and a fine outer screen. The letters of the watermark legend (STAMP MARKS) were attached to this casing in such a way that the legend was not in the direction of the axis, but ran in a ring around the casing. Five identical running legends of this wording were attached parallel to one another at equal distances around the circumference of the roller, so that as the roller rotated, one letter of these five legends after the other (hence all five S, then all five T, etc. at the same time) was pressed into the paper pulp. In the aforementioned document from 1867, this five-numbered legend is expressly attested. However, it must have existed from the very beginning. In the early days, only the soldering of the letters is mentioned; later, these letters were attached to the sieve with fine metal wire.

At that time, the stamps were printed on half sheets. The dimensions of these were originally 9¾ inches x 15½ inches for the paper used for printing. *Auer* gives the dimensions for machine paper as 10 inches x 16 inches in a document from 1864. The paper machine had a usable screen width that was certainly more than 54½ inches, because a paper web was later produced that was just as wide, plus the edges on both sides that always had to be cut away because of their unevenness. The described arrangement of the screen roller and the arrangement of the regulation that the watermark should be applied to the paper sheets "lengthwise", i.e. in the direction of the longer sheet dimension, lead to the assumption that in the early days (as up to then) a paper web with a total width of 50 inches was produced and split into five webs of 10 inches wide by means of longitudinal cuts.

The sheets were then cut from these strips, each 16 inches long. The above-mentioned regulation is not really precise, since when you hold a half sheet in front of you in the same reading-correct manner as a whole sheet, you speak of a *height* and width and not a *length* and width. The idea that the vertical dimension of a sheet (half sheet) is noticeably *larger,* i.e. *longer ,* is a contributing factor here , so that you are tempted to use this expression, which is otherwise only used for running Mali. From the type of intended division of the paper web, you can draw conclusions about the distances at which the rows of five raised letters were placed on the circumference of the roller. It is natural that the aim was to ensure that each sheet of stamped paper contained the watermark as close to the middle of the sheet as possible (running down from the top), so that the opaque edges on the right and left were the same width. If you now divide the

If you divide a paper width of 50 inches into five parts and place the legend in the middle of each of them, the letters of which had a height of one Vienna inch in the newly introduced watermark, you have about 4½ inches left on each edge of the paper, so that the distance from the first to the fifth legend (both included) is 41 inches. If you subtract 5 inches from this for the five legends, you get a space of 36 inches for the four spaces and 9 inches for each of them.

The roller for the stamp paper was made in the Schlöglmühle, like the other five rollers. However, a protocol entry shows that the precisely crafted brass letters required for this were produced in Vienna. In October 1863, the factory management's protocol contains the following entry: "List of brass letters for watermarked paper; 337 letters, 87 fl 62 kr." In addition, a protocol entry by the head office *(Auers)* dated March 5, 1864 contains the comment: "The brass letters have already been sent to Schlögelmühle." The number of letters just mentioned is now of crucial importance in clearing up any doubts that have arisen regarding the watermark roller.

In a decree to the paper factory dated August 23, 1864, the management instructed the factory administration to no longer deliver the stamp paper in whole sheets, as was previously the case, but in half sheets. Previously, the whole sheets had to be cut in half at the state printing works, which was now to be avoided by supplying the paper from the state paper factory in the required half-sheet dimensions. If what the management said here had been entirely correct and only whole sheets of stamp paper had been delivered up to now , then the assumption that the paper roll had had five rows of watermark legends would of course have become invalid. Since two legends belong to each sheet and three sheets would have required a usable paper web of over 60 inches wide, which the machine could not produce because the total length of the shaft of the watermark roller, according to a report from 1876, was only a little over 64 inches, of which at least the two edges of the paper web that could not be used must be deducted - production would have had to be limited to two sheet widths, which would have required only four watermark legends. Strangely enough, the record of this settlement in the management's minutes reads as follows: "The order has been sent to the paper factory; and is to be delivered in half sheets and partly in whole sheets." The person taking the minutes undoubtedly misunderstood the settlement; next to the existing text of the settlement, his extract appears to be obviously incorrect. But the fact that he was so absent and that he could speak of a delivery which took place partly in half sheets and partly in whole sheets, suggests the thought that he did not state what actually happened at the time, so that the previous process could be more accurately inferred from his erroneous entry than from the file itself.

This assumption is very substantially supported by the above-mentioned number of 337 brass letters delivered to Schlöglmühle for the production of the paper rollers. The fact that this is an exact figure is confirmed by the fact that the price of 87 fl 62 kr can easily be divided by the first number and results in 26 kr as the average cost of a letter. If one now takes into account that (including the pauses and dots) the individual legend contains: stamps 15 letters; newspaper stamps 16 letters; letter stamps 13 letters; bills of exchange 8 letters; promissory notes 9 letters; and letter envelopes 15 letters and that the first legend was applied to the respective roller five times, the second six times, the third four times, the fourth twenty times, the fifth sixteen times and the sixth four times, the total required is 587 letters. It now appears from the documents that the existing roller, intended for bills of exchange and promises, has been reworked. Since the legend K. k.

Since the Aerarial Paper Factory had exactly the same narrow, one-inch-high letters that appeared on the six new rollers, the brass letters from the older roller could evidently be reused after they were removed. The old legend consisted of 25 characters and appeared ten times on the roller. If these 250 letters are subtracted from the total requirement of 587 letters, the number of brass characters ordered is exactly 337. Since the number 587 is based on the assumption of five legends on the stamp roller, this seems to provide sufficiently reliable circumstantial evidence that this roller actually had five rows of letters from the beginning and that part of the paper was therefore certainly produced and delivered in half sheets. In addition, on the occasion of the two subsequent repairs to this roller for the stamp paper, after which the five rows of watermarks are documented, no mention is made of an increase in the rows of letters, which would certainly have happened if such an increase (from 4 to 5) had taken place.

A laborious compilation of numerous stamps, often containing only small fragments of the watermark, by the Viennese collector Medical Councilor Dr. *Krueg* shows that each of these five watermarks had a length of approximately 13¾ inches. One of the reports by the supervisory commissioner *Czermak* stated that the roller also pressed a mark into the paper "which indicates the sheets". By this "mark" he probably meant a light line visible on some strips consisting of connected stamps, which runs parallel to the letter height approximately in the middle between the end of one and the beginning of the next watermark, thus dividing the opaque space in half. Since the "length" (actual height) of the sheets was 16 inches, this mark had to repeat every 16 inches and the roller therefore had to have an equally large circumference. This assumption that the roller had a circumference of 16 inches is supported by a circumstance which in itself is probably a

This may belong to a later period, but may well have applied earlier. Two strips of connected stamps from the years 1865 to 1870 and 1870 to 1875 show that in this later period the opaque space between the end of one watermark and the beginning of the next is exactly 2 inches 3 lines. Even if the space in the first watermark had only been the same length, this would result in exactly 16 inches with the 13 inches 9 lines of the first watermark, which is the height of the sheet and the circumference of the cylinder. This arrangement would meet the requirement that the watermark in the sheets be symmetrical in all directions in relation to the stamps printed on them, and therefore not only lie on the longer central axis, but also have both its beginning and its end at the same distance from the edges of the sheet. The shape of the alleged sheet stamp on connected strips of stamps suggests that it is not a directly intended watermark, but rather nothing more than the impression made by the seam of the roller screen in the paper pulp.

Czermak's reports show that cutting the paper sheets crosswise delayed the work a lot because it had to be done by hand because of the watermarks. The production of the first supply of all six types of paper took 64 days from May 10 to July 12, 1864. In *Czermak's* opinion, 24 days of this could easily have been saved if the papers for the stamps, newspapers and postage stamps had not been cut by hand, but in the "manner used for other paper". The cutting by hand was done so that the watermark would be "in the right position". This can only mean that the cutting was arranged in such a way that the entire 13¾ inch long watermark was present on each sheet and that a part of the 2¼ inch opaque space remained visible on each side in front of and behind this legend.

An exact position of the watermarks on the papers for bills of exchange, promissory notes and envelopes was now absolutely necessary, because these were also to occupy a certain position on the finished printed matter; in the case of the three stamp papers, however, such precision was superfluous, as *Czermak* rightly pointed out.
It was purely a matter of chance whether a single stamp had a piece of the watermark or not. Since it was only a matter of identifying the whole sheets, it was irrelevant whether the individual sheet contained the whole legend, or only a part, or even parts of two consecutive legends. It was impossible for a sheet to remain completely without a watermark, no matter how the cuts were made, because the sheet had a length (actual height) of 16 inches, but the opaque space between them was only 2¼ *inches.*

For testing and illustrative purposes, *Czermak* had a ream cut in the aforementioned “different manner”.

He also stated that the paper production on the machine was so fast that, for example, the 100 reams of blank paper were ready in 24 hours; however, in the sorting room, where the paper was then sent for “cutting and cutting”, no more than 20 reams could be processed daily, even with the greatest effort.

There is a certain amount of obscurity in these files as to what the usual, normal method of cross-cutting was. *Czermak* mentions that he had negotiated with the factory management to have the cutting done “with a cutting machine”, to which he was told that the factory did not have one, that it would incur a significant expense, and that despite the precision of such a machine, small differences would arise when the paper was unrolled, which would lead to the watermarks being cut if repeated frequently. It now seems that the “usual method of cutting” mentioned so vaguely also involved a cutting machine (attached to the paper machine), albeit of lesser precision. Such a machine had to be available for the lengthwise splitting of the entire paper web, and older records also mention the purchase of such a machine from *Thode* in Dresden (1861). A cross-cutting machine was probably also connected to this. In a later document it is stated that the cutting of the paper webs on the machine takes place “in sheets and sheets”, which is no clearer. What Worring meant by “cutting in layers” as opposed to manual sheet-by-sheet cutting also remains unclear. *Czermak* also mentions in particular that if his suggestion is adopted, the symbol in the roller which “indicates the sheets would have to be omitted”.

From the figures mentioned several times *by Czermak* it is also clear that the paper production itself had to reckon with a considerable amount of waste, both at the paper machine and in the sorting room, which was then immediately ground up in the presence of the supervisory commissioner; furthermore, it regularly turned out that the sorting room delivered a greater weight of usable paper and waste combined than it had taken in, because the paper came off the machine in a very dry state and then "tightened"; finally, that with regard to the possible waste and in order to ensure the full delivery of the ordered quantity of paper, more material was taken in than was strictly necessary, and that, in the absence of adverse circumstances, an excess production resulted, which the depot for secret state papers had to take on, because this paper could not be given to anyone else and grinding it would cause great damage to the factory.

The aforementioned spontaneous inclusion of the cylinder for the coin paper in the triple blockade by *Czermak* had to be reversed. The competent department of the Ministry of Finance held such anxious

Monitoring measures were not necessary. With regard to papers for credit securities, the previously usual personal monitoring of production by a representative of the State Debt Directorate, who took the watermark forms with him on each outward journey and then brought them back to Vienna, was abolished, and the only precautionary measure that remained was that these forms for each production were sent by post to the factory management, which had to return them to the State Debt Directorate after production had been completed. Since these latter papers undoubtedly appeared to be the far more important item from the point of view of the state's monetary interests and also of danger, the disproportionate nature of the monitoring apparatus introduced for the less important stamp and postage stamp papers was striking.

Auer , pointing out this and the greater security of the cylinders in the Vienna depot, and finally the fact that sending the cylinders back and forth by post would be cheaper than sending an official to open and re-attach the seal, suggested through the State Debt Directorate at the Ministry of Finance that the six cylinders and also the coin cylinder should be taken into custody in the State Debt Treasury and sent to the factory management in case of need, just like the forms for the credit papers.

Although the Directorate of the National Debt supported this proposal, it was not approved. On the other hand, the Ministry of Finance accepted the suggestion that the stamp paper should not be cut by hand. Since no second paper was produced in 1864, manual cutting was only used for the first production.

It should be noted here that the brass letters on the stamping roller all belong to one and the same alphabet, so that the same letters are always the same size. However, when the letters were attached or soldered onto the screen by hand, smaller or larger differences in the distances between the letters appear to have arisen. The watermark formed by one of the rows of letters therefore did not completely coincide with the product of the other four rows. In this case, quite striking differences have become known.

C. BRAND REGULATION AND CENTESITAL DEMOLITION

1. The seven old plate formats. If one asks which position the watermarks in the first stamps that were printed on the new paper take in relation to the stamp image, a comparison with the denominations shows that for the values of 10 kr, 50 kr, 2 fl, 3 fl, 4 fl, 5 fl, 6 fl, 10 fl, 12 fl and 14 fl the reading directions of the stamps and the

Watermarks are aligned in the same direction (in the broader sense), while they cross each other for the other values (½ kr, 1 kr, 2 kr, 4 kr, 5 kr, 6 kr, 7 kr, 12 kr, 15 kr, 25 kr, 30 kr, 60 kr, 72 kr, 75 kr, 1 fl and 20 fl, then 1 kr and 2 kr announcement stamps, and finally 6 kr calendar stamps). Of course, in the former case they can either be aligned in the same direction (in the narrower sense) or in opposite directions. Since the paper was produced with the same sides and did not have a better side specially prepared for printing, it was left to chance which side of the individual sheet of paper was placed on the inked plate during printing and which was left over as a backing side.

Since the first issue in conventional coinage was made, when the values of 45 kr and above were printed on half sheets, and since the special denomination of 35 appoints was no longer available for the values of 2 kr and 4 fl, instead of the original nine panel sets (of 120, 90, 84, 80, 40, 35, 30, 25 and 20 appoints), there were now only seven panels (of 120, 90, 84, 80, 60, 50 and 40 units), which can be referred to as plate formats I, II, III, IV, V, VI and VII. This status had been preserved when the issue in Austrian currency began, since the earlier die designs were retained and for the most part even the old plates continued to be used *in kind* with appropriate modifications to the engraving. The only new addition since then was the 1 kr stamp, the denomination of which was 110 in January 1864 and 120 from February of the same year, so that it now joined the smallest values (with the old 3 kr design, i.e. format 1), while the dimensions of the sheets of paper used for printing remained unchanged for both denominations of the 1 kr stamp (10 x 16 inches).

Of the seven denominations, four (I, II, IV and VII) formed upright rectangles, while the remaining three (III, V and VI) formed horizontal rectangles when the stamps were held in the correct reading position. Since the watermark ran in the longer dimension of the rectangle, the first four formats were cross-shaped, but the other three were parallel.

This standard of plate formats was radically changed in 1864. The panelling, which had previously been adapted to the requirement that the sheets of paper used to print the stamps should have a uniform paper format, was now to be adapted to a different requirement, namely that of a round number of stamps on each sheet. In 1854, the main concern was to cause as few problems as possible with regard to the paper that had to be procured from private factories and which was experiencing a period of high prices at the time, and the plate format was therefore based on the standard paper format of the paper made from paper and the conventional equipment of the paper factories. Now, consideration of the wear and tear apparatus and the facilitation of its tasks came into play.

First of all, it was a considerable burden for all manipulations connected with the distribution of stamps that the stamps had seven different denominations. This led to the tendency to give stamps of all categories one and the same, or at least not more than two, denominations and at the same time to make these denominations practical for accounting purposes, in which respect the number 100 was particularly recommended.

The action aimed at this goal was simultaneously linked to a second negotiation, officially known as the *trademark regulation,* which aimed to adapt the existing range of trademark categories to the current state of legislation.

The idea for these innovations came from two different sources: the Vienna Finance Directorate and the Bratislava Finance Directorate Department. The Vienna Directorate reported on the problems encountered in practice with the wear and tear of stamps, which urgently required an easier and simpler way of handling this manipulation. The original 19 categories of 1854 had been reduced to 27 categories during the transition to the Austrian currency (1858) and as a result of the war surcharge (1859). On these occasions, due to the rush, and the extraordinary surcharge because of its transitory nature, there had been no radical adjustment of the stamp categories to the legal stamp sets; instead, it had been decided to fill the most obvious gaps with new categories. This meant that for most stamp sets, two or even three stamps had to be combined by the parties. The number of pieces to be worn out was therefore many times greater than that which was actually necessary. Now that the war surcharge no longer appears to be a temporary measure, it is time to make a thorough regulation.

With regard to the war surcharge, the subsequent period proved the Viennese management's view to be correct in effect; but formally they were and remained wrong: for the surcharge is still a temporary arrangement even today. When it was introduced, it was expressly stated that it was not to be a permanent arrangement, but rather that it would only be introduced "for the duration of the extraordinary circumstances brought about by the war events". However, since this termination is not automatic, an explicit repeal should have taken place. Since the restoration of the constitutional arrangements took place soon afterwards, this would have been a matter for constitutional factors. The legislature took note of the surcharge for the first time in the amendment of December 13, 1862, RGBl No. 89, by increasing it to 25 percent in those areas where it had previously only been 15 percent, but set a deadline *for this increase* to December 31, 1863. The continuation of this increase was then stated up to further calendar dates as the end points of its validity, partly simply, partly with the meaningless addition,

that the increase would have to be repealed unless it was further extended. Finally, the provisional budget of December 31, 1867, was the first to use the wording that has since been used in all financial laws and provisional measures, empowering the government to levy taxes “in accordance with the existing tax laws.” The norms governing the surcharge therefore still exist in their old form. They are of a transitory nature, but continue to exist as if they did not have it. The Imperial Decree of August 28, 1916, RGBl No. 281, also retained the designation “extraordinary” for the increase and extension of the surcharge, clearly intending to indicate that the previous legal situation would continue unchanged. Although this future development could not have been foreseen in 1863, all the authorities involved already then treated the surcharge as something that was not likely to disappear, and the need for a trademark regulation was therefore considered to be a given.

The Vienna management proposed that all existing stamp sets of the scales, which were to be paid by means of stamps (up to 25 fl.), should form the basis for the stamp categories to be created. Only if stamps for mixed amounts in guilders and kreuzers (for example 17 kr., 50 kr.) were not to be created, the use of two stamps each should be considered.

The ½ kr category would be cancelled in its entirety. The Vienna management also suggested a reduction in the current number of seven different denominations of stamp sheets. All stamps in the Kreuzer categories should only be produced in one size and each series should always contain 10 stamps. Orders for stamps from 1 kr downwards should always be divisible by 10, and orders for stamps from 50 kr downwards should always be made in whole sheets.

The State Printing Office and the Tobacco and Stamp Court Accounting Office commented on this proposal. Both took up the idea of adjusting the stamp values to the existing stamp rates. The State Printing Office proposed creating 34 categories (including consumption stamps); the Court Accounting Office increased this number to 57 due to the amendment of February 29, 1864, which had since been passed, and taking into account the fixed stamp rates. The Printing Office also welcomed the idea of a uniform number of pieces (100) per sheet and suggested that there should then only be two or at most three stamp sizes: one for all guilder values, a second for all kreuzer values, and possibly a third for consumption stamps. *Worring,* who conceived this, designed three corresponding sample sheets.

The guilder stamps should be the size of the 2 kr stamps and the sheet should have dimensions of 15¾ x 12¾ inches. The kreuzer stamps should be printed in the size of the 15 kr value and sheets of 14½ x 11½ inches should be used. Finally, the consumption stamps should be in the dimensions of the 1 kr

To produce an announcement stamp and to use sheets of 13 inches high and 10 inches wide. In addition to simplifying the calculations, this would have the advantage that only three "type formats" would be required for the natural printing and the preparation for printing on the printing press, which was previously necessary from category to category, would be much less frequent. This would make production cheaper. Likewise, stamp consumption would be lower if only *one* stamp were to be used in each case. The stamps were to be provided with new designs. The production of the latter and the copperplate engraving were estimated at 2000 fl, the production of the first galvanic plates at 800 fl.

Some of *Worring's* ideas, first presented here, later became realized, but by people other than him and *Auer.*

2. *The denominations of 50 and 100.* While these proposals were being considered by the Ministry, a similar proposal was received from the District Collection Office in Neutra in Bratislava, according to which the stamp sheets should contain either 50 or 100 appoints. The State Printing Office also declared this to be practical, especially since it would make it possible to retain the existing designs and even continue to use the existing plates with a few modifications. *Worring* then submitted a detailed proposal regarding the future denominations. Format VI, which already contained 50 pieces, could simply be retained, so that not only the high plates but also the low plates would remain in use without further ado. For the other formats, however, some of the printing and high plates would have to be reduced in size, and some of the high plates would have to be scrapped to adapt the printing plates and then produce new low plates. The adaptation should be achieved in the following way: for both formats I and V, which are too large (120 and 60), by cutting away 20 or 10 pieces respectively; for formats II and IV, which are too small (90 and 80), by soldering on 10 or 20 pieces respectively; for both formats III and VII (84 and 40), finally, a conversion and addition of brand engravings must take place.

A later act, which lists all the fragments of raised plates that remained after these manipulations and were sent for melting down, makes it possible to follow this transformation in detail (including in the last two formats, where the matter is not yet quite clear after what has been said). Then, in format I, which was an upright rectangle with 12 units in height (and 10 in width), the height was reduced by two rows. In format V, which was a horizontal rectangle with six horizontal rows of 10 stamps, one such horizontal row was severed, leaving 50 appoints. In format 11, which consisted of 10 horizontal rows of 9 stamps, a vertical row of 10 pieces, which had been severed from a second raised plate, was soldered onto one side. Likewise, in format IV (10 horizontal rows of 8 appoints), a strip was added containing two vertical rows.

of 10 stamps each. The conversion of formats III and VII was more complicated. The former was a horizontal rectangle with 14 vertical rows of 6 stamps each. Four vertical rows were then removed from two vertical plates, leaving two plates with 60 appointments each. Two horizontal rows of 10 stamps each were then cut off from one of these. The remainder, with four rows of 10 stamps each, was placed on the other plate (6 rows of 10 stamps) and soldered on, creating an upright rectangle with 100 appointments. If a horizontal rectangle has become an upright rectangle here, the opposite effect occurred with format VII (20 kr). This was an upright rectangle with 40 appointments (8 horizontal rows of 5 stamps each). Three horizontal rows were then cut off from two plates of this type. The two remainders of 25 stamps each were then soldered together sideways to form a horizontal rectangle with 5 horizontal rows of 10 stamps each.

While the position of the stamps and watermarks in the other formats was not modified due to the change in denomination, this was the case for the stamps for 10 kr and 50 kr (Format III) and 20 fl (Format VII), and one could tell from pieces that have a watermark whether they were printed before or after the introduction of the centesimal denomination. In the two kreuzer categories mentioned, the stamp and watermark were previously aligned in terms of their reading direction and have now become cross-aligned. Conversely, the older 20 kr stamps have cross-aligned watermarks, whereas now they are aligned. One should actually say “aligned” and “crossed” because in the former case there are two other possibilities, namely the alignment and the opposite alignment of the two legends being compared. As opposed to “cross-aligned”, however, “aligned” (in the broader sense) has a sufficiently clear meaning to justify the choice of such a handy expression to avoid cumbersomeness.

When soldering the plate strips on after the manipulations described, the previous distances between the stamp images do not always seem to have been precisely maintained. This is why one now sometimes finds significant differences in the spaces between the stamps that were not previously known.

For those stamp categories (formats I and V) where the reduction from 120 and 60 to 100 and 50 appoints had to be made, this could be done both with the raised plates and with the still usable printing plates. However, for the remaining 14 categories where an enlargement (II and IV) or even a simultaneous enlargement and conversion (III and VII) was necessary, the old printing plates were still unusable and new ones had to be produced using the edited raised plates. Worring considered the number of 34 raised plates to be necessary for these 14 values. As far as can be judged from the certificate of the cut raised plates, two raised plates were produced from the outset for the value of 10 kr by soldering them together. In any case, it should be

It would have been more convenient to manufacture the necessary raised plates by galvanic welding after the *one* had been soldered together.

3. The three new paper formats and the watermark cylinder. Worring further explained that the reduction of formats I to IV (Kreuzer values including 1 fl) to 100 and formats V to V11 (other guilder values) to 50 appoints would, due to the different sizes of the natural prints to be compiled, bring about such a change in the size of the plates that it would no longer be possible to use uniform sheets of paper of 10 x 16 inches for printing as had been the case up to then. Instead, three different widths would have to be created, namely 9½, 10½ and 12 inches, while maintaining the same height of 16 inches. One could still produce all these papers simultaneously by producing a paper web of 54½ inches, which would make advantageous use of the capacity of the paper machine, and cutting it into two widths of 12 inches, two widths of 10½ inches and one width of 9½

customs would share.

The price of the two wider types would be somewhat higher, and that of the third type cheaper than before. Information on these prices is available from 1867. According to this, these formats 9'½ x 16, 10½ x 16 and 12 x 16 inches cost 3 fl 39 kr, 3 fl 74 kr and 4 fl 6 kr per ream for German stamps, and 4 fl 6 kr for Italian (pink) stamps.
Stamps, on the other hand, cost 3 fl. 91 kr, 4 fl. 32 kr and 4 fl. 93 kr. As it was stated during the negotiations on the introduction of the watermarks that this would increase the paper prices of 5 fl. 30 kr and 6 fl. 30 kr by 1 fl. 20 kr each, a price reduction must have occurred in the meantime. In fact, the paper factory's minutes of 15 October 1863 contain an entry that *Auer* had criticized the high paper prices (and made an order for a cross-cutting machine), whereupon new paper prices were established on 5 November 1863.

In the above-mentioned document ex 1867, the format and price of the newspaper stamp paper are also given as 18½ x 24 inches and 38 fl 3 kr and finally the format and price of the paper for bills of exchange and promissory notes as 21 x 24 inches and 10 fl 42 kr.

The distribution of the stamps among the three new paper sizes was, as can be seen from a slip of paper found in the files of the Court and State Printing Office, that the dimensions 9½ x 16 inches were to include formats V and VI, the dimensions 10½ x 16 inches were to include formats I, II and VII, and finally the dimensions 12 x 16 inches were to include formats 111 and IV.

The State Printing Office added to its report that with the suggested combination of the three widths (12, 12, 10½, 10½ and 9½) the newly manufactured watermark roller could be retained with a small change. The nature of this change is not specified. The relevant files of the Schlöglmühle paper factory have already been scrapped and only laconic book entries can be found on this subject. These entries state that on June 21, 1864 an order was received from the factory management “regarding the production of the stamp

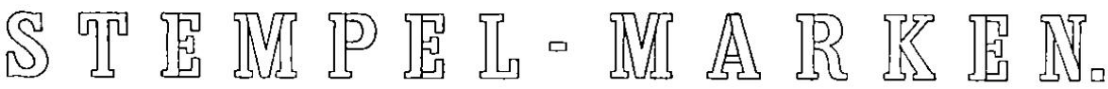
stamp paper of three dimensions with one roller". Later, a protocol is *recorded about the handover of the roller for the stamps for the purpose of changing it to a smaller format* and a corresponding report dated August 17, 1864 to the senior management is also noted. In the Finance Ministry file 25415 ex 1864 it is stated that a size adjustment of the roller, however not a significant one, will be necessary as a result of the change in paper formats. Finally, a file from the State Printing Office dates from 1867, in which, as already mentioned above, some details are given about the condition of the roller, which in all probability describes the condition as it existed in 1864 after the adjustment for the new formats, as far as the distances between the legend rings and not the circumference of the roller were important. This note reads: "Stamps are currently cut in bulk on both machines, so the size of the roller is not important. The present cylinder has a circumference of 20½ inches. Five rows of watermarks are placed along the length of the cylinder at a distance of 46 inches. With this distribution it is possible to produce 12 and 9½ wide paper; only then, as is the case now, the watermarks do not always appear in the middle of the sheet."

Compared to the first configuration of the watermark cylinder described hypothetically above, this would result in the difference that the distance from the first to the last watermark legend (both included) would now be 5 inches longer (46 inches instead of 41 inches). The need to push the ring-shaped soldered rows of letters apart in the axial direction is already clear from the fact that in the assumed original arrangement these rows had their center line at inches 5, 15, 25, 34 and 45. If we now imagine a paper web of 54½ inches on this roller, consisting of the five bands 12, 12, 10½, 10½ and 9½ in the most unfavourable order given by *Worring ,* the end of the first four bands together falls exactly at 45 inches. Since the letters were 12 lines high, the fifth watermark would have been cut exactly in the middle and the last band, 9½ inches wide, would have had only half a strip of the watermark as a border, whereas the second to last band, 10½ inches wide, would have been bordered on both sides by watermark strips, on the one hand just at the edge of the sheet with an intact watermark, but on the other hand by a halved strip 6 lines wide. Even if, for reasons of practicality, when the manual cross-section of the paper web was abandoned, the idea that each sheet should contain the complete watermark legend in the reading direction, i.e. all of its letters, had to be taken into account in any case, if the entire control measure was not to fail in its purpose, to ensure that the longitudinal part of the legend which was allocated to each individual sheet had a legible form and did not consist merely of fragments of letters, as would have been the case with the previous width. For this purpose, it was necessary to move the rows of letters somewhat further apart.

Since in 1867 a total distance of 46 inches from the beginning of the first row of letters to the end of the fifth row of letters is documented, this 5-inch spreading must have taken place at this time during the transition to the “three dimensions” of paper.

It goes without saying that the apparently assumed *simultaneous* production of two widths of 12 inches, two widths of 10½ inches and one width of 9½ inches could not always be accommodated and that other combinations had to be provided for, especially in the most extreme cases where only one of these types of paper was ordered. The rearrangement of the ring-shaped rows of type actually made it possible to produce five widths of 9½ inches or five widths of 10½ inches simultaneously. Only the 12-inch dimension required a restriction to four widths or a combination with the other formats, because the paper machine could hardly have produced 60 inches of usable width.

A preserved document from the management of the state paper mill, the only detailed document that speaks of this roller, sheds some light on the processes involved in the modification of the watermark roller.



Verkleinerte Abbildung des Wasserzeichens Nr. 2.

The same contains the wording of an order issued to the factory administration on July 21, 1864. According to the order, the Schlöglmühler foreman *Pleniger* had been in Vienna shortly beforehand, where the effects of the centesimal stamp denomination on the stamp paper and the necessity of producing three different paper formats were discussed with him. *Pleniger* then himself suggested how the “watermark letters should be distributed accordingly” in order to enable the production of all three paper dimensions with one and the same roller. It is therefore clear from this that a shift in the rows of letters was the main purpose of the reworking.

The factory management had been commissioned to redesign the watermark roller without being sent any new brass letters, as this was merely a matter of shifting the existing letters.

Whether several letters were damaged during the work and could not be reproduced in the same way, or whether some other reason arose, there is no doubt that the change in the roller was in fact linked to a complete change in the brass letters used. The collectors' stamp stocks show that even in the first papers produced with the modified roller, a watermark (to be referred to as No. 2) appears, which differs from the original watermark No. 1 in its different form.

and size of the letters certainly differs. The narrow Egyptian script of 12 lines high (7 Cicero) has been replaced by wider and at the same time lower letters (11 lines, 6 Cicero). The distances between the letters have remained approximately the same. The total length of the legend is 14 inches 6 lines.

Perhaps it was this reduction in the size of the letters that prompted the factory management to make the above-mentioned statement about a “reduction in format”; for apart from the height of the letters, nothing else has actually become *smaller* on this occasion .

With the decree of June 20, 1864, 2.25415-2072, the Ministry of Finance approved the technical requests made by the Court and State Printing Office regarding the change in denomination and the associated modifications to the paper format and the roller, presumably without examining them in more detail: otherwise it would not have been able to fail to notice that four categories of stamps (½ kr., 1 kr., 10 kr. and 50 kr.) were inadvertently not mentioned at all in the printing office's report and that the requested sheet height of 16 inches was too long for the majority of cases. This had probably already been the case. This might have been acceptable as long as it was only half a sheet of a standard commercial format that had been in use since the time of papermaking. But now that special formats were being created ad hoc, they should be adapted to requirements not only in terms of width but also in terms of length. Worring evidently imagined that the entire paper web would have to be divided into five strips at the same time as it was divided lengthwise into continuous 16-inch sections according to the combination he had mentioned. However, he overlooked the fact that the demand for stamp paper would not always require the simultaneous production of all three formats, and that twice as many sheets of the two wider formats would by no means always be required as of the narrowest format: in practice, things turned out quite differently.

The Ministry of Finance expressed the approval of the centesimal denomination in whole and half hundreds in the somewhat cumbersome form that each individual stamp sheet should not contain more or less than 100 or 50 stamps and each (horizontal and vertical) line of the sheet should not contain more or less than 10 or 5 stamps. The first arrangement on its own was not sufficient, because it would also correspond to sheets of 1 x 100, 2 x 50 and 4 x 25, or 1 x 50 and 2 x 25 appoints. The second arrangement alone, on the other hand, would have allowed for 5 x 5 appoints. And yet, despite the apparent thoroughness of this version, an unintended alternative interpretation remained possible, namely the delivery of the Kreuzer and 1 fl stamps in *half* sheets of 50 pieces. The State Printing Office, however, did not accept this interpretation and in 1867 specifically requested permission for this delivery in half sheets (for all stamps), but this was not granted. It would have been simpler and safer to say in the Ministry's order above that all

Gulden categories except 1 fl should be produced in sheets of 50 and all other stamps in sheets of 100.

Just as surprising as this gimmick in the choice of version are some of the technical errors in this act, as is the order that the plates for the calendar, announcement *and playing card stamps* should also be included in the redesign, when there were no stamps for playing cards either then or later, and the possibility of paying for the playing card stamp with stamps was only attempted once (in 1878, see pages 153 and 259). *Schwarzwald* then added an addition to the deal, in which he requested a report on whether the perforation of the stamp sheets should not be abandoned and how much money could be saved by doing so.

4. The regulation of stamps. The ministerial act dealt much more thoroughly than with mild technical questions with the modification of the stamp categories according to the value, which it directly referred to as “regulation of revenue stamps”.
As stated therein, the negotiations were deliberately delayed beyond the publication of the new law of February 29, 1864, in order to be able to take the new stamp rates created by this law into account in the stamp reform. In a table (also communicated to the State Printing Office), *Schwarzwald* calculated the number of possible stamp rates to be 49. Since there were also three consumption stamp rates, it was obviously not possible to create a separate stamp for each tax rate. Instead, the principle was established (and this was also announced in the later announcement) that the use of two stamps in each fee case could be tolerated and the stock of stamps should be organized accordingly. It was therefore suggested that the previous number of 29 categories should first be reduced to 20 by abolishing 9 categories, but then brought back to 26 by introducing 6 new types. Among the stamps to be abandoned were the ½ kr denomination, the cancellation of which was proposed by the Vienna Finance Directorate, and the 72 kr denomination, the abolition of which was proposed by the Kraków Finance Directorate. Furthermore, of the denominations of 10 kr, 4 fl, 8 fl, 16 fl and 18 fl that had been suspended since the creation of the extraordinary surcharge and were therefore printed on prepared paper - with the exception of the vandyk brown 8 fl. denomination, which has appeared in several impregnated pieces and must therefore have been printed on prepared paper that had been in use since the second half of 1859, despite its suspension in May 1859 - the last three known denominations of 10 kr, 4 fl, 8 fl, 16 fl and 18 fl were now to be definitively eliminated, neither for Lombardy-Venetia nor for the non-Italian crown lands. The denomination of 10 kr had already been reactivated in the preparations for the amendment of 29 February 1864.

Now the 4 fl stamp was also reactivated, as it was included in the list of values that in future

The 14 fl stamp was also included among the values to be abolished. This stamp had not been expressly suspended in 1559, but since then it has not been printed (except for Lombardy-Venetia, where the bluish-prepared and pink paper with bills of exchange were introduced, which required all valid categories to be kept in stock) because it was not included in the published list of stamp combinations designated as indicated. In addition to the six values mentioned above, the 6, 12 and 30 kr stamps were also added to the proscription list. According to *Schwarzwald's* proposal, the six new values should be 22 fl, 17 fl, 7 fl, 90 kr, 36 kr and 4 kr.

Following an objection by section chief *Hock ,* this was changed so that the new values were to be 15 fl, 7 fl, 2 fl, 50 kr, 90 kr, 36 kr and 3 kr. The Court and State Printing Office was to begin producing these stamps immediately and to announce by the end of September 1864 when stocks would be sufficiently advanced for the new measure to be announced.

The State Printing Office initially commented on the idea of abandoning the perforation (in a report dated July 11, 1864). It pointed out that by cutting the edges closer, or even by cutting into the stamp image, malversations could be concealed, because one could never know whether such a mutilation of the stamp had not been caused by clumsy handling of the scissors when cutting the stamps. The detail was given that the perforation of 1000 sheets would cost 4 fl 70 kr. The Ministry of Finance then left the pre-punching in place, although the printing office's motivation had overlooked the fact that a malversant could also have a perforating machine.

In a further report dated October 1, 1864, the printing works announced that the reduction of all stamp plates (with the exception of those for 6 kr and 30 kr) to 100 and 50 appoints each had long since been completed, so that the delivery of the stamps in this new denomination could begin as early as July 25.
Only the 6 kr and 30 kr stamps, which had been decided to be discontinued, continued to be produced in the previous denominations using the old plates. Even *after* the date of the above-mentioned report, the 6 kr and 30 kr denominations were printed because they were among the most frequently used and therefore received large orders. The last printing of the 30 kr denomination took place from October 8 to 18, and the last printing of 6 kr stamps from October 8 to 21, 1864. The State Printing Office did not begin delivering the stamps in centesimal sheets for all categories on July 25, as one might think from its report.
The records of receipts of watermarked paper and its delivery in usable stamp sheets and waste paper show that 1,000 sheets and then 4,600 sheets of 2 kr stamps in the new denomination were printed on July 25 and July 30.

were delivered. In September, however, the 15 kr value was still printed with the old plates of the large chancellery format, and it was not until October that centesimal production took place throughout (apart from the 6 and 30 kr values).

In its above-mentioned report of October 1, 1864, the Court and State Printing Office also announced that the production of the plates for the *new* six types of stamps had progressed so far that their printing would begin on October 20 and that the delivery of the ordered 80,000 sheets of German and 20,000 sheets of Italian stamps would be completed by mid-December.

This time too, the technical side of the new stamps was left entirely to the discretion of the State Printing Office. After the Ministry of Finance did not accept *Worring's* suggestion to create entirely new designs, they again chose suitable engravings from the treasure trove of stamp designs that had been created in 1854. For the three guilder values (2 fl, 50 kr, 7 fl and 15 fl) it was obvious to choose the designs of the 8 fl, 14 fl and 18 fl categories that had been definitively discontinued at the same time, because these had become vacant. The design of the 16 fl stamp was no longer used. Of the five Kreuzer values that were discontinued (½ kr, 6 kr, 12 kr, 30 kr, 72 kr), the first three had one and the same (already regenerated) design that the 6 kr stamp of the Convention coin had had at the time; the 30 kr stamp still had the original design as in the first issue; Finally, the passport stamp for 72 kr was made on the smallest design, which previously belonged to the 3 kr CM stamp. So only three designs were possible in the five issues, and one of them was partially vacant. These designs were chosen for the new three Kreuzer values of 3 kr, 36 kr and 90 kr and assigned to them in a natural order so that the higher value received the larger design.

There is now again a 3 kr stamp with the same design as from 1854 to 1858. The legend, however - even apart from the missing CM addition - is noticeably different. It seems that nothing of the original engravings and plates remained except the original, plain stamp shield without a legend. Therefore, there was nothing left but to engrave a new legend on a copy of it and then produce a new multiplication plate. The old 6 kr design was chosen for the 36 kr stamp and the old 30 kr design for the 90 kr stamp. Here too, regenerations (third degree) took place by producing new original types and producing new multiplication plates. For the 36 kr stamp, the appearance of the rich details in the stamp shield is not so striking because this design had already been regenerated several times in previous years. The 90 kr value is all the more striking, where the lower shield, on which the ligature kr is attached, appears to be filled with a hatching that even only a few, rarely found pieces of the first issue

It seems that, due to the perception that the overly delicate lines were missing on almost all 30 kr stamps, the decision was made to deepen these hatchings in the original engraving. Such retouching of the engraver's work is probably very rare exceptions. The new three guilder values also show full copper printing and have been regenerated. There is no noticeable change in the richness of detail in the drawing, because the previous values of 8 f1, 14 fl and 18 fl. were printed so rarely that no signs of wear had yet become apparent.

As far as the gradation in the size sequence of the stamp images is concerned, the 3 kr value, which belongs to the smallest design, and the 15 fl. value, which comes immediately before the even larger 20 fl. value, fit in well, and the 72 kr stamp, which was disturbing due to its small size, has now disappeared. The other new stamps, however: 36 kr. (with the old 6 kr design), 90 kr (with the 30 kr design), 2 fl 50 kr (with the 8 fl design) and 7 fl (with the 14 fl design) irritate the original (only affected by a small oversight in the 4 fl stamp) even more than was already the case with the previous additions to the inventory.

war.

The plates for the three new guilder values (2 fl, 50 kr, 7 fl and 15 fl) had the denomination 50, which had the same engravings (8 fl, 14 fl, 18 fl.) before (Format VI). The 3 kr stamps belonged to Format 1, the 36 kr stamps to Format II and the 90 kr stamps to Format IV; all with 100 appoints.

The watermark is parallel on the three guilder values, but crosswise on the three kreuzer values.

In response to the aforementioned announcement from the printers on October 1, 1864, the Finance Minister's decree of October 14, 1864, 2.48703-4151, was issued. It was included in both the Imperial Law Gazette (as No. 83) and No. 50 of the Ordinance Gazette. In addition to announcing the introduction of six new stamp categories, it also contains a mention of the categories that were to be eliminated. The Imperial Law Gazette states that further production of these stamps, which are no longer needed in the future, has been stopped. Such a comment in the Imperial Law Gazette about discontinued printing was probably inappropriate, since an instruction to the printers was sufficient for such an order, and the only remaining purpose of preventing unnecessary orders could easily be achieved by a further special notification to the administrative authorities. Even more surprising is that some parts of the decree which concerned the withdrawal of these stamps from circulation, a relatively more important matter affecting a wider circle of people, were not included in the Reichsgesetzblatt, but only in the Verordnungsblatt. At other times (such as the withdrawal of the red rose stamps on unprepared paper) no announcement at all was considered necessary in analogous cases.

In omitting some sentences from the regulation in the Reichsgesetzblatt, an obvious oversight occurred, as a sentence which contained the only mention of the value of ½ kr was not included in the regulation.
Thus, the Reichsgesetzblatt gives no information about the cessation of production with regard to this value and it might seem that it would have had to be printed even further.

This seemed all the more disproportionate as the Ministry of Finance wanted to treat this stamp (of ½ kr.) more strictly than the others: while the latter were to remain in circulation until the end of June 1865, the ½ kr value was to be handed in by all those who had worn out in November and to be withdrawn from circulation completely by the end of November 1864. Anyone who owned stamps in the category withdrawn from circulation could use them without further ado, as they had not been recalled; however, they could also exchange them for other stamps.

At the same time, it was announced in the Ordinance Gazette that centesimal denominations of 50 and 100 appoints had been introduced for all existing stamp values as well as for the six new ones.

5. The reactivation of two stamp values. With regard to two of the new values declared to be superfluous, namely the stamps of ½ kr and 12 kr, the withdrawal had to be made soon. The Innsbruck Finance Directorate drew attention to the ½ kr amounts that occurred when calculating percentage registration fees, which up to 5 fl. also had to be paid by stamp. The Vienna Commercial Court and the Finance Prefecture in Venice also pointed out the existing stamp rate of 12 kr for minor legal disputes.

Schwarzwald did not want to admit the mistakes that had been made. He claimed that he had thought about the registration fee, but that he had intended to force the parties to pay the small additional fee (up to 1 kr) in the interest of the state treasury. When he added that by not mentioning the ½ kr value in the Imperial Gazette, they had still been given free rein, this was probably just an attempt to make the violation appear to be a well-considered move. He denied the need for a 12 kr stamp, since 5 kr and 7 kr as well as 10 kr and 2 kr could be combined to make this amount. In general, he was in favor of postponing any announcement on this matter, since the withdrawal of the 12 kr stamp would not take place until the end of May 1865. The decision went against him, since the approved completion of the relevant act did not fit with the vote. Even then, *Schwarzwald* initially limited itself to an order to the printer and an announcement in No. 59 of the Ordinance Gazette (dated 18 December 1864, Z.

59494-5305). Only three days later (21 December 1864) does the relevant department also include an order to the Reichsgesetzblatt. The announcement in this (No. 94) is also, remarkably, dated 18 December. Since the

The withdrawal of the ½ kr stamp, which must have already been completed by this time, had not previously been mentioned in the Reichsgesetzblatt, so the new insertion also refers only to the 12 kr stamp. The decree in the blue ordinance, however, mentions both values and adds that the ½ kr stamps withdrawn in November are to be returned to the wear and tear.

Both values were also expressly stated as being retained in the simultaneous order to the printing works, because precautions had to be taken for their continued production and in particular for their inclusion in the centesimal denomination. A few days before December 18, 1864, the printing works had submitted a list of the galvanic copper plates that had become superfluous due to the change in denomination and the cancellation of several categories and were ready for melting down. From this it was clear that he had kept *one* raised plate each of the denominations of 18 fl, 16 f1, 14 fl, 8 fl and 72 kr and *two* raised plates each of the denominations of 30 kr, 12 kr, 6 kr and ½ kr for all eventualities, since with the latter denominations one plate had to be cut in order to be able to enlarge a second one to 100 appoints, while with the first five categories *one* plate could be increased to 50 or 100 appoints (by cutting away the excess). Due to the change in the arrangements regarding the denominations of ½ kr and 12 kr, the printing works now had to proceed immediately, by urgent instruction, to put together the two raised plates and produce the necessary intaglio plates for printing these denominations, while the other plates that had been reserved as a precaution were now destroyed. The new plates are to be completed in January 1865 in order to prevent a delay in the wear and tear of these two categories.

This concern was completely unfounded with regard to the ½ kr value. At the beginning of the same year (1864), when the tax rate of 1 kr for invoices and consignment notes was established (by the law of February 29, 1864), a very large stock of ½ kr stamps (more than 1,000,000 pieces) was stockpiled. Their use was only minimal because the 1 kr stamps had also become obsolete in good time. So it happened that from January 1865 onwards, 12 kr stamps were repeatedly produced using the centesimally reconstructed plates, but none at ½ kr. The latter did not happen until October, but only because this value had to be reprinted for the new issue (1866) without taking into account the noticeable need for wear and tear. From then on, consumption in this category remained negligible and, due to all other emissions, this brand is one of the rarer values.

Of the nine values by which the previous stock of general stamps was to be reduced as a result of the two regulations, only seven were subsequently reduced. Since six new values were added at the same time, the total number was only reduced from 29 to 28 categories.

This stock, namely the 16 Kreuzer categories of ½, 1, 2, 3, 4, 5, 7, 10, 12, 15, 25, 36, 50, 60, 75 and 90 kr, then the 12 Gulden categories of 1 fl, 2 fl, 2 fl 50 kr, 3, 4, 5, 6, 7, 10, 12, 15 and 20 fl remained completely unchanged for a long time, namely until the application of the crown currency to the stamps in 1898.

Of the seven denominations definitively cancelled in 1864, three (18 fl, 16 fl and 8 fl) had been suspended since 1859, that is, only the first of the four measures required for a change in issue, namely the cessation of production, had been implemented. When these were mentioned in the decree of October 14, 1864, together with the denominations of 14 fl, 72 kr, 30 kr, 12 kr and 6 kr, and with the addition that the further production of these stamps, which were no longer needed in the future, had now been suspended, this was not entirely accurate.

Since the same time, the State Printing Office had stopped producing the 14 fl stamps for the non-Italian provinces (presumably due to a lack of orders). The printing office had similarly stopped printing the 72 kr and 12 kr stamps since receiving information about the intended regulation, but continued printing the 30 kr and 6 kr stamps (using the old format plates) despite the same situation - apparently due to urgent orders. The dates for the stamps being declared out of use have now been announced for all of these stamps. The third and fourth cancellation measures, namely the cancellation of use and the cancellation of validity, have not yet taken place. Anyone who owned such stamps could therefore still use them as they wished or request that they be replaced.

It should be noted here that of the six new values created during the stamp regulation, namely 3, 36 and 90 kr, then 2 fl, 50 kr, 7 fl and 15 fl, there are sample impressions on fairly intense brown paper with cut edges. These impressions were made according to the custom of the Court and State Printing Office for their own use, in particular as templates for assessing stamps whose authenticity was in question. The time of their creation is uncertain.

Issued between October 20, 1864, and October 1865, probably nearer the former date than the latter. As a specimen impression of the 1 kr stamp occurs on *the same* brown paper, it appears that the printing of this value was only made when specimens of the new six values had to be made.

D. AUERS RETIREMENT FROM SERVICE

In the year 1864, which brought so many modifications to the stamp system and - as will be shown below - also for some other
Transformations that contained the seeds and first beginnings, also includes a

A rather regrettable event that caused a great stir in the public and in the press at the time. Given this, its description is understandably not easy, but cannot be ignored here because of its connection with the history of stamps and the repercussions on their further technical development. It concerns *Auer's* retirement from active service.

From what has already been said, it is clear that *Auer* knew how to gain opponents almost everywhere. Conscious of his achievements and merits, and probably also of his nature, he acted with a certain arrogance, never shying away from conflict and sometimes setting aside the necessary considerations towards those who disturbed his circle.

However, the ambivalence in the position of the institution he headed, which was initially a purely practical institute for the graphic needs of the state administration, but was also intended to be a model institution that naturally had to make material sacrifices for its ideal purposes and could not always see whether its attempts and undertakings would be profitable, was in itself sufficient cause for many differences of opinion and clashes. This is exacerbated when the subordinate position of the head of such an institution is occupied by a person who, due to a rich past of brilliant achievements and great successes, is not inclined to subordinate his will to another. And yet it is again rooted in the system of official subordination and superiority that even those in possession of higher authority are not inclined to forego the exercise of the official power to which they are entitled because of the personal circumstances of the person at the head of such an institution. In such cases, in order to avoid open conflict, a great deal of insight and goodwill on both sides is required. But this seems to have been lacking at the time. Things had gradually progressed to such an extent that, when one examines them, one has the vague feeling that it was high time for those involved to step down from the scene and for new men to come on board.

As far as can be judged from the files, the starting point for the peripeteia seems to have been *Auer's* excessive workload . Even the management of the court and state printing works and the introductions he made there - largely based on his own inventions - took up so much of his time that in 1853, when an article about natural printing appeared in the daily newspaper "Die Presse" and the question was whether he had written it or inspired it, he was able to point out that his official duties did not allow him to even read newspapers. Nevertheless, so many other tasks were assigned to him that he was bound to succumb to the workload in the long run. For example, he (temporarily) took over the National Bank printing works, the Lemberger

State Printing Office and the “Wiener Zeitung”. However, he was always in charge of the Temesvár State Printing Office, the Vienna State Porcelain Factory, the Schlöglmühler Paper Factory and finally a semi-finished paper factory in Román St. Mihály near Temesvár, where corn straw was to be processed. The manufacture of corn paper was to become the stumbling block here. As is well known, the use of corn straw for paper production is a problem that has not yet found a satisfactory solution. For Austria, the same was of great importance, particularly because of the extensive cultivation of corn in the Hungarian lands.

At the end of the 1950s, *Moritz Diamant,* with the support of the government, carried out experiments in this regard in the Schlöglmühle paper factory. *Auer,* who thus became aware of this question, turned his interest to it. After he believed he had found a solution to the problem by using not all the straw but only the husks, that is, the husks of the corn cobs, he took on this branch of production with his usual generosity and impulsiveness. The aforementioned semi-finished product factory was built in Hungary and considerable investments were also made in the Schlöglmühle. And before the fruits of these expenditures had even been realized, *Auer* came up with a project at the end of December 1863 to build a new large factory for processing corn in Schlöglmühle next to the existing paper factory. Such paper had already been produced in various types in the Schlöglmühle. The by-products were adhesives, food products and spinning products, all of which required special machinery. In January 1864, with the approval of the Ministry of Finance, an exhibition of these corn fiber products was opened in the State Printing Office and then - the turning point occurred! The success was not achieved because the paper products were not well received due to their poor quality. The large investments made up to that point were as good as lost, especially since the many by-products were of no importance in view of the main problem that no completely usable paper could be produced. The lack of profitability undermined *Auer's* projects . Now voices were raised again about the unproductive expenditure in the state printing works, particularly because of *Auer's* undertaking to produce full-size electroplating copies of outstanding plastic works of art from all over the world.

It now appears that *Auer,* nervous as a result of the failure, overworked and probably already ill, lost his composure and coolness and took unwise steps. He demanded his retirement, complaining about the offensive tone of the decrees he had received, and at the same time submitted a petition to the High Court. He was initially granted leave of absence. A commission set up in consultation with the Supreme Audit Office was to investigate the inadequacies of the State Printing Office's facilities and to

clarify whether the reason lies in the existing regulations or in the inaccurate compliance with them.

Auer then wrote a memorandum entitled “The Beginning and End of My Service Life” and had it printed with the date May 10, 1864.
Much of it was exaggerated and aggressive, and there are not a few traces of pathological irritability. This is particularly true of the claim that the enemy secretly mixed bad stuff into the corn paper production process in order to have an unfavourable effect on the product.
The affection that *Auer* showed to his patron, the Finance Minister *Bruck,* who tragically committed suicide in 1860, is touching on a human level. He said: "After this loss, the fall of *Baron Bruck,* all my higher plans were dead." Also not uninteresting is the mention that the Fees Act (1850) was printed three or four times at enormous additional expense because it was full of false citations that had arisen through changes. This was aimed at *Schwarzwald ,* who had been responsible for this work in drafting the Fees Act.

It is not clear whether this claim is aimed at the well-known question of the quotations in §§ 82 and 84 of the Fees Act, which are different in the German edition of the Reichsgesetzblatt than in some bilingual (equally authentic) editions. If so, *Auer's* description would probably be quite exaggerated.

Since the *Auer* incident had already caused a great stir in public and since the discussion about it was fueled in particular by the private printing industry, which tried to exploit it in order to make a move against the inconvenient existence of the state printing establishment - just as the current movement against the continuation of the state factories in general had its origins in the " *Auer case"* - the proposed publication *of Auer* would have been very inopportune from an official point of view and, moreover, contrary to all discipline. He had reported the publication of his work to the Finance Minister, submitting excerpts. He was now ordered to deliver the entire printed edition. In his irritation, he refused (in writing) to comply with such "orders lacking a legal basis", citing the rights arising from his private property, but declared that he would comply without further ado with a request for delivery. Then the normal final act of such civil service tragedies occurred: he was suspended on the basis of this declaration sent in November 1864; he was restored in February 1866; and soon afterwards (in March 1866) he was finally retired. He died in July 1869.

The production of corn paper was stopped after a mixture of the
Corn cloth with rags was not of much use and especially the eye-catching
Use of this paper to create a new type of stamp

turned out to be impractical, the idea was abandoned altogether. A few years later, when there was still no demand, the existing products were sold off as best they could.

Since *Auer's* leave of absence and for some time after his retirement, the Court and State Printing Office was under the management of the Vice-Director *Karl Adam Kaltenbrunner.* During this interim period, the trends that had contributed to *Auer's* departure from the service also sought to reduce the State Printing Office to the level of a mere auxiliary office for the printing of stamps and the production of printed matter.

Following a decision by the Council of Ministers, the publishing house and the art department of the institute were closed in October 1865. On October 13, 1866, after more than two years of provisional arrangements, the director of the official "Wiener Zeitung", Section Councillor Dr. *Anton Beck ,* was appointed Director of the Court and State Printing Office, a position he held for 26 years (soon promoted to Court Councillor). It took a great deal of patience, wisdom and strategy on his part to overcome the consequences of the one-sidedness of the new direction and to gradually return the institute to a state that corresponded to its mission and the reputation established by its artistic achievements. How many difficulties had to be overcome soon became particularly apparent in the area of radical reform of the method of producing postage stamps, which is important for this presentation. This issue, which was under the official title of "improving postage stamps", now got rolling and occupied the institute for many years.

E. THE FIRST FOUR CREATIONS OF WATERMARKED PAPERS

1. The first and second creation. During the *first* "creation" of the watermarked paper, which lasted from May 10 to July 12, 1864, immediately after the extremely urgent production of 200 reams of paper for bills of exchange (i.e. far more than the nine-month requirement of 90 reams estimated by the ministry), the production of 399 reams for the German and 231 reams for the Italian stamps began. Since an order to count the ream as a new ream with 500 sheets came in the middle of the work, the aforementioned bills of exchange paper was still counted as 480 sheets. For the German stamps, there was an excess production of 16 reams. In this case, 415 reams were sent to the depot for secret state papers in Vienna. The shipment took place in bales immediately after each completion (in three reams in plank packaging). Immediately after 1 June 1864, the day on which the use of watermarked paper was to begin, the State Printing Office also had to place its order for it at the secret

Depot began to issue stamps, so that on June 13, 1864, it was able to begin delivering the 4 kr, 12 kr and 1 fl denominations printed on new paper to the central stamp collection warehouse. The 415 reams, which were to be sufficient for nine months of printing, were produced in 10 x 16 inch format and contained the first form of the watermark (narrow letters 12 lines high). To identify this paper, the collector should pay attention to two factors: the presence of fragments of the first watermark mentioned above, and the 6 kr and 30 kr denominations, which disappeared during the stamp regulation and therefore do not appear on any of the later papers produced in other formats and with other watermarks.

If one looks for such leading pieces, one can equip them with other values as well as stamps of the same values, but without watermarks, by comparison.
If you compare this paper of the first creation with the previous cyan-blue single-cross papers, you can clearly see that it is noticeably thicker, has a spongy complexion and has a bluish tint that tends towards stone green. With three values, namely 10 kr, 50 kr and 20 fl, you could in principle immediately tell whether the paper was of the first creation and therefore whether it had watermark No. 1, even if there were only very small watermark fractions on a stamp. This must be parallel for the two Kreuzer values and crosswise for the 20 fl values.

After the denomination change, both things changed into the opposite. However, this distinguishing feature is only really important for the 50 kr value, since the other two values were not printed on watermarked paper before the introduction of the centesimal denomination. However, for the 50 kr value, the stamps with watermark No. 2 are usually clearly distinguishable by the color of the paper.

As a result of the introduction of centesimal panelling, the plates had changed their size so that, as mentioned, three paper formats (9½ x 16, 10½ x 16 and 12 x 16 inches) had to be created. It is now clear that the large remaining stock of paper from the first creation (with watermark no. 1) that was still available at the time of the panelling change could also continue to be used for the stamps assigned to the dimensions 9½ x 16 inches (formats V and VI), i.e. the guilder values from 2 fl upwards. This actually happened and is particularly noticeable in the new values of 2 fl 50 kr, 7 fl and 15 fl, which were first printed in November 1864. These first prints still have watermark no. 1.

From a compilation of the measured dimensions of the 19 different natural prints and their white spaces after
Combining them into whole plates resulted in approximately determined dimensions of these stereotype plates, which show that the stamps of 2 kr, 3 kr, 4 kr, 7 kr, 1 kr announcement and 6 kr calendar (Format I), then the stamps of 20 fl (Format VII) could also be printed on this previous paper if necessary.

could be printed; however, only very narrow margins were required, which, however, were more than sufficient if the printer was careful.
In fact, it appears from the records that the above-mentioned very first delivery of decade stamps, namely the 2 kr denomination, was printed at a time (in July) when no other watermarked paper than that of the first creation existed.
For the stamps of formats II, III and IV, however, new paper (in the dimensions 10½ x 16 inches for II and 12 x 16 inches for III and IV) had to be purchased after the introduction of centesimal denominations. As the only remaining protocol entries show, 150 reams of the dimension 12½ x 16 inches and 100 reams of the dimension 12 x 16 inches were ordered on August 23, 1864. It is not entirely clear how much was then delivered. For one of the types of paper (without further description), an additional delivery of 8½ reams is mentioned. The delivery dates are given as September 3 and 4. According to an entry in the paper factory's protocol, this order was made "for the new stamps". Since the guilder denominations of 2 fl 50 kr, 7 fl and 15 fl were printed on the paper of the first creation (10 x 16 inches), this naturally only included the kreuzer denominations of 3 kr, 36 kr and 90 kr, of which the second denomination required paper of 10½ x 16 inches and the third of 12 x 16 inches, while the 3 kr stamp, as mentioned above, could also have been printed on the paper of the first creation in an emergency, but this did not actually happen. Since the roller was redesigned precisely with the new formats in mind and the factory reported the completed redesign to the management on August 17, 1864, the paper of the second creation produced at the beginning of September was already produced with watermark No. 2.

If one compares the stamping system of this period with the previous situation in terms of the paper used, it can be seen that, on the one hand, the inconvenience of the costly monitoring procedures that were now associated with paper production meant that larger quantities of paper were generally produced and that these stocks lasted longer. However, the format splits created a new element that led to a previously unknown variegation and prevented the greater consistency expected from the larger paper productions from coming into effect. The paper stock of one format, which included less frequently used stamps, lasted a long time, while in the same period a second format had to be replaced two or even three times because of faster sales. However, these replacements usually looked considerably different in terms of color shade to the earlier paper.

Thus it came about that now quite different papers were in use at the same time, some for this, others for that value, whereas previously the nuances of the more frequent small purchases changed quickly, from a procured

However, all the values that were ordered could be created from the stocks. Now different papers are mixed up and one would have to create a separate chronology for each of the formats.

The paper of the first creation, which has not yet been differentiated according to format, provides the important lesson that one should not go too far in distinguishing between varieties. While it is quite certain from the records that all paper with the watermark No. 1 comes from one and the same creation, the associated marks show such striking differences in strength, transparency, thickness and apparently even in color that one would be tempted to assume that there are several distinct varieties. It is quite possible that the *one* large creation was made up of several production processes in which the manufacturing process was repeatedly started anew. Since it is hardly possible to reproduce the previous composition exactly when paper is freshly made and therefore considerable differences are also within the realm of possibility, one could actually turn the matter around and say that the individual parts of the paper of the first creation look very similar to one another. All kreuzer denominations except those of ½ kr, 10 kr and 60 kr were printed on this paper; likewise all guilder denominations except those of 6 fl, 12 fl and 20 fl.

It should also be emphasized here that the value of 4 fl, which had been reactivated during the stamp regulation *in thesi ,* was not actually reprinted until May 1865, when an order for it arose.

If there is not the slightest doubt as to which stamps should be included in the first edition of the paper, thanks to the 6 kr and 30 kr types and the watermark No. 1, there is by no means the same certainty as regards the second edition of the paper. The only thing that is certain is that this paper already had watermark No. 2, that it was produced at the beginning of September 1864 in the formats 10½ x 16 and 12 x 16 inches, and that it was intended for the *new* Kreuzer values. The first production of the 3 kr, 36 kr and 90 kr stamps took place in November 1864. The 90 kr value was then only issued once more in March 1865, while the 3 kr value was printed in December 1864, apart from the two months mentioned above, and the 36 kr value was printed in July, August and September 1865, apart from these three months.

It is now a fairly probable assumption that the two papers (different in format) of the second creation were either quite identical if they were produced simultaneously by cutting three widths of 10½ inches and two widths of 12 inches from the 55½ inch paper web, or, if this was not possible because the paper machine did not have a sufficiently wide metal cloth, that both papers would at least be very similar if made from the same stuff. It can therefore be concluded that those stamps of 3 kr, 36 kr and 90 kr which have the *same* paper are the *first prints .*

This is the case with a light yellowish or even whitish paper that suddenly appears in this phase, which shows no trace of bluing, but is nevertheless impregnated with prussiate of potassium, as the acid reaction shows.
The assumption that this is the second edition of the paper is supported by the rare occurrence of the (frequently used) 5 kr denomination on the same paper, starting in November 1864. Not much later, the 1 fl stamp also began to appear on this paper. According to the waste paper lists, both of these stamps were already printed in centesimal denominations in October 1864 and their plates in the new paneling required a different paper than 10 x 16 inches (namely 5 kr in the dimension 10'½ x 16 inches, but 1 fl in the dimension 12 x 16 inches). Because of these two values, the yellow stamps of the three new Kreuzer denominations must be regarded as the first prints from November 1864. According to the collectors' records, the denominations of 12 kr, 15 kr and 50 kr also appear on the same paper. In fact, in January 1865, stamps of 12 kr and 50 kr were printed, and in February, stamps of 15 kr - all three in centesimal denominations. The 50 kr stamp now has a cross-shaped watermark.

There are a large number of collector's forgeries of the stamps on this paper, especially the rarer 3 kr and 90 kr ones, which fall into the same category as the previously mentioned artificial decolorization of the 72 km stamp by using alkalis, which dissolve the Prussian blue of the less rare blued pieces, including the impregnation. Such forgeries can be recognized by the fact that they do not show a blue reaction when dabbed with acids. However, this distinguishing feature is not entirely certain, because it has been found that a blue reaction, albeit weak, can still be observed when decolorized by *weak* alkalis. However, if the forgers were to impregnate the stamps again with prussiate of blood, there would be no distinguishing feature other than the difficult-to-assess structure of the paper.

2. The third and fourth creation. In 1864 a third paper creation took place. No records of this have been preserved. The minutes only show that 266 reams of “two kinds of stamped paper” were ordered in the second half of October and that the product was dispatched from the factory on November 19, 1864.

The year 1865 also brought three creations: the fourth, fifth and sixth.
The fourth creation was purchased in mid-March and consisted of 200 reams of paper with “white” stamps, as they were called because of the contrast to the pink stamps of the Lombard-Venetian kingdom. On April 12, 1865, a protocol was drawn up at the Schlöglmühle about the completed production.

Nothing further is known.

If the fifth and sixth creations are temporarily disregarded because
their products are mainly used to produce the first supplies

were used for the next (partial) issue and the papers of these two creations can therefore be identified with certainty, it is only necessary here to go into more detail about the third and fourth creations. The stamps of this period (i.e. widely perforated stamps on paper with watermark no. 2 [except for the light ones of the second creation] of which the Kreuzer values do not yet have a value print) are actually found on two different papers. One of them shows so many strange coloring phenomena that it really deserves the name chameleon paper given to it. The most striking feature of the stamps on this latter paper can be said - but only with several reservations - that they appear *darker* on the back than on the front. Notwithstanding this regularly occurring gradual difference in the coloring of the printed and glued sides, a wide range of color intensity can be seen, not only on the upper side from light gray-yellow through pale brown to medium green-blue, but also on the underside from a light bluish-green tint to a very dark coloring, which is sometimes more blue, sometimes more green, but in any case, especially when viewed through, has a pronounced green tint. When the upper side is lighter in color, irregular blue clouds of color can sometimes be seen on it.

Revenue stamps of this type are not uncommon on dated items from April 1865 onwards. In general, there are a striking number of stamps from this period on which a complete date appears. These stamps mostly come from bills of exchange. This is related to the provision of the law of February 29, 1864, RG Bl No. 20, that if the obligation to stamp a bill of exchange was to be met by stamps, the date was to be written in the upper part of the stamp and the name of the issuer above the lower part: an echo of *Baumgartner's project, which was in question when the revenue stamps were created,* and which called for the long leaf-shaped flaps to be added to the round stamp plates. Unfortunately, the dates on these stamps are not always reliable, since it is well known that there was always a lot of arbitrariness in the dating of bills of exchange. If someone had an unstamped bill of exchange and was forced to make official use of it, it was natural that he would first try to remedy the lack of stamps: he would buy the stamps that were available and overwrite them with the date that the bill already bore, without taking into account that stamps of this type had not yet existed on the date given. Only when a large number of dated specimens give the same result with regard to the date can the existence of a stamp variety be considered proven for the time in question. This is now the case with the chameleon-colored stamps for the spring of 1865. The values of this coloration are known to be 3 kr, 5 kr, 7 kr, 12 kr, 36 kr, 50 kr, 1 fl and 2 fl.

The 2 fl stamp deserves special attention. The printing lists show that this value was produced in May 1865. Of the papers available at the time, only paper from the first edition (12 x 16 inches) could have been used for this - as was actually the case with the 4 fl stamp printed at the same time (when it was reactivated) - or paper measuring 9½ x 16 inches would have had to have been produced during the fourth edition in April 1865. Later, this value is also listed as having been printed in September 1865. Also in September, 20 fl stamps were printed on fairly dark blue paper with watermark no. 2, which must belong to the fourth edition, because no paper format was produced during the fifth edition that would have been suitable for 20 fl stamps. It will only be possible to decide which of these two papers the 2 fl- with chameleon coloring belongs to, namely the paper of the first or the fourth creation, when 2 fl- stamps of chameleon coloring *with parts of watermarks* are found. The paper of the first creation had only watermark No. 1; the subsequent creations, and also the fourth, had watermark No. 2. Both watermarks have differently designed ladders, so that they can be recognized from existing letter fragments.

The strange thing about stamps with chameleon coloring is that it is always the glue side of the stamp that has the darker coloring, without exception. This leads to the conclusion that this state of the paper could not have existed at the time the latter was delivered to the Court and State Printing Office. If *one* side of the paper had already had the darker coloring, there would also have to be stamps where the opposite of the regular appearance would occur, i.e. the printed side would be darker and the glue side lighter. The files do not contain the slightest information about this differential coloring and therefore it was not my intended and expressly regulated matter. It was always up to the printer in which position he wanted to place the paper during printing. It would have been the strangest coincidence if the paper - especially with rapid mass production - had always been placed on the engraving with the lighter side without exception. In fact, no brand has yet been identified where the back is the lighter one.

All this leads to the assumption that the darker coloring of the underside of the stamp must have its origin in something that did not exist before printing and which, by its very nature, could have caused the unprinted side of the stamp to take on this darker coloring. This something could very well have been the *sizing* .

A clue to this assumption is provided by a report from the Court and State Printing Office from September 1863. The occasion and the specific circumstances of the report show that even then the new conditions in the stamp business were already emerging and that new men with new

aspects began to come into play. Even under *Schwarzwald,* who left the service in 1865, a younger official, the design trainee Dr. *Wenzel Nejedly,* made himself known through his zealous activity and his efforts in the field of stamps. In a later, very important summary report Z.31019 ex 1865, the head of the section *Dessary* informed the finance minister that *Nejedly* had carried out intensive chemical studies in an effort to help improve stamp production and had contacted *Vinzenz Kletzinsky ,* a chemistry professor at the Wieden secondary school and regional court chemist (also known as the inventor of a process for producing parchment paper) . One of the relevant questions tackled by these two concerned the production of a suitable stamp adhesive. In September 1863, the State Printing Office submitted a report on a proposal *by Kletzinsky* for an improved stamp adhesive and mentioned that iron vitriol was also added to this adhesive, which *changed the color of the chemically prepared stamp paper from white to blue ,* as was proven by the enclosed test sheets. Since the question of a better adhesive has not disappeared from the agenda since then and an order to the printing office from 1865 to test another proposal *by Kletzinsky* concerning the use of mucilaginous gum is mentioned , it is conceivable that the glue used in the first half of 1865 in the production of stamps contained an additive with a similar effect, i.e. an agent that combined with the prussiate of potassium contained in the stamp paper and caused the blue reaction.

This can also be concluded from the characteristic fact that the degree of intensity of the discoloration produced by the chameleon paper is very different and that the reaction also penetrated to different depths into the paper.
If you scrape away paper particles from the back of these stamps, the strongly colored layer soon disappears and you come to the lighter layer, which forms the front of the stamp. The depth to which the blue color has penetrated from the back is in no way related to the intensity of the coloring, since the light paper sometimes appears at the same depth on both the darkest and less dark backs. On some stamps, the coloring has penetrated so deeply that the layers exposed by scraping are lighter than the back, but are still visibly colored.

Finally, in other cases the colouring has penetrated completely, so that the whole mass of the paper has an even colour. Of course, in the latter case it cannot be said with certainty whether the colouring has started on the back or whether the paper was coloured this way from the start. Only the existence of numerous gradations up to this degree of colouration allows us to conclude that this may be a further case of the same kind.

When one looks at all these peculiarities, the above-mentioned assumption that this blue coloration is an effect of the branded glue becomes more and more likely. All the deviations noted can also be explained by the way in which the glue was applied at the time. The glue was always prepared and used in small portions because of the rapid decomposition. The glue was applied manually using large hand brushes. The glue solution could therefore be thinner at one time, thicker at another; the hypothetical reacting additive could then have been stronger at one time, weaker at another; finally, the applied glue layer was sometimes thicker, sometimes thinner. All of these factors could have a different effect on the blue reaction. A more concentrated additive produced a darker color; a thicker glue layer gave off moisture to the paper over a longer period of time until the reaction stopped when it dried out; a thin glue solution finally moistened the paper more and penetrated deeper than a stiff solution. The assumption that the blue colouring of the back of the stamp was caused by sizing is also supported by the fact that it is easy to find stamps of the same value that have exactly the same degree of colouring, while stamps of other values usually have a different colouring. The former were treated at the same time with the same glue solution, which therefore caused the same reaction. The fact that this is not a case of bluing of the paper (caused by a blue dye) as usual is shown by the fact that etching with acids leaves only a barely visible trace or no trace at all on these papers. The reaction to the impregnating agent has already taken place.

Strangely enough, there is not the slightest note from that time about this extremely striking two-tone color of the stamp paper. However, one should not conclude from this that the backs of the stamps were not yet blued at that time and that this discoloration only developed in the time that has passed since then.

The realization that the glue is the cause of this coloration of the back and that we are not dealing with a two-tone color that already arose in the paper mill now brings a certain uncertainty into the assumptions about which creation this paper should be assigned to, especially since it is not at all certain that these two-tone stamps all have paper from one and the same creation.
The glue mixed with a suitable reagent could produce this effect on any prepared paper. One can actually find stamps (especially those of 3 kr and 90 kr) which undoubtedly belong to the yellowish paper attributed to the second creation, and which already show a light blue-green coloration on their back.

On the other hand, among the white-yellow brands of this period, there are Paper differences and compare some brands with rougher,

rougher paper so similar to the chameleon marks when these have been bleached using alkalis that one must assume that this paper was also a very light yellow *from the beginning* and that its use *began* at a time when pure glue was still in use; and furthermore that the paper of the second creation had already been partly glued with the reacting glue - at least with a slightly bluing solution. To be precise, one should therefore place the papers of the second and third creations side by side both in their original appearance and with the glue reaction visible. In general, however, a side by side of the yellow marks on the one hand and the chameleon marks on the other is sufficient and in the majority of cases the contrast between the second and third paper creations will be correctly captured.

While the paper with sizing reaction can be assigned to the second or third creation with greater or lesser certainty, there is not much stamp material that could be assigned to the fourth creation.

The leading type is the 20 fl denomination (mentioned above in connection with the 2 fl denomination of chameleon coloring), which was printed on watermarked paper for the first time in September 1865, when watermark No. 2 already existed, but not again until May 1866, when this watermark no longer existed. There are now 20 fl stamps with watermark No. 2, which can therefore be dated to September 1865 with certainty. The paper on these is a considerably darker blue than that of the first creation. Judging by this coloring, which therefore belonged to neither the first nor the second or third creation, this paper would come from the fourth creation. There are also stamps of the same color tone for 15 kr and 5 fl. and then from the later Kreuzer new issue ones for 90 kr. Stamps of 5 fl and 15 kr were actually printed at the same time as the 20 fl denomination in September 1865. These values, if they really all belong here, would indicate that the 200 reams of the fourth creation referred to all three paper sizes, because each of the first three values (20 fl, 15 kr, 5 fl) required different paper dimensions. The later 90 kr stamp could be printed on the same format as the 15 kr value.

F. TECHNICAL MODIFICATIONS

The provisional management of the Court and State Printing Office was evidently trying to adapt to the restrictive tendencies that had come to the fore in the area of stamp production. To this end, it introduced a price reduction for the delivery of

of these stamps. This was made possible in part by the general decline in wages, but in part by the fact that an invention *by Auer,* the so-called endless copper printing press, was used to print the stamps. There is a document from 1862 about the use of this press in printing the 10 kr notes, which shows that opposition to *Auer's* inventions had arisen within the institution itself, which was expressed in the accusation that this press was not very efficient. When the justification for this information was demanded, it turned out that, on the contrary, the efficiency had doubled compared to previous presses. On this occasion, a moment relating to the printing of the stamps was also mentioned, although not in a completely clear way. First, it is said that a printer's ink recommended by *Heinrich Prey* and *Tomassich* made it possible to save on one inking machine for each press. Then there is an addition *by Prey* that a new printing process devised by the chief machine master *Steinbach* and von *Tomassich* and calculated for the engraving of coin notes and *stamps* was tried out “press by press” and accepted as practical. No further details are given. The price reduction, which came into effect in August 1864, was 15 fl 49 kr per 1000 sheets, with the price falling from 68 fl 99 kr to 53 fl 50 kr. The components of the new price were: copperplate printing 16 fl; type printing (i.e. natural printing, for which the term “art printing” was used in a later act, where the letterpress printing of the value legend was also taken into account, but in the surveys for the price reduction the term “tone printing” was used, which was later also used in Finance Ministerial Decree 42631 ex 1869) 10 fl; gluing and “pressing through” (i.e. perforating) 15 fl; Galvanically produced copper plate (which was therefore estimated to be unusable after 1000 impressions) 10 fl 50 kr; finally “iron coating” (that is, steeling of the plate, a process that appears here for the first time in the field of stamps) 2 fl. From the calculations for this price reduction, it should also be noted that 14 pounds of glue were required for 1000 sheets of stamps, namely 7 pounds at 25 kr and 7 pounds at 10 kr.

From the date from which the reduced tariff was to apply, it could be concluded that the use of the endless copper printing press for the production of stamps was only initiated by the provisional management of the Ansah. However, this does not agree with the fact that

Auer mentioned in his memorandum of May 10, 1864, that after the implementation of the automatic high-speed printing presses, he had switched to the endless or perpetual printing copperplate printing press that he had long planned, which would produce as much as twenty presses previously, “so that now, in addition to the stamps, all the coin notes are supplied, which would require 40 copperplate printers and two large rooms.”

This, in conjunction with the above-mentioned note about an experimental change in the printing process for coins and stamps in 1862, leads to the assumption that *Auer's* press had already been in use since 1862. If he had not already reduced the cost price of the stamps himself, this was evidently done for the purpose of having a positive effect on the profits of the institute.

The year 1865 also brought another technical change in the stamping industry. The Ministry of Finance learned that in Galicia the "washing out" of ink writing from overwritten stamps was being carried out successfully and on a large scale, despite *Hausner's* preparation of the paper, and the appropriate procedures for this were also made known from several submissions by *Leo Geller* from Kaÿusz, which revealed remarkable chemical knowledge. The most important thing was that the blue coloration that occurred when the lettering was removed by acids could in turn be removed again using caustic potash solution. The Court and State Printing Office carried out detailed tests in this direction and came to the conclusion that the most important way to protect the gradient would be to ensure that the natural printing was not attacked and damaged by the procedure with the acids and caustic potash. Of all the printing inks used in the tests, the orange-yellow oil ink proved to be the most sensitive and on 20 June 1865 the printing works proposed that the leaf veins of the stamps should be printed with this ink in the future. *Nejedly* took up this suggestion and wanted to prescribe the orange-yellow ink for the "tone printing" at the beginning of October 1865 when the new Kreuzer issue mentioned in the next chapter was printed. It is unclear whether this was only meant for the new Kreuzer stamps or also for the Gulden stamps that were still to be printed; however, this is irrelevant because this part of the report (Z.48224 ex 1865) was deleted. In the aforementioned summary document 31019 ex 1865, which probably only bears the completion date of March 10, 1866, but was certainly written earlier (in November or December 1865), because an order to reject the blue paper issued on October 20 for the number 48224 ex 1865 is described as having been issued “recently”, *Nejedly* also mentions the “deep orange-yellow overprint color requested by the State Printing Office” and then notes the following: “In order to ... introduce the most feasible improvement to the stamps immediately, without first having to issue the new stamps of all 34 categories and recall all the old ones, which would require a period of about six months, the State Printing Office was quickly commissioned to mix a dark brown with the above-mentioned orange to the previously usual overprint tone and to use it immediately in the current stamp production.

use."

Judging by the dates given, this new orange mixture natural print would have replaced the previous Vandyke brown colouring in November or December 1865. The new print is easily recognizable

Not at all, presumably because, according to your instructions, the mixture was made similar to the previous color, so that there was no significant difference in appearance. The files are silent on the chemical composition of the two colors mixed together.

An incident from the year 1565 must be mentioned here as an appendix. *Theodor Wallnöfer,* an intern in the tobacco and stamp court accounting department , had to be handed over to the criminal court because he had removed stamps from bills of exchange that had been received for censorship as exchange material and sold them after “cleaning them with an elastic band”. This case showed that the order of the Finance Minister’s decree of March 10, 1855, Z.9834-768, V.Bl No.10, according to which all exchanged stamps were to be overwritten with the word “Exchanged”, did not offer sufficient protection against malpractice with the exchange material. The Ministry now ordered on 26 July 1865, Z.29296, that all exchanged stamps had to be “punched through”, that is, punched through with a gouge, in such a way that the imperial eagle find (where two eagles were attached, one of them) had to be punched through, whereby, however, a violation of the numerical value legend and the

certain room must be avoided.

FOURTH SECTION

THE LEGEND EMISSION

CHAPTER XXI

THE THIRD (PARTIAL) EMISSION

A. THE CZERNOWITZ FALSIFICATION

In 1865, it became necessary to modify some of the stamp categories, namely the Kreuzer values. The reason for this was the occurrence of a special type of stamp forgery, known among collectors as the Czernowitz forgery. In April 1865, the Ministry of Finance received repeated reports from the from Bukovina Finance Directorate, according to which stamps of 75 kr, 72 kr and 50 kr had appeared at the Czernowitz Land Tax Office that were genuine stamps but contained forged value legends. The original legends had apparently been erased from stamps of 15 kr, 7 kr and 10 kr and the legends of the higher values mentioned had been drawn in the blank spaces. These stamps had mostly been handed over to the court in unused condition. The same stamps had also been forged at a tobacconist. An engraver was suspected of being the perpetrator, especially since the deceptively precise tracing of the legends, which stated higher values, required considerable skill.

But then suspicion turned to a clerk who had previously worked for the court and who had since fled. Since he could not be found, the whole matter came to nothing. The Court and State Printing Office was asked for its opinion and in particular whether such forgeries could not be prevented most effectively and at the same time most cheaply by repeating the value of the stamp several times. The printing office reported that in the forgeries the erased areas had been covered with white watercolour and the new legends had been drawn in with black ink. It also pointed out that these forgeries were made possible by the fact that several stamp plates were used for more than *one* stamp category. There were five drawings belonging to more than *one* value, one common to the 15 and 75 kr denominations, a second to the 25 kr and 60 kr denominations, a third to the 10 kr and 50 kr denominations, a fourth to the ½ kr, 5 kr, 12 kr and 36 kr denominations, then 2 kr announcements, and a fifth finally to the 2 kr, 3 kr, 4 kr, 7 kr, 1 kr announcements and 6 kr calendar denominations.

All other values had a different design. There was a risk of counterfeiting, particularly with regard to the six values of 75 kr, 60 kr, 50 kr, 36 kr, 12 kr and 7 kr, which is why it was recommended that six new designs be engraved for them. The printers overlooked the fact that the values of 72 kr and 30 kr had probably already been collected but had not yet been recalled and were therefore also taken into consideration: counterfeit stamps for the former amount had just been received in Czernowitz, and the change from 30 kr to 90 kr was also possible, although the above-mentioned fact that the regenerated design of the 90 kr stamp had a clear hatching of the lower shield could have been an obstacle here.

The printing works explained that the change in the drawings proposed by them would make forgery impossible, while the use of the other method, namely the frequent repetition of the value in the existing stamp images, would make forgery more difficult but would not prevent it completely. In both cases, it would take five to six months to complete. A new drawing and engraving were estimated to cost 50 fl., and a subsequent raised plate with 100 stamp plates would cost 20 fl., so a total of 420 fl. The other method would require new raised plates, which would cost at least 150 fl. It is not clear whether this was meant for all stamp categories or just for the six at risk.

The Ministry of Finance insisted on the proposed
Measure which was specified that the brand value of the
Kreuzer categories of the general stamps (i.e. not in the guilder values and not in the already protected by their special legends
consumption stamps) expressed in words below the stamp plates

Worring, who was briefly questioned, confirmed that this was the cheapest method, as it only required a third print (copperplate printing of the stamp plate, natural printing, letterpress printing of the new legend) and did not require any changes to the existing plates. On July 28, 1865, the printers were informed that for stamps intended for use on documents and papers under one guilder, the amount of the fee was to be printed *outside* the edge of the stamp mark, and around it in letters (for the Lombardy-Venetian Kingdom in particular in Italian). This was to be done immediately, and the date when the new stamps could be put into use and the existing ones could be withdrawn from use was to be announced.

The usefulness of the method chosen by the Ministry of Finance is obvious. Even a duplication of the legend in the same form would have doubled the forger's work and thus halved the chance of success. The protection afforded by this was now increased many times over, because the value figure was not merely repeated with the ligature kr, but rather the value information was to be given in words. A fairly long series of letters would now have had to be erased and replaced by a series of newly drawn letters of varying lengths. The difficulty of doing this without leaving noticeable traces was further increased by the fact that the value legend had to be printed over the existing natural print. In the areas that had been erased, this brown print also had to be removed and then supplemented accordingly, which was no easy task.

The Finance Ministry's adherence to a technical view, despite the differing opinion of the Court and State Printing Office, shows that the reins were now being tightened more by the senior officials in the revenue stamp system. From now on, the influence on all relevant details increased more and more until finally the decision-making position on the one hand and the executive position on the other crystallized out clearly, which subsequently found expression in the fact that a new design of the revenue stamps could and was only allowed to come into being when the competent people in the Finance Ministry had given their express *"imprimatur" .*

On August 14, 1865, the printing works reported that galvanic matrices would have to be produced for the casting of the printing plates for printing the value captions, which would take three weeks, so that printing could begin in the first half of September. Since the central stamp wear magazine had ordered 283,000 sheets of German and 51,000 sheets of Italian stamps, printing (assuming a daily delivery of 3,000 sheets) would take approximately four months. The additional cost would be 4 fl 48 kr per 1,000 sheets.

In case the matter was even more urgent, and at the same time to protect the state treasury, the printers proposed that the value legend should only be provided on those Kreuzer categories where the erasure of the value information was to be avoided (i.e. the stamps for 25 kr, 15 kr, 12 kr, 10 kr, 5 kr, 4 kr, 3 kr, 2 kr and ½ kr), of which only 173,000 sheets of German stamps and 29,000 sheets of Italian stamps had been ordered. The printers also pointed out that the 1 kr stamp had a square, not a round, stamp image like the others, and that there was no danger of it being forged.

With regard to the 1 kr stamp, the Ministry agreed with the printers' opinion. However, it did not accept the suggestion to leave the higher kreuzer denominations unprinted, where there was no fear that their value legend would be erased, for the not inaccurate reasoning that counterfeit stamps denominated in these categories were in circulation and it was important to remove them from circulation as soon as possible.

On September 14, 1865, the printing works presented a sample sheet with 100 stamps of 12 kr, on which the stamp value (twelve kreuzers) appeared in a hanging arc below the round stamp plate and parallel to its lower edge above the brown natural print. In the decision on this, dated September 25, 1865, it was ordered that the "semicircular inscription" - as it was said with some exaggeration, since it did not even make up a quarter of a circle - should be placed as close to the stamp plates as possible so that there would be enough space in the lower part of the stamp for the overwriting. The letters of this inscription should also be as small, beautiful, artistic and difficult to imitate as possible. The small legend on the National Bank's notes: "The privileged Austrian National Bank pays" etc. was named as a model. Such a small type of font would then also be suitable for those value legends that would have to be longer.

In its response to this order, the Court and State Printing Office pointed out on October 4, 1865 that the legends indicated on the banknotes were engraved in copper, in italics on the 1 fl notes, but in round script on the 5 fl notes. Such fonts did not exist for printing and had to be created. Furthermore, there were great technical difficulties in forming a uniform, correct semicircle with such small types, which in these types of fonts consist of middle, upper and lower lengths. In addition, the individual letters of these fonts had to be connected to one another with their connecting stitches. This would not be possible if legends were lined up in a circle, and all legends would therefore have to be engraved in a circle. This would then necessarily result in numerous deviations in the letters, which would make the

Recognising counterfeits would be more difficult. The printers therefore proposed an English Latin capital script illustrated on test sheets (with stamps of 12 kr and ½ kr). For longer legends (25, 36 and 75 kr) a similar, but slightly narrower script would be chosen. At the same time, the printers announced that, due to urgency, 3,000 sheets of the ½ kr denomination had already been printed in a different design (with a much larger, bold font) and asked for permission to continue printing this category in this style. The Ministry of Finance approved these requests on October 20, 1865, with a renewed instruction to bring the legends closer to the stamp plates and in a more uniform manner. This was now more a matter of preparation and printing than of plate production.

In its execution, the printer did not adhere exactly to the approved proposal. Only the legend THIRTY SIX KR. was produced in a bolder but narrower font, while the legends FIVE AND TWENTY KR. and FIVE AND SEVENTY KR. appear in the same English typeface as all the other legends, from which they differ only by the abbreviation KR with a full stop. It is noteworthy that a small u. appears in the legend for the 25 kr value.

The typeface used for the German ½ km stamps does not appear at all on the Italian stamps. The narrower bold typeface of the legends SETTANTA CINQUE SOLDI and TRENTA SEI SOLDI seems appropriate for the former because of its length, but for the latter it was probably only used for the sake of analogy with the German value. All other legends have the regular English overlays.

As has already been mentioned elsewhere, the manufacture of the printing plates for the value legends in question was the first occasion in the field of stamping where it was clearly stated that electroformed matrices were used to cast the legend. This method of manufacture then explains the sharpness with which the letters appear on the stamps.

There were two ways of producing these matrices. Since the arched formation of the legend was difficult, one could have restricted oneself to setting each legend once and producing as many galvanic copies (100) as the matrix required in full plate size. This would have taken a lot of time, but would have ensured that all the legends on the plate were absolutely uniform. The other way would have been to set the typographic form in full plate size - so that the legend text would have been put together a hundred times - and to produce a single galvanic copy from it. Since the letters of a typeface, despite their general uniformity, often show small deviations from one another,

In such a case, some such differences can be perceived in a stamp sheet. Since this is actually the case, it follows from this, and also from the haste of the production process, that the second-mentioned procedure was chosen here.

Before the approval of the last applications from the Court and State Printing Office (20 October 1865), there was a small preliminary hearing. The head of the department, *Neuwall,* wanted new stamp samples to be produced which should have “a lace-like design instead of a black background, which would make any transfer impossible”. The printing office would have to be consulted about this. *Worring* then made a written statement, but it is not entirely clear what this was about. According to this statement, the question was whether it would be possible, without technical difficulties, to “pierce the stamps in a jagged shape” on the outermost circular surface of the black stamp images in order to make it impossible to remove stamps once they have been stuck on without tearing them. *Worring* pointed out that a few years previously, experiments had been carried out with stamps pierced in this way (by which he probably meant the "grids" made according to *Baumgartner's* idea), but that even with little care, the stamps could be removed without damaging them. Moreover, there were difficulties in production and the risk of inconveniences in practice. Because of the different diameters of the stamp plates, a special mold had to be made for each of the 19 different designs (12 for the guilder values and 7 for the kreuzer values). 100 or 50 of these molds would then have to be put together to form a plate. Since the piercing could only take place after the gluing, but the paper would stretch very differently due to the moistening that took place during the process, it would often turn out that the piercing had damaged the pressure of the stamp plate. In addition, there would be the danger of tearing when handling the stamp sheets, because the edges of the perforations would bend and several sheets lying on top of each other would be held together tightly. Finally, many stamps would be torn when they were torn out of the stamp sheets, because the perforations would be so close to the edge perforations that the remaining paper bridges would not be strong enough. After this statement, the idea that had emerged was immediately put into practice.

B. THE EMISSIONS REGULATION

The printing of the first stock, which had begun with the value of ½ kr in the first days of October 1865, made such rapid progress that the printing works were able to announce at the beginning of December that all

All stamps except the *5* kr denomination were to be delivered to the central stamp warehouse before the end of the year. The delivery of the ordered 60,000 sheets of this one denomination would also be completed by January 10, 1866 at the latest. The Ministry of Finance then issued a decree on December 16, 1865, Z.59094, RGBl. No.140, V.Bl. No.63, according to which the stamps in the Kreuzer category (with the exception of those for 1 kr, thus all Kreuzer stamps with *round* stamp shields) would be put into obsolescence in a different form from March 1, 1866. On the new stamps, the amount of the fee would appear "on" the lower edge of the stamp mark, also printed in letters in an arc. This description was probably not very precise or descriptive. However, if one ignores the brief and meaningless hints in the cardinal regulation, which applied to both the project with the sheet appendices and the stamps actually issued, it is the first detailed "technical description" of the kind that became common practice from then on. The use of the earlier stamps was to cease on the same date (beginning of March 1866). Exchange was permitted until 31 March 1866. The general stamps of the guilder denomination and of 1 kr as well as the consumption stamps remained unaffected.

The dates outlined here were subsequently changed in that the decree of January 13, 1866, item 1249, (without publication) permitted the new stamps to be sold and used before March 1, 1866, so that the production of older stamps, of which stocks of some denominations were running out, would no longer be necessary. Likewise, the decree of March 6, 1866, item 9857, RGBl. No. 29, extended the period of use of the older stamps by one month (until the end of April 1866). The latter decree contains a peculiarity for the first time, which has been repeated since then with every change of issue and is theoretically very important. It was declared (on the basis of a suggestion made by the Prague Chamber of Commerce and Industry) that trade and business books, as well as bills of exchange, consignment notes, invoices and the like, on which older stamps had been affixed and which had been duly officially stamped before 1 March 1866, could continue to be used without objection.

Even before it came into effect, the new partial issue had an impact on the elimination of the relics of the older stamp system that had remained from earlier times. For a purely external reason, namely the lack of space in the central stamp wear-out magazine - whose facilities do not seem to have been as extensive as its endless official title - it was necessary to destroy the remaining stocks of stamps of 6 kr, 30 kr, 72 kr, 8 fl, 14 fl, 16 fl and 18 fl, which had been confiscated from the wear-out stamps at the end of June 1865 according to the decree of October 14, 1864, Z.48703.

With regard to the brands in these seven categories that remained in private hands, the decommissioning and invalidation of these stamps was only carried out later. A surprising peculiarity deserves to be noted here. The relevant regulation of 14 November 1866, Z.29199, RGBl.

No. 137, V.Bl. No. 45, only mentions the categories of 8 fl, 14 fl, 16 fl and 18 fl, of which “the stamps still in the hands of the public” were withdrawn on May 31, 1866, taken out of use and simultaneously rendered ineffective. Since no analogous regulation can be found for the stamps of 6 kr, 30 kr and 72 kr, it is assumed that the Ministry of Finance had accepted the view that these three values, along with all other Kreuzer stamps without a value legend, were rendered ineffective on the occasion of the partial issue. However, if one examines the wording of the regulation of December 16, 1865, Z.59094, it becomes clear that this did not affect all Kreuzer stamps (with round shields) without value legends, but *only those* that were to be replaced by categories of the same number *with* legends. In particular, the cancellation clause stated explicitly: “The stamps *of the same* categories currently in use will be completely withdrawn from use.” Since the categories of 6 kr, 30 kr and 72 kr were not issued with legends, they were never actually withdrawn from use. However, this seems to have been accepted by the Ministry of Finance. However, this statement is of no more than antiquarian interest.

It should be noted here that the Nullification Decree of 14 November 1866, Z.29199, as far as the non-Italian provinces were concerned, concerned stamps of the guilder values of 8, 14, 16 and 18 fl, which had been printed on unprepared paper before the transition to paper with *Hausner* impregnation and therefore also had the close perforations.

Of the Kreuzer denominations which, in the opinion of the Ministry of Finance, were cancelled on the occasion of the partial issue, the 6 kr and 30 kr denominations could in reality still be in circulation on both types of paper and with both types of perforation, but the 72 kr denomination, due to the time of its issue, could only be in circulation on impregnated paper and - since it has not yet been known to have been issued with wide perforation - only in the original 1854 narrow perforations (13½ to 17).

The still existing printing (correct delivery) lists provide the following information on the production of the first stock, which is consistent with the documents cited. Printing began on October 27, 1865 with a value of 90 kr (5000 sheets), for which, as mentioned, at least in part, fourth-generation paper was used. Then, on October 29, 4800 sheets of 12 kr stamps and on October 30, 3000 sheets of ½ kr stamps were printed, the latter having already been mentioned because of the different typeface of the value print. Stocking then continued in November and December. In the former

In the first month, the denominations of 75 kr, 60 kr, 50 kr, 36 kr, 25 kr, 15 kr, 12 kr, 7 kr, 4 kr, 3 kr and 2 kr were printed, as well as the pink stamps of 90 kr, 75 kr, 60 kr, 36 kr, 25 kr, 12 kr, 4 kr, 3 kr and ½ kr. In December, printing began on the 5 kr stamp, for which an order for 60,000 sheets was placed as the most commonly used denomination, and in addition, stamps of 50 kr, 36 kr, 15 kr, 10 kr, 7 kr, 4 kr and 2 kr were printed, as well as Italian: 50 kr, 15 kr, 10 kr, 7 kr, 5 kr and 2 kr. In January 1866, only the ordered 5 kr stamps were “printed out”, as the printing shop’s terminology would say, “finished printing”.

Since permission had already been granted in January 1866 to wear out and use the new stamps even before the legal date of their entry into force, no more Kreuzer stamps without a value print were produced in anticipation of this after November 18, 1865. The current demand was already covered by the new stamps and therefore more extensive printing of all Kreuzer categories with value prints took place in February and March.

If one examines the stamps of these first printings more closely, it becomes clear that two different types of paper were used (or even three if one includes the value of 90 kr printed on paper of the fourth creation). One of these two papers is a strong blue, which is somewhat lighter than that of the fourth creation, but still somewhat darker than that of the first creation. The other paper of the first stock of the kreuzer issue in 1866 is a very light paper, which only has a bluish shimmer and, as the best characteristic when viewed from the back, irregularly distributed blue clouds, sometimes more, sometimes less visible. The ½ kr stamps can serve as the leading type for the former paper (Vth creation) and the 2 kr stamps for the latter paper (VIth creation).

These 2 kr stamps on blue clouded paper are also remarkable from another point of view. They include the use of the plates which had been adapted for this value in 1858 after the introduction of the Austrian currency when the initial auxiliary book printing was abandoned, from the transition to full copper printing, by hand engraving the legend 2 kr, one by one, into blank plates of the old 3 kr design. Of the 2 kr, 4 kr, 5 kr, 12 kr, 25 kr and 60 kr denominations, all of which at that time underwent this transition to full copper printing with adapted multiplicative plates, the 2 kr denomination was, as the brown sample impressions already mentioned, the first to be produced in full copper printing (in November or December 1858). In the time that has passed since then, the 5 kr and 12 kr denominations have already undergone a regeneration due to the heavy wear of the adapted plates, which resulted in the creation of the so-called second types of these denominations. Now it was the turn of the 2 kr denomination, while

the values of 4, 25 and 60 kr were still printed with the adapted plates. A plate without a legend of the old 3 kr design, into which the legend 2 kr was engraved, was then duplicated until a multiplicate plate was produced. The new type of 2 kr stamp, which can be recognized by the identity of all the stamps and the wealth of detail in the design, in particular by the clear visibility of the three crowns of the double eagle, already begins with the aforementioned paper of the sixth creation. Both the older and the newer type are therefore found on this paper. Section 7 of the law of February 29, 1864, RGBl. No. 20, may have been the reason for this regeneration of the 2 kr stamp, since this determined the stamp of cheques for 2 kr.

As soon as this form of document came into use with the boom in traffic, the previously modest consumption of this stamp value increased and the frequent printing led to the old plates becoming unusable.

C. THE WATERMARK PAPERS OF THE FIRST STOCK

The *fifth* paper creation (standard type ½ kr with legend) was ordered at the beginning of June 1865 and, as the minutes of the State Debt Directorate show, involved 100 reams of 10½ x 14 inches and 100 reams of 12 x 14 inches. Until then, the records had only mentioned paper dimensions of 9½ x 16, 10½ x 16 and 12 x 16 inches, so this is an innovation. From the later records, it can be seen that there were now *four* paper formats: 9½ x 14, 10½ x 14, 12 x 14 and 12 x 16 inches. The first mention of this can be found in the fifth creation. It cannot be said whether these formats were not already used in the fourth or even the third edition, about which, as mentioned above, no details have been preserved; but this is hardly likely. The files do not contain the slightest mention of the time and reason for this format change or of the relevant events. In this case, we are left with speculation. Perhaps we would not be wrong to attribute this innovation to the provisional management of the Court and State Printing Office and its efforts to make a profit by initiating savings.

If one can create by combining marks of all drawings the
If we reconstruct the dimensions that the complete natural self-printed plates had to have after the centesimal paneling, and add approximately one inch in height and width as a manipulation latitudinal space for the edge strips to be torn off after perforation, we obtain, if we first consider the *heights ,* the dimensions of 12¼, 12½, 12¾

13, 13½, 13¾ and 16 inches as required. It is therefore clear that the introduction of centesimal denominations had gone too far when the height for all formats was set at 16 inches because of the one drawing for 20 fl, which required sheets 16 inches high. A glance at the above figures shows that for all other values sheets 14 inches high were sufficient. This height dimension was now adopted as the regular one and only *one* format was left at a height of 16 inches. The *widths* required were: 8¼, 8¾, 9, 9½, 9¾, 10, 10½, 11, 11¼, 111½ and 11¾ inches. The combination of these into three gradations of 9½, 10½ and 12 inches had already taken place when the centesimal denomination was introduced and has continued to do so now. The combination with the height of 14 or 16 inches took place in such a way that the previous third format 12 x 16 inches was split into two formats: 12 x 14 and 12 x 16 inches. However, this new arrangement did not simply mean that the values that had previously belonged to 12 x 16 inches were divided into the dimensions 12 x 14 and 12 x 16 inches and everything else remained the same. Rather, other shifts also took place, which were dictated by the trend to save as much paper as possible. However, there is almost no evidence in the records on this and one has to rely on measurements and calculations. However, the results agree with what is available about paper production and stamp printing and can therefore be regarded as authenticated. Thus the denominations of 7 fl and 15 fl (previously 9½ x 16 inches), then the denomination of 20 fl (previously 10½ x 16 inches) were given the format 12 x 16 inches, because their width as well as their height required the largest format. On the other hand, the denominations of 10 kr and 50 kr, then 15 kr, 75 kr and 90 kr (previously 12 x 16 inches) were given the format 12 x 14 inches, because the latter height seemed sufficient. This division and these paper formats remained until the end of the next issue (1870), that is, until 1875, when the round stamp plates were taken out of use.

Regarding the fifth creation, apart from the above-mentioned innovation regarding the paper formats, all that is known is that on 23 June the monitoring commissioner (from Schlöglmühle) requested the sending of sample sheets “because of the colouring” (namely one for the change blank and two half sheets for the stamps), and that paper production was terminated on 26 July 1865.
The provision of sample sheets, which at the time was something quite natural when purchasing paper from private factories and also the stamp paper from J. *Reichle ,* but was considered superfluous when purchasing paper from Schlöglmühle - probably because *Auer* managed both the paper factory and the printing works - was no longer out of practice from now on.

In the case of the paper of the fifth creation, which, as mentioned, was in the middle of the blue colouring of the first and the fourth creation, there are no noticeable differences in the colour nuances of the two produced

formats (10½ x 14 and 12 x 14 inches). The former was suitable for the values of ½, 2, 3, 4, 5, 7, 12 and 36 kr, the latter for the values of 10, 15, 50, 75 and 90 kr. This paper could not be used for the remaining two kreuzer values of 25 and 60 kr due to the format. Therefore, these values can only be found on the paper of the sixth creation.

Likewise, the value of 5 kr has only been known on the latter paper. As mentioned above, this was the last value printed during the first supply (33,300 sheets in December 1865 and 38,700 sheets in January 1866), and the 10½ x 14 inch format of the fifth creation seems to have already been printed by then. Strangely enough, despite the large supply produced according to the records, this stamp is quite rare. The reason for this is probably that the blue clouds on the paper easily disappear when watered (especially in warm water), and one then thinks one is looking at a different paper.

The *sixth* creation was purchased in September 1865 and the order was for 100 reams 9½ x 14 inches, 300 reams 10½ x 14 inches, 300 reams 12 x 14 inches and 40 reams 12 x 16 inches. The production, which also included other watermarked papers, lasted from November 2 to 12, 1865 and resulted in an additional delivery of 71 reams, which were distributed across the formats mentioned as 15, 40, 13 and 3 reams. All values could be printed on this (blue-clouded) paper, which was ordered mainly in view of the imminent launch of the new Kreuzer issue. The not uncommon values of 2 fl and 3 fl were printed in May and June 1866 respectively. Therefore, the value of 4 fl issued in May 1866 should also be found on this paper.

Given the large scale of this creation, it is understandable that the individual formats show some differences, particularly in the degree of blue cloudiness and also in the overall nuance, which sometimes goes as far as whitish. In addition to the effort to achieve the lightest possible paper coloring, which is evident from these differences, there are also documented indications that

Such things were actually the subject of negotiations at the time, but unfortunately they are not described in detail. Here too, as with the appearance of the yellowish paper of the second creation, *Nejedly* and his efforts were probably in the background. In the files of the Directorate of the National Debt, there is a telegram without any further explanation, which was sent on 12 October 1865 to the cash officer *Johann Ludwig,* who was in Schlöglmühle as a supervisory commissioner , and which said laconically: “Stamp paper only white and thin; do not send in blue.” *Ludwig,* who was replaced on 27 October by the official *Ignaz Kodolanyi ,* could not achieve anything more than to agree with the factory administration that the production of the stamp paper would not begin until further instructions were received and that sample sheets should be submitted to the National Debt Directorate immediately. Eleven such sample sheets

The factory sent in a sheet of paper on October 20, 1865; the State Printing Office received one of these on October 23, so that future paper deliveries could be checked and non-conforming batches could be rejected. Other samples were returned to the factory on October 24 with the message that they had been found to be in accordance with the specifications. The stamps on this paper show through the print more strongly, indicating that the instructions regarding the thickness of the paper had also been taken into account. When the sample sheets were sent in, the factory reported “that the yellowish color could not be achieved.” It must therefore have been suggested to retain this shade, which was achieved in the second (and perhaps also in the third) creation. That personal negotiations with the Finance Ministry in Mitte were taking place in this case can be seen from the fact that on October 20 the State Printing Office received ministerial decree Z.48224, in which it was instructed to use only carefully prepared stamp paper and to reject any other paper, since the parties' submissions had also recently shown stamps with a striking blue tone which, when treated with acids, did not change color noticeably. The State Printing Office then referred to this decree in a note to the Directorate of the National Debt on February 28, 1866, and stated that according to this instruction, "only thin, white and carefully sized paper may be used" for printing stamps. This decree makes no mention of *thinner* paper. However, a later ministerial act (Z.19695 of April 29, 1866) mentions that the state printing office “had already been given verbal instructions not to use thicker paper for the stamps than was necessary for printing.” The printing office evidently confused this verbal order with the first-mentioned decree.

From the minutes of the State Debt Directorate it can be seen that the printing works actually refused to accept the dark blue paper. Therefore, on February 20, 1866, the Universal State Debt Fund submitted a request to stamp the paper for bills of exchange and stamps in dark blue shades that had been sent in by Schlöglmühle and had always been rejected by the printing works. The State Printing Works was then asked by the said Directorate to have the entire relevant stock in the secret paper depot examined by an expert. After this had been done, the State Printing Works announced that the *blue-colored* stamp paper in the depot had been found unsuitable for further use.

On the other hand, in the 14 packages of bills of exchange that were the subject of the complaint, quality paper was mixed with significantly darker paper that was very cloudy when seen through and had a blue tint, and careful sorting and separation was required. On April 24, 1866, the factory administration finally reported on the grinding of the stamp paper that was found to be of poor quality. This paper is evidently the product of the fourth creation.

If only a few values are found printed on it, this is due to the destruction of a large part of the stocks.

The remark of the State Printing Office about the cloudy nature of the bill paper could lead to the assumption that the values of 5 fl, 3 fl and 75 kr, which appear on paper that looks spongy when viewed through, were also printed on paper of the fourth creation.

However, this is contradicted by the fact that this spongy paper is the same color as the paper of the first creation and is lighter than the 20 fl stamp with watermark no. 2, which authentically belongs to the fourth creation. The 5 fl and 3 fl stamps were printed at the same time as the 20 fl stamp in September 1865. However, there is a 3 fl stamp that has the same paper as the 20 fl stamp and this paper is *not* cloudy. Therefore, either part of the first or part of the fourth creation must have had this cloudy quality. The (spongy) stamp of 75 kr suggests the former. This value was only ever issued in August 1861 when it was just paper of the first creation, and then again in November 1865 and February 1866, but now already for the new Kreuzer issue with a literal value legend - with “text printing”, as the State Printing Office called it. If this (vague) stamp did not belong to the first creation, it would be a *misprint* , in that the text had been accidentally forgotten to be printed, which, according to a case to be discussed later, did indeed sometimes happen. The definitive decision in this doubtful case could be made by 75 kr stamps with watermarks.

The probability is that it will be watermark number 1.

The sixth creation, which produced the light, more or less blue-clouded paper for the majority of the first stock of the 1866 Kreuzer issue and for which the values of 2 kr old and new type and 25 kr can be assumed as the leading types, is linked to another important circumstance for the stamping industry. In his final report of November 13, 1865, the supervisory commissioner *Kodolanyi* reported that the watermark rollers for change blanks and stamps had become almost unusable due to the original unsuitable construction and heavy use and required thorough repair before the next paper production. On November 17, the factory administration was asked to state what this repair would consist of. The factory did this on December 13, with the attached request that the repair should be carried out in Vienna. Unfortunately, it is not possible to determine what this was, because nothing more than laconic minutes has been preserved. The necessary work was completed in Vienna by January 26, 1866, and on the 31st the factory was notified that the roller had been returned. On February 3, the factory administration reported that the roller had arrived and was in good condition. At the same time, a repair work started on January 18

Production of watermarked paper was already underway and the repaired roller that arrived was immediately used for this *(seventh)* creation, which lasted until March 7th.

The stamps printed on the paper of this creation, which can be identified with certainty as belonging to this area based on dated pieces, show a noticeable change in the watermark, which collectors understand as watermark no. 3 and which, especially since there is no record of any further change to the roller for years, must have come about during this roller repair carried out in Vienna around the turn of the year 1865. As already mentioned, there is an authentic note for the current state of the roller that it had a circumference of 20½ inches and that within a space of 46 inches the legend STAMP MARKS ran five times around the circumference of the roller in a ring. It can also be clearly seen from several strips of stamps that the opaque space between the end dot and the letter S following it in the legend ring was 2 inches 3 lines. This leaves 18 inches 3 lines for the legend itself, i.e. from the S to the dot. This does not exactly agree with the approximate reconstructed legends from individual pieces (which contain small fractions of the watermark), since this would suggest that the legends would be longer. However, the observation that the distance between any two consecutive letters used for such reconstructions is not the same on all pieces shows that the five legends on the cylinder were not completely identical in terms of these distances.

If you now combine pieces of evidence that come from different legends and that all happen to have larger intervals, this can add up to a considerably larger total length of the combined legend. But even from the minimum length of 18 inches 3 lines, it can be seen that watermark No. 3 is noticeably longer than watermarks No. 1 and 2. Since the letters themselves are just as wide as in watermark No. 2, only the intervals have become larger. In the middle of the opaque space, a continuous vertical light line can be seen on the above-mentioned stamp strips. This is clearly the imprint of the seam of the screen. The pushing apart of the letters (in comparison with their position in watermark No. 2) was evidently due to the increase in the circumference of the roller from 16 to 20½ Viennese inches. Presumably the small diameter of the dandy roll was the factor that appeared to be an “unsuitable construction”. The now spreading out of the brass letters and the resulting length of watermark No. 3 of more than 18 inches did not cause any concerns. Ever since the initial manual cutting of the stamp papers had been abandoned, the idea of each sheet containing the complete watermark legend had been abandoned. This would have been

Watermark No. 2, whose legend is more than 14 inches (namely 14 inches 6 lines)
length, it would no longer have been possible since the height had been set at 14 inches for three formats. Now that people were used to seeing only part of the legend on each sheet, consideration of the watermark could no longer constitute an obstacle to a cylinder reconstruction that seemed practical for other reasons.

It cannot be said with certainty whether the older brass letters were reused in whole or in part during the roller repair that created watermark No. 3. The letters in this watermark are almost exactly the same height and width as the older ones. However, they are generally not clear enough to allow any firm conclusions to be drawn. In the first two watermarks, some letters (E, M, P, K and R) had the peculiarity that the open interior of the letters on the right edge of the vertical parts was divided by contour lines that went from top to bottom. If you hold a sheet of paper containing a watermark up to the light, the areas that corresponded to the contours of the letters on the roller, which were formed from brass strips, appear lighter, while the interiors of the letters between these contour strips appear darker. These dark interiors are now divided by light lines in the letters mentioned, which must have corresponded to brass bridges between the brass edge strips of the letters. Something similar was also observed with the letters N and A, except that here the dark bridges were at an angle. With watermark No. 3 one sometimes thinks one can see this peculiarity again, but at other times it does not seem to be there. If the observations were not so uncertain and one could really claim that there were brass letters of two different designs here, the explanation would seem plausible that during the repair mentioned, part of the five legend rings were made up of the previous letters, while another part was made up of new letters whose open interior had *no* interruptions (bridges), as was the case with the letters S, T and L from the very beginning. Given the scarcity of the information available, it cannot be ruled out that the completely open letters were only added to the watermark roller in 1871 during a repair to be mentioned later; and furthermore, that on this occasion all *five* legend rings were made up of new open letters. According to this difference in the letters, one could distinguish a watermark No. 3a and No. 3b for greater accuracy. If it were certain that the latter watermark took the place of the former and was not continually produced alongside it in paper creations, it would even have to be designated No. 4.

At the end of the above description of all watermarked papers, the
up to and including the first provisioning for the cruiser issue in 1866

used, the “Sample Book for Stamps” kept by the Court and State Printing Office must again be mentioned, which contains a kind of introduction with short handwritten comments on the technical nature and method of production of the individual issues. In it, for the critical period, the entry for the issue in Austrian currency is that it was “printed on white prepared paper from November 1, 1865 to February 28, 1866.” This would mean the paper of the sixth creation, which, however, is less deserving of the designation “white” than, for example, the paper of the second creation, which the sample book makes no mention of at all. The first of November as the beginning of the use of the paper in question may be correct; but whether it was really exhausted by the end of February 1866 is something the sample book must be responsible for. Since the “sample book” was only kept in February 1875, there may well have been a memory error here.

XXII. CHAPTER

RESTRICTIONS ON THE TERRITORY OF VALIDITY OF AUSTRIAN STAMPS

A THE LOSS OF THE ITALIAN PROVINCES

It has already been mentioned that after the loss of the greater part of Lombardy in Venetia and in the district of Mantua (the rest of the Italian possessions retained the title of Lombard-Venetian administrative area - sometimes also "kingdom"), the red rose stamps on unprepared paper were replaced on January 1, 1860 by the block on bluish Hausner paper. With the use of this paper, the increased value of 72 kr began. For a short time, white-prepared paper was then used. During this time, this new value remained in the auxiliary letterpress printing; the values of ½ and 7 kr, on the other hand, switched to full copper printing, so that they were produced on these papers using both graphic production methods. The use of dark Lombard blue paper began around May 1860 and the 72 kr stamp now appears in full copper printing.

From January 1, 1862, the stamps were printed on pink paper, a color that was retained until the loss of the rest of these countries in 1866.

In 1863 (certainly before November) wide perforation (12 and 12½) began. Even before this, the type change for the 5 kr and 6 kr denominations had taken place. Under the rule of wide perforation, the 12 kr stamp was regenerated, the 10 kr stamp was reactivated and the 1 kr stamp was added. It is not possible to determine exactly which other denominations, apart from these three, were produced before June 1864 (the beginning of watermarked paper) on pink paper with wide perforation but without watermarks; the 60 kr, 30 kr, 15 kr, 7 kr, 6 kr, 4 kr and ½ kr stamps certainly belong here. It should also be noted here that the value of 14 fl for Lombardy-Venetia was printed on both block paper and pink paper, because in both cases it was a measure that required a complete exchange of stocks. On the other hand, this value cannot be found at all on impregnated paper for the German stamps with Vandyk brown natural self-printing. The values of 6 kr and 30 kr should be kept in mind as reference types for the pink paper, which did not yet have a watermark but already had the wide perforation, because they were abolished when the use of watermarked paper for Lombardy-Venetia began.

With the beginning of the use of watermarked paper, the regime of stamps on pink paper becomes clear in every detail due to the strict control which from now on prevails over the production and consumption of stamp paper.

The first creation of paper of this color, which had the watermark No. 1 and was produced between May 10 and July 12, 1864, was unsuccessful.
231 reams (500 sheets, or 115,500 sheets) measuring 10 x 16 inches were ordered and delivered. The Court and State Printing Office obtained 2 reams of this from the depot for secret state papers, but returned them all on August 23, 1864 because they did not have the “quality color.” The factory management held the Schlöglmühle paper factory responsible for this and ordered that new paper be replaced. In the same order, the factory was given the order to produce the second edition in the new paper formats because of the transition to centesimal denominations and the stamp regulation that had taken place with regard to the “white” stamps. It was therefore also ordered at the same time with regard to the pink paper that the replacement quantity should be divided into 44,000 sheets of 9½ x 16 inches, 86,000 sheets of 10½ x 16 inches and 101,000 sheets of 12 x 16 inches. The factory office was also asked how it intended to make up for the loss caused by the factory's fault. The factory management was then asked to write off the loss in value of 1520 fl 5 kr, which had occurred when the papers returned from the paper depot to the Schlöglmühle were crushed.

This act remained with the upper management *(Auer)* until its dissolution at the end of 1864. During the liquidation

The Ministry of Finance itself then approved the write-off of all the outstanding debts found here.

The pink replacement paper delivered to the paper depot on September 3 or 4, 1864, bore watermark No. 2 because the repaired roller was already in place. This is why there are no Lombardo-Venetian stamps on paper with watermark No. 1. The first use of the new paper was in September 1864 for the value of 4 kr and then in November for the values newly created by the stamp regulation of 3 kr, 36 kr, 90 kr, 2 fl, 50 kr, 7 fl and 15 fl. These new values form the standard types for this paper of the second creation, since of these only the value of 36 kr was issued a second time before the Kreuzer issue in 1866. Incidentally, such standard types are not actually required here, since according to the state of the files, this paper is the only watermarked paper that was used for the pink stamps. It is only in the seventh issue, which lasted from February 2 to 26, 1866, that we find a mention of 40 reams of pink stamp paper measuring 9½ x 14 inches being ordered and delivered with an additional production of 19 reams. This last pink paper (with watermark No. 3), which would have been suitable for the values of 2, 3, 4, 5, 6, 10 and 12 fl, then 2 fl 50 kr, was certainly no longer used for Lombardy-Venetia. According to the printing lists, none of the values mentioned above were printed on pink paper in 1866. This is why watermark No. 3 cannot be found on either of the pink stamps, and all stamps that bear a watermark reveal that of the second issue.

There is a suspicion that the last-produced pink paper mentioned was subsequently used for the vanity brown stamps. This was possible because the other papers of the seventh creation, which were produced at the same time, had a pink-mauve tint that was sometimes more, sometimes less distinct, so that this paper, which did not differ too much in shade, could also be used. In fact, one finds 2 fl stamps with a brown natural print on paper that is similar in color to the Lombardy stamps, but similar in fineness to the papers of the seventh creation. This may have been the end of this last paper production for the Italian provinces. This assumption is supported by the fact that no note could be found that this paper was destroyed or used for another purpose.

Negotiations about the pink stamp paper were still taking place in April and May 1866. The Finance Prefect of Venice, Baron *Spiegelfeld* (as mentioned above, the first person to suggest the idea of stamps), had objected to the new stamps issued by Kreuzer because the glue layer was too thin and the paper was too thick. The Court and State Printing Office received this negotiation with the addition of the statement (on April 29, 1866) that it had already been given verbal instructions not to use any thicker paper than was necessary for printing.

This order mentioned above also related to the pink paper, as the context here shows, and could have been the reason why the last creation of this paper produced a product just as fine as that for the other crown lands. The printing works reported that there was still a stock of 188 reams of pink paper - which was inaccurate according to the printing lists, which show a stock of only 150 reams (including the new fine 59 reams) - and on 19 May 1866 received the order to use up this stock and only then to use thinner paper. This was probably inappropriate because, given the format split, a remainder of thicker paper could have been kept for a long time alongside the use of thinner paper. The State Debt Directorate and the factory were informed of this order. However, before a new creation could be made for the Italian territories, these were lost. By a decree of October 16, 1866, it was then announced, as should be noted here, to all the dicasteries of the financial administration that His Majesty had renounced the title of King of Lombardy and Venice.

According to the printing lists, the 1 kr value for Lombardy-Venetia was not printed on watermarked paper. Likewise, the values of 60 kr, 25 kr and ½ kr without a value legend were not printed on this paper. The kreuzer values *with* a value legend were, of course, produced in full.

According to the production lists, the guilder denominations were printed in denominations of 1 fl, 2 fl, 50 kr, 5 fl, 7 fl and 15 fl. The denomination of 5 fl has not yet appeared in the collections. Perhaps little or none of it was subject to wear and tear.

It should be noted here that the 4 fl stamp with red natural printing only exists as a red rose stamp on unprepared paper, since it was suspended from 1859 onwards and was not printed again between the stamp regulation (during which it was reactivated) and the definitive cessation of printing of pink stamps.

Since it is an established fact that all watermarked paper for pink stamps comes from a single creation, and since, given the relatively small size of these (44 reams 9½ x 16 inches; 86 reams 10½ x 16 inches and 101 reams 12 x 16 inches), each of these formats undoubtedly comes from one and the same set of materials, it is clear that at least all stamps of one and the same value should always have the same paper shade. But this is by no means the case. Without knowing this, for example, one would want to distinguish between at least two types of paper in the case of the 50 kr denomination, where pieces bearing fractions of the watermark are found to be pale brick-red and very bright pink. Having become aware of the facts of the case, one can easily find pieces with a medium colour and then also notice that almost every piece has a different colour intensity when viewed against the light (and the lighter pieces do not always have the lighter

Coloration when viewed through). This leads to the conclusion that the pink paper coloration was apparently something very sensitive and changeable and that the sizing, then the fate of the stamps since then, especially the effects of light and sunlight, and finally the washing procedures of the collectors, have brought about very significant color changes. Therefore, in this special area, the distinction between special paper nuances must be dealt with.

It is also worth mentioning that the 2 kr stamp in the 1866 Kreuzer issue on pink paper appears in both the older and the regenerated type. The same was the case with the Vandyke brown stamps on paper of the sixth creation. Because of the more frequent printings of the German 2 kr stamps with value legend (28 November and 1, 2 and 11 December 1865; then 6, 7 and 10 February, 3, 9 and 10 April, and finally 5 July 1866), it is not possible to state exactly when the new multiplicated plates were put into use on the basis of these dates. This is much easier with the pink stamps. The 2 kr value was only issued with text printing twice: on 7 December 1865 and on 9 February 1866. The new plate must therefore have already existed on the latter date. This leads to the conclusion that the printing of the German stamps of 6, 7 and 10 February 1866 was already carried out with this new plate and that the type change therefore took place in the period between 11 December 1865 and 6 February 1866.

The loss of the Italian crown lands is, as will be said here at the end, also very regrettable from the point of view of the development of Austrian law, but especially that of financial law. When Austria acquired these territories, it was still in the stage of patrimonial organisation, which had a rather imperfect and cumbersome, but not very oppressive, tax system. In the Italian acquisitions, on the other hand, a well-developed financial system had already existed from earlier on, especially since it is well known that the foundations for the general cadastre and the land income tax as well as for the consumption taxes of the closed towns were laid here. During the French period, the strongly fiscally developed, richly differentiated, but also very oppressive French institutions were then grafted onto this highly developed financial system. Under Austrian rule, a remarkable and theoretically very fruitful mutual diffusion of the two systems began. The population sought the abolition of French burdens and, if complete exemption was not possible, would have accepted the milder Austrian taxes. However, the conditions for this did not exist, as there was no patrimonial jurisdiction and no subjection relationship. The government would have prevented the extension of the old Austrian institutions to the newly acquired parts of the empire for political reasons.

This was done for various reasons in order to speed up assimilation. However, financial difficulties were an obstacle here, as the French institutions made it possible to tax these rich and well-developed regions appropriately, and this could not be foreseen. So only gradual and cautious steps were taken to bring about legal equality, but these were still not fully implemented. Even though formal common law had already been achieved, particularly in the area of fees (the minor differences caused by the land registry system are not significant in comparison), the unfortunate currency situation formed a very noticeable barrier until the end. However, the fact that Austrian statesmen had the opportunity to get to know a foreign financial system in its daily application and effects in one part of the empire had a noticeable influence on the development of financial law throughout the period. Just as the lawyers of these southern regions gained a significant, and still not sufficiently appreciated, influence on Austrian legal life in general, the same was true in the field of financial administration.

It is no paradox to say that the very fact that Lombardy-Venetia proved to be the classic land of stamp forgeries, which best shows the ingenuity and differentiated fiscalism that the conditions there demanded of the financial administration. The extent to which theoretical knowledge gained from these conditions can be cited as an example of the fact that a very remarkable solution to the notoriously difficult question, which cannot be avoided for the law of the poor, of how to define the term poverty, was found by the financial administration there. When, half a century later, on the occasion of the Austrian civil procedure reform, the law of the poor was put on a new basis by literally adopting the relevant German norms tailored to completely different conditions - in Germany the court itself levies its own flat-rate fees - this undoubtedly represented a step backwards from the state of the norms that had been built up on a Lombardy-Venetia basis.

B. THE COUNTRIES OF THE HUNGARIAN CROWN

Since the Fees Act was implemented in Hungary and its neighboring countries by the patent of August 2, 1850, RGBl No. 329, these areas shared all the fates of the monarchy's stamp system. First, stamp paper was introduced there, as had been the case since 1836 with the modifications made in 1840 and 1850 in the other (non-Italian) provinces of Austria. As far as stock stamp paper is concerned,

Hungary and its neighboring countries were supplied by the Vienna Central Stamp Office in the same way as all the other provinces. Only with regard to the fulfillment stamp a special feature was created, in that it was merged with the control stamp, so that now the value stamp itself indicated the day of the stamping by means of the interchangeable date.

The financial authority was organized in such a way that outside Hungary proper, there were regional finance directorates in Zagreb for Croatia, in Temesvár for the so-called Voiwodina (civil Croatia) and in Hermannstadt for Transylvania, which were directly subordinate to the Ministry of Finance without any connection with each other or with the authorities in Hungary and held exactly the same status as, for example, the regional finance directorates in Prague or Graz. Due to the size of its territory, the regional finance directorate for Hungary proper had the special feature of being divided into several "regional finance directorate departments" operating in different locations. These were set up in Pest, Debrecen, Kaschau, Bratislava and Ödenburg.

In all these places there were also signature places. The difference between the latter was expressed by the fact that the stamps contained the letter U with a number added (in the order of the above-mentioned departments). The engraver made a mistake by choosing Roman numerals (UI and U II) for Pest and Debrecen, but Arabic characters (U 3, U 4 and U 5) for Košice, Bratislava and Sopron. The same numbering was used for the consumption stamps (calendars 3 kr, foreign newspapers 2 kr, announcements ½ and 1 kr, playing cards 5 and 10 kr CM); here, however, the so-called provincial letters are all UI, U II, U III, U IV and U V. In contrast, the 2 kr stamp for commercial records, which was subsequently created in 1852, used Arabic numerals (U 1, U 2, U 3, U 4 and U 5). The provincial symbols for the three other signature positions were: C for Croatia, WO for Vojvodina and S for Transylvania. The letters Te replaced WO for the consumption stamps. It should also be noted with regard to all of these newly created stamp symbols that the abbreviated value information contained in each of them (attached next to the German value legend or converted from part of this legend) was clearly intended to take the national languages into account. For Hungary, the ligature fr. appears, for Croatia fr., for Vojvodina the latter, but in Glagolitic letters, and for Transylvania fl in new Cyrillic letters. Such differences are not noticeable in the consumption stamps, because these are always only Kreuzer amounts and the letter K appears to be used for them throughout.

With the introduction of revenue stamps in 1854, the performance stamping was discontinued and all the special features mentioned above ceased. The lands of the Hungarian crown were divided into three parts by the Vienna

Central stamp wear magazine endowed with the same stamps as all other non-Italian Reich territories.

After the war in 1866 had resulted in the loss of the remainder of the Lombard-Venetian Kingdom and thus the area of validity of the pink stamps, the territorial scope of application of these stamps was soon subjected to a further, very significant restriction as a result of the further aftermath of these events and the constitutional settlement reached with the countries of the Hungarian crown.

Formally, a special fee law had already been in force in the lands of the Hungarian crown: however, since this was nothing other than the law of 9 February 1850, supplemented by a number of norms which had meanwhile been put into effect in Austria by amendments or decrees and which were immediately incorporated into the text of the law when the patent of 2 August 1850 was drafted, material legal equality had existed up to that point; the fee sovereignty and administration were entirely uniform.

As a result of the Compromise, a new, separate financial area was created with its own fee sovereignty. The content of the fee norms in Hungary was not changed for the time being, so that the substantive common law continued to exist for a while, which in many respects has continued to exist up to the present day. In particular, the categories of stamps remained the same on both sides for the time being. The consumption stamps of playing cards, calendars, newspapers and announcements, which were based on the patent of September 6, 1850, RGBl No. 345, also issued for Hungary, continued to be a subject of substantive common law.

The mutual relationship between the two halves of the empire with regard to fees, taxes and consumption stamps was then regulated by an explicit contractual agreement. After the Finance Minister for the kingdoms and countries represented in the Imperial Council was authorized by the law of July 3, 1868, RGBl No. 94, to conclude an agreement with the Finance Minister for the countries of the Hungarian Crown on the regulation of the mutual relationship while maintaining reciprocity, the agreements reached were published on October 2, 1868, RGBl No. 135. Although the two financial areas were fully independent, they should not treat each other as foreign countries (apart from the exchange stamp). Furthermore, it was agreed in Section 16 that there should be *special stamp marks* (stamps, blanks) for each of the two financial areas, which could only be used within the respective area. The date from which financial independence was to be considered to have come into being and to which the accounting was to be based was set as 14 March 1867 for the Kingdom of Hungary and the Grand Duchy of Transylvania, and 1 December 1867 for the Kingdoms of Croatia and Slavonia.

A special regulation was necessary with regard to the revenue stamp system.
Even earlier, namely in point 7 of the stipulations of March 8, 1867, it had been envisaged that the Hungarian financial administration would have its own stamps produced and used. Until then, however, the Vienna Finance Ministry would have to provide the Hungarian financial administration with Austrian stamps, which would be sold in the latter's territory on behalf of Hungary and for which the Court and State Printing Office would only be reimbursed for the production costs. This process took quite some time because Hungary lacked the technical requirements for producing its own stamps. However, since there was an urgent desire there to stop using the previous Austrian stamps as soon as possible, the solution was to change the stamps with

The Vienna Ministry of Finance readily agreed to this and was helpful to the Hungarian financial administration when the fee service was first set up, and in particular in this regard. This is how the first Hungarian stamps were produced by the Court and State Printing Office in Vienna. This must be explained in more detail here, as far as the stamps are concerned, because the printing of the stamps for Hungary brought up many details of stamp production that would otherwise not have been mentioned in the records; secondly, because the easily dated printing of these stamps can be used to classify the paper varieties of the Austrian stamps of the Kreuzer issue in 1866, and finally, because some of the events in this regard later became important for the Austrian stamp system, so that they should be briefly presented here in chronological order.

At first, only one thing was certain: the newly established Hungarian financial administration was not in a position to have revenue stamps produced in Hungary itself. Two options were considered for the production of these stamps by the Vienna Court and State Printing Office: either to do as had been agreed between the two governments with regard to postage stamps according to the announcement in the "Wiener Zeitung" No. 126 ex 1867, namely to redesign the existing stamp images in such a way that they could be used in both parts of the empire without causing any problems; or to print completely new stamps specifically for Hungary. The choice of one of these options was left to the opinion of the Court and State Printing Office.

In eventum, 33 drawings for Hungarian stamps were also made to her, which were made by a Hungarian artist not named in the files and some of which were still in the stage of hastily sketched sketches.

These drawings are no longer completely preserved. As far as they are available,

They are full of three very different looks. Ten of them have circular drawings on round pieces of canvas that have been cut out and glued to red cardboard covers, in grey and white oil paint. This design was very suitable for photographic reduction. The artist had already set the amounts; the amounts of 3 kr, 4 kr, 50 kr, 5 fl, 6 fl and 7 fl were retained, while the designs designated by the designer as 2 kr, 25 kr, 50 kr and 75 kr were designated for the stamps of 75 kr, 1 fl, 3 fl and 2 fl. Another ten designs are executed pen drawings; in this case the designation of a drawing was changed from 2 fl to 36 kr. The rest consisted of pencil sketches, some of which were only very cursorily executed. What is remarkable about these drawings is the change from 1 fl to 90 kr and the dedication of the planned two drawings of the newspaper stamp for the announcement stamp.

The Court and State Printing Office emphasized in its report of August 8, 1867 that it would be more difficult for both halves of the empire to agree on common emblems in the field of stamps than in the field of postage stamps. The value legends would also pose insurmountable difficulties, since the greatest abbreviation of the guilder legends still left the difference that the conventional ligature in German was fi, but in Hungarian it was ft. The printing office therefore recommended the production of special Hungarian stamps. At the same time, it selected 28 designs from the available designs for the general stamps, with the figurative designs being designated for the higher values, and the others, according to their level of decoration, for the kreuzer values. The remaining five designs were assigned to the calendar stamp (6 kr), the two announcement stamps (1 kr and 2 kr) and the two newspaper stamps (1 kr and 2 kr). She explained that the designs were generally well-composed and could be used as stamp images. Those that were only sketched out (for 5, 10 and 15 kr, then 6 kr calendar) still had to be worked out in detail. In particular, the decoration outside the circle was to be omitted for the 5 kr value. The drawing shows that this decoration consisted of a cord forming multiple loops, similar to that drawn under cardinal's hats. Regarding the 90 kr value, *Worring* demanded in a statement underlying the report that "the raising of the wreath should be omitted"; the report itself states that raising the wreath should prove to be useful, which is pretty much the opposite. Neither is really understandable. The drawing provides better information here. In it, the wreath wound around the circular edge lines hung down a considerable distance in the bottom center before returning to the border. This bulge was removed. The Court and State Printing Office also emphasized that no private printing office could compete with it in terms of stamp production costs and that,

If the production of the stamps were to be entrusted to the Royal Hungarian University Printing Office in Buda, the establishment of a special department at this printing office and the training of the staff would require a great deal of money and time.

The drawings were to be reduced to the required dimensions using photographs and then engraved by a Viennese artist. 3600 fl were allocated for this reduction and engraving, 1130 fl for the production of the master plates, 2264 fl for the production of the 44 high plates required to produce the printing plates, and finally 689 fl for the 55 copper (intaglio) plates required for printing. The newspaper stamps were to be produced using letterpress printing; the two new “stampiglia” for this would cost 50 fl. This is the first time that the photographic reduction of drawings for the engraver in the stamp industry is mentioned in documents. The new stamp images always contained either the Hungarian coat of arms covered by the royal crown or this crown alone. The cross on the latter is crooked; However, the inclination is only (heraldically) to the right for the 10 kr value, and to the left for all other stamp values, whereas (according to the heraldic findings made since then and taken as a guideline without exception on the newer Hungarian stamps) it should correctly always be to the right. The placement of these emblems was clearly intended as a counterpart to the occurrence of the double-headed eagle on all Austrian stamps. This latter occurrence, however, was an echo of the use of the relief eagle in all paper stamps since 1802.

The first Hungarian stamps are actually modeled on the Austrian stamps (in a similar way to how the Hungarian fee law of August 2, 1850 was a copy of the Austrian one, taking into account the modifications made in the meantime). They also have (as a rule) round stamp shields in black print, which are moved up to the upper part of the stamps and leave the natural print free at the bottom as a writing field.

An arched legend below the stamp plate also expresses the value in words. These legends, which were now also included on the guilder values, probably no longer had the same meaning as on the Austrian stamps, because each value now had its own design, but they were nevertheless a valuable hindrance to imitation. Conveniently, these legends were now engraved directly on the plates. The copying of the Austrian stamp system went so far that the 1 kr value was not round but also had a square image. It was therefore quite appropriate that the ½ kr value was also given a square image. For these two values, the value legend had to be included in the stamp plate itself.

On 7 September 1867, the Hungarian government declared itself
Agreed to have the first stamps produced by the Court and State Printing Office.

However, this was only a temporary measure, chosen in view of the urgency - the new stamps were to be worn out by January 1, 1868. The intention was to produce all stamps later in Pest. Therefore, the plates and other equipment to be produced at the expense of the Hungarian government would be paid for at that time; the Hungarian government would also like to send specialists to Vienna to acquire the necessary practical knowledge of stamp production in the Court and State Printing Office. The printing office then declared that it was impossible to meet the deadline mentioned (January 1, 1868) because the engraving alone would take at least four months. The new stamps could therefore not be issued before July 1, 1868. The Hungarian Ministry accepted the latter date and announced that the Budapest Financial Inspectorate had been instructed to arrange communication between the Court and State Printing Office and the artist who had created the designs regarding the necessary completion of the drawings. This led to the Court and State Printing Office continuing to correspond directly with the Hungarian authorities and in particular with the ministries involved in this stamp delivery matter. The Office informed the Financial Inspectorate that when drawings were made for the 5 kr and 15 kr stamps, the fee amounts were to be placed inside the stamp images and that the aforementioned cord decoration outside the circular disk was to be omitted for the former stamp.

The engraving must have been started quickly, because on November 13, 1867, the printing works reported to the Imperial and Royal Ministry of Finance that several original engraving plates were already available and that the galvanoplastic work would soon begin, and that it was therefore time for those people who were to learn the manipulation to be sent from Hungary to Vienna. By chance, records have been preserved which show which engravers were entrusted with the production of the engravings for the Hungarian stamps. Their names, the drawings they engraved and the fees they received are listed here: *Schmidt:* 1 fl, 2 fl, 2 fl 50 kr and 5 fl (800 fl); *L Sonnenleitner:* 4 fl, 6 fl, 10 fl, 12 fl, 15 fl, 20 fl (1200 fl) and 5 kr and 10 kr (300 fl); *Leopold Beyer:* 15 kr, 75 kr, 90 kr, 3 fl and 7 fl (750 fl); *Josef Benedict: 2* kr, 4 kr, 50 kr, 60 kr, 6 kr calendar, 1 kr announcement and 2 kr announcement; H. *Bültemeier:* ½ kr, 1 kr, 3 kr, 7 kr, 12 kr, 25 kr and 36 kr (700 fl).

Finally, it is stated that *Schmidt* made two woodcuts for the Hungarian newspaper stamps (12 fl), furthermore that *Waldheim* was paid 15 fl for 3 woodcuts and *Hahn* was paid 30 fl for 3 woodcuts. And finally, that *Würbl* etched 31 drawings in copper and received 62 fl for them, and that he was paid 30 fl for 12 drawings (obviously for the etching of them). Both etchings are probably the

The woodcuts *by Waldheim* and *Hahn* will be discussed in more detail below.

The graphic design of these stamps was considered so successful that they were still held up as an example to be imitated years later. This was the case during the preparations for the 1879 issue, when the Ministry of Finance recommended that the Court and State Printing Office, when selecting the tree leaves for the natural print, ensure that the pattern of the veins "offered a pleasing appearance and enabled clear printing, as was the case with the Hungarian stamps, for example." After the Ministry of Finance had stressed the importance of ensuring that even faint obliterations on the stamps remained clearly visible, the Court and State Printing Office also provided the engravers entrusted with the engravings for the 1879 issue with Hungarian stamps as examples of "light" copperplate printing.

For the general stamps, only two sizes were chosen in accordance with Worring's simplification ideas: the natural self-print for the Kreuzer categories was made in the size of the Austrian 45 kr CM stamp, but the natural self-print for the guilder values was made somewhat smaller than that of the 14 fl CM stamp.

The veining of the natural self-print is also the same for all Kreuzer values and also for all Gulden values, so that only two natural self-printing plates existed. The natural self-printing is different in veining from that of the Austrian stamps and new sheets were therefore formed. As with the Convention coin stamps, this print again appears in green. From an occasional remark in a document from 1874 it is clear that chromium oxide green was used for this.

Worring's ideas were only implemented with regard to the size of the stamps, but not with regard to the stamp images, in which respect he had suggested limiting them to two drawings with variable legends.

The denomination of the Hungarian stamps was analogous to the centesimal denomination in Austria: 50 stamps of the guilder denomination and 100 stamps of the kreuzer denomination formed a sheet, equal to half a sheet. The format used for the guilder stamps was 9½ x 14 inches, and for the kreuzer stamps the format was 12 x 14 inches. The white spaces between the individual stamps are strikingly narrow, especially in the vertical direction.

On December 9, 1867, the Court and State Printing Office was still negotiating with the Schlöglmühle about the paper for the Hungarian stamps and it appears that the paper types for the bills of exchange, promissory notes and stamps should be provided with a watermark “in Hungarian text”. However, on January 12, 1868, the printing office turned to the State Debt Directorate and requested, referring to the fact that had only just become known that the Hungarian stamps

should also be printed on the paper of the Austrian stamps, in order to prompt a subsequent order of 50 reams 12 x 14 inches and 30 reams 9½ x 14 inches. The well-known watermark STEMPEL-MARKEN can actually be found on the Hungarian stamps produced in the court and state printing works. On the guilder categories it is parallel, but on the kreuzer stamps it is crossed. With regard to this watermark, the curious observation can be made on the Hungarian stamps that in a few rare cases watermark No. 2 occurs, but otherwise watermark No. 3 is the rule.

Even more remarkable is that these stamps usually *do not produce a blue reaction* when dabbed with acid , although this does occur occasionally. Finally, the most remarkable thing is the regular coincidence of both of the above-mentioned observations: namely, that the stamps with watermark No. 2 appear to be sufficiently impregnated, while those with watermark No. 3 do not appear to have been effectively prepared. This might lead one to suspect that some of the Hungarian stamps were printed using existing paper, which was of course impregnated with prussiate because it was intended for the Austrian stamps, and that other parts of the paper were made specifically for the Hungarian stamps, and that impregnation was omitted. The latter part of the conclusion is somewhat doubtful, however. For each of the Hungarian paper varieties, there are analogous varieties in the Austrian stamps (as far as this can be judged with any certainty in view of the fact that in the Hungarian stamps the majority of the surface is covered either by letterpress printing or by natural printing and that it is very difficult to say anything positive about the identity of the papers used when the background is of different colours), and with the Austrian stamps in question, no or only a minimal blue reaction can be achieved. It therefore seems that the paper mill used only a minimum amount of prussiate of potassium hydroxide in the production of stamp paper at that time in order to achieve the light colouring of the paper that was sought and expressly required by the Ministry.

The fact that the purpose of the preparation was completely missed and that the stamps, which were so to speak anemic, no longer reacted to ink etching, was ignored. It is noteworthy that the people involved repeatedly placed greater emphasis on the coloring of the stamp paper, which was only of secondary importance, than on the impregnation, which was the only essential part. With the older *Hausner* papers, for example, they sometimes went as far as blue coloring, which was detrimental to the intended principle; but now they went to the opposite extreme and, in order to avoid any trace of blue coloring, reduced the impregnation to an almost imperceptible and ineffective residue.

It should be noted here that the Hungarian consumption stamps differ in size and equipment from the general stamps.

The two announcement stamps and the calendar stamp (engraved by *Josef Benedict)* represented a *third* size category, as they were only the size of the analogous Austrian consumption stamps (format of the 3 kr CM value). The stamp shields on the announcement stamps were square, while those on the calendar stamp were round. The natural self-printing was brown on all three stamps.

A *fourth* size category was represented by the newspaper stamps (woodcuts *by Schmidt)* of 1 kr and 2 kr. The size and square shape corresponded to the Austrian stamps, but they were much more finely executed. The fact that the 1 kr stamp was printed in blue and the 2 kr stamp in brown also reflected the uniformity with the Austrian stamps, and this was evidently done in a very practical way because of the contractually agreed reciprocity and with regard to postal traffic.

The imprimatur orders for 25 of the 33 stamp values are still available; one of them is undated; the dates of the others are between October 20, 1867 and January 16, 1868. These orders were based on test prints of the copperplate print (without self-printing), which already had the legends. Analogous prints without legends therefore date from an even earlier time. On April 20, 1868, preparations for printing the Hungarian stamps, in particular the production of the printing plates, had progressed so far that the Court and State Printing Office produced the first paper version. The first delivery of finished stamps took place on May 28. Printing continued continuously, as the existing lists show, especially since a further 358,960 half sheets were purchased while the first 196,014 sheets were being delivered. The peak of performance was reached in September with 118,652 and October with 103,648 sheets delivered. Smaller follow-up orders allowed printing to continue uninterrupted until January 1869. Then smaller quantities were ordered in April and May 1869, in January 1870 and from June to August 1870. After August 1870, no more production took place for Hungary. Even the last purchases had only been a stopgap measure, resorted to because the order of the Hungarian Ministry of Finance of May 11, 1869, Z.29374, according to which the stamps were to be produced in the Royal Hungarian State Printing Office from 1870 onwards, could not be implemented in time, so that the printing of the stamps in Hungary can only have started in the second half of 1870.

The Hungarian financial administration followed the Austrian model in this regard. A central stamp warehouse was set up in Pest; and after originally only an extension of the University Printing Office in Buda was planned, a separate Royal Hungarian State Printing Office was set up. The people chosen to manage the stamp production of this institution were precisely those who, upon request,

of the Hungarian Ministry of Finance at the Court and State Printing Office were to be informed about the details of stamp production. First, the controller of the university printing office, *Franz von Szebenyi ,* and the assistant *Franz Walther* were delegated to Vienna in December 1867. From their reports, the ministry learned that the production of stamps required the establishment of a galvanoplastic department. The Court and State Printing Office was approached in May 1868 to provide the necessary equipment and to name a person who was familiar with this work. As the latter encountered difficulties, the director of the Royal Hungarian Lithographic Institute, *Norbert Bauer,* was sent to Vienna in July 1869 to study the production of stamps in addition to the production of credit securities. *Bauer* then sent *Josef Harrer,* an assistant in technical chemistry at the Polytechnic in Ofen , to the Court and State Printing Office so that he could receive practical training in electroplating. *Harrer* stayed in Vienna from the beginning of August to the end of December 1869 and, at the request of the Hungarian Ministry of Finance, received a formal certificate of the training he had acquired. He then became head of the special department for the production of stamps in the new Hungarian State Printing Office, while *Bauer* was appointed its director. However, since the start of stamp production in this institution was delayed and the Hungarian Ministry of Finance had requested that the printing of Hungarian stamps be continued in Vienna until it could be continued in Pest, the Court and State Printing Office carried out the orders of the Hungarian Central Stamp Office until August 1870.

During his stay in Vienna, *Bauer* had also initiated negotiations with the printing works regarding the provision of several printing presses and other equipment for the production of stamps. The Austrian financial authorities agreed to this request because the discontinuation of the supply of stamps to the Hungarian territories meant that the production of stamps had to be significantly reduced and some parts of the technical equipment had therefore become superfluous. The comments of the Court and State Printing Office on the list of required equipment drawn up by *Bauer* provide more details about the perforating machines. It was mentioned that “rows”

There are 17 perforating machines for stamps, namely 10 with 16-inch and 7 with 11-inch long perforated plates; one of the short machines could be reduced by 150 fl and a longer one by 200 fl.

It was also stated that there were three perforating machines for stamps “for quarto perforation” worth 800 fl each. It is not clear from the files whether line perforating machines were already delivered to Budapest in 1869. In 1871, however, such negotiations were again underway, as the Hungarian State Printing Office announced that the perforating machines in use were not sufficient and that it therefore needed three

I would like to buy more. A long and a short machine were then provided for the price of 150 and 100 fl. It is highly probable that the State Printing Office supplied Hungary with the perforating machines with the *coarsest* perforation. This perforation (mentioned below) was now becoming quite rare in Austria and reappeared in Hungary on the first stamps produced in Budapest, which are well known to collectors because of the pile paper used *(papier pelure) .*

One more special feature must be mentioned here, namely the stamps for the *military border.* As a result of the Supreme Resolutions of 12 February and 30 June 1860, the direct taxes and indirect levies (including direct fees) in the militarily administered military border were administered by the military border authorities under the direction of the General Command in Temesvár and constituted an income of this administration as "border proofs". Only with regard to the stamp wear and tear, things remained the same, as the wear and tearers in the military border stocked up from the nearest Hungarian or Croatian publishing offices against payment, as before. When the latter reached an agreement with Hungary and continued to wear out the previous stamps on its own account (in return for merely paying the production costs to the Vienna Court and State Printing Office), the *ipso facto* result was that the proceeds from the wear out of stamps in the military border from March 1867 went to the benefit of the Hungarian half of the empire, while the military administration and the purchase of the border stamps by the latter continued to exist until further notice. When Hungary then introduced its own new stamp stamps from July 1868, the question arose as to whether these should be allowed to be worn out in the military border, or whether the previous stamps, which could still be purchased directly from Vienna, or finally new stamps made especially for the military border, should be worn out in order to ensure that the border stamps also benefit from the proceeds from the wear out of stamps. However, this latter idea was never implemented because Hungary had already been in actual possession of this wear and tear proceeds for more than a year and, pointing out that the border territory belonged to the Hungarian crown, was opposed to any change in the previous status quo. In order to counter the objections regarding the use of stamps bearing only the Hungarian coat of arms in this militarily administered area, the Hungarian Finance Ministry took up a suggestion from the Reich Minister of War to add the Imperial and Royal Eagle to these stamps, but in such a way that the eagle was only to be added to the stamps intended for wear and tear in the military border, which were otherwise made in the design chosen for Hungary. That was it.

There are no details on this in the files, as only a letter from the Hungarian Ministry of Finance to the

There is a letter from the Court and State Printing Office dated August 19, 1868, which states that it has been decided to allow a deviation from the form used for the other countries belonging to the Hungarian crown with regard to the stamp marks intended for traffic within the military border. The Hungarian Chief Accountant *Ludwig Kindermann* was to negotiate the details with the Court and State Printing Office. Then there is a report from the printing office dated August 30, 1868, according to which “three copies of *eagle shields,* in which the stamp values are to be inserted”, were presented.

On 31 August, the Hungarian Ministry of Finance decided on a model recommended by *Kindermann* and at the same time urged the prompt printing of the stamps to be equipped with this design.

This reference to the "insertion of the value amounts in the eagle shields" is aimed at the fact that the brown letterpress printing of these double eagles does not extend over the entire stamp, but only over the natural self-printing, while the space that the round black stamp shields were supposed to take up was so extensively left out that not much of the eagle remained: parts of the heads and fangs as well as the tail feathers. The most important part, the breast shield with the coat of arms, was not visible. There were three sizes of such eagles: one for the guilder values, a second for the kreuzer values and the third for the calendar and announcement stamps.

Since the ½ kr and 1 kr values, as well as the two announcement stamps, previously had *square* stamp plates, new designs had to be created for these four stamps for the military border in order to be able to attach the double eagle with the round cutout. Here we therefore find four round stamp plates of a rather modest design, which are no longer produced in copperplate printing, but in letterpress printing. This graphic method of execution, the fact that (in terms of the square design) the inclusion of the detailed value legend in the stamp plate itself was retained, and finally the resulting lack of the curved value indication below the stamp plate, make these stamps stand out from the others.

The newspaper stamps were handled in a simpler way. Since the square surface of these stamps was so completely filled with ornaments that an eagle overprint could not be applied properly, two completely new woodcuts were made with a slightly different design, in which the four corners were more lightly ornamented. To save money, the aforementioned rudiments of the eagle, which had to remain visible around the circular centerpiece, were cut into the woodblock itself, so that only a single print was required. Here too, the 1 kr value is blue, the 2 kr value brown.

The adaptation of the Hungarian stamps for use in the military border had thus required six woodcuts, namely for the ½ and 1 kr values of the general stamp series, then for the two announcement

stamps and finally for the two newspaper stamps. This agreed with the above-mentioned note that *Waldheim* had made three woodcuts at 5 fl each and *Hahn* three woodcuts at 10 fl each. However, it cannot be said with certainty which drawings were assigned to one and which to the other.

The first printing of the eagle stamps took place in October 1868 (14,360 half sheets). Later, 2,700 sheets were delivered in January 1869, 22,200 in May, 1,000 in January 1870 and 5,700 in August. A document dated October 28, 1868 is remarkable, in which the State Printing Office states that it had produced 80 half sheets of ½ kr and 150 half sheets of 2 kr announcement stamps *for the military border ,* which could no longer be used for this purpose due to the later choice of eagle overprint, but were perfectly usable for Hungary. There seems to be an inaccuracy here. There was no special production of stamps for the military border before October 1868. However, in June and July 1868, 6,010 and 17,827 sheets were printed specifically for Croatia and Slavonia.
This happened because the first order had inadvertently not taken into account the needs of these two countries and only the needs of Hungary and Transylvania were specified. Since the military border was mainly supplied with stamp material from Croatia, the confusion seems understandable. The main reason why these stamps could not be made usable for the military border by subsequently overprinting them with the double eagle was that this eagle required round stamp images. However, both types of stamps had square stamp shields before the modification made specifically for the military border.

The commission-based supply of the Hungarian half of the empire with the first requirements of its newly created own stamps ceased in August 1870, when the new Hungarian State Printing Office began its activities.

It should also be noted here that the Court and State Printing Office produced sample impressions of the Hungarian stamps on sulphur-yellow paper, both those without natural printing on very rough paper and those with green leaf veins on finer paper of the same colour. It is not known whether all values of the first type existed. Impressions of the second type were issued to designers and engravers as samples to be observed during the preparations for the issue in 1879. Sample impressions were also made of the stamps for the military border, both on light yellow and on orange-yellow paper.

These yellow pattern prints have been known in collector circles for a long time. This may also have been the reason why collectors' forgeries appeared in this case. Unused genuine stamps were dyed by the forgers in a yellow dye bath and their edge teeth were then

Cut away. The paper of these imitations is, however, much thinner than that of the sample prints. Sometimes used stamps were also processed in this way after the traces of use had been etched away. In the latter case, these forgeries are usually easy to recognize by the remaining traces or the damage to the stamp image.

XXIII. CHAPTER

THE PAPER VARIETIES OF LEGEND EMISSION

The " Auer *case"* was of more far-reaching significance than one might think. Because of *Auer's* aforementioned multiple entrustment with leading functions in state-owned commercial enterprises and model institutions, he appeared to both the currents directed against his personality and the private competition in the same technical fields as an embodiment of the system of state factories. Both currents now united and each sought to use the other for its own ends. The aversion to *Auer* pretended to fight the fundamentally reprehensible state factories; the private competition, for its part, saw the official circles no longer as determined as before to support the existence of the state factories and considered the time had come to undertake a general attack against the unwelcome competition from these institutions under the cloak of scientific principles. Added to this was the financial hardship of the time and a financial policy that sought to overcome the needs of the day by cashing in all usable assets. At the court and state printing works; The closure of the factory had also been considered during the provisional management (the "interregnum", as it was then called), but the cup was still over. With *Beck's* appointment as director, the continued existence of the state institution was secured. On the other hand, the corn paper factory and the porcelain factory, the latter of which is now only remembered by the street name "Porzellangasse", were closed. Then it was the turn of the Schlöglmühle paper factory. After the management of the paper factory, which was linked to the court and state printing works, had been abolished at the end of 1864 and a "provisional administration" continued to manage the factory itself, the Ministry of Finance announced its decision to sell the paper factory to the relevant dicasteries in the decree of October 30, 1865, Z.33186. The company was to immediately focus on processing the existing stocks and fulfilling those delivery contracts that did not require cancellation.

allowed, were restricted. With regard to credit securities and stamps, alternative supplies for the paper requirement were to be introduced. On October 8, 1865, the State Debt Directorate reported (among other things) a stock of 512 reams of stamp paper and reported that the paper requirement was currently being produced until the end of May 1866. This was the sixth creation mentioned above, the last with watermark No. 2, in which, despite the effort to achieve a yellowish tone, only a light, more or less blue-clouded paper was produced, on which the majority of the first stock for the legend issue was then printed. This report also shows that the stamp paper was listed in the depot of secret state papers as paper No. 24. The Ministry of Finance now envisaged a larger stockpile to cover the needs of the whole of 1866 and instructed the State Debt Office to do so after the factory had declared that, due to a lack of sufficient work, it would be able to deliver much larger quantities as quickly as possible. This was followed by the purchase for the seventh edition, in which the stamp paper was produced from the beginning of February to March 7, 1866.

The first time limit is due to the fact that the reworked watermark roller arrived at the factory on February 1, 1866, where other value-representing papers had already been in production since January 18. The following were ordered: 180 reams of the dimension 9½ x 14 inches; 300 reams 10½ x 14 inches; 230 reams 12 x 14 inches and 40 reams 12 x 16 inches. In addition, 40 reams of pink paper for Veneto 9½ x 14 inches, which, as mentioned above, could no longer be used for stamps with red natural printing. This order of 790 reams resulted in an additional production of 165 reams, which together represented the largest stock to date. The paper of this creation is therefore also the most common for stamps of the legend issue. It is recognizable by the presence of watermark No. 3 and a light pinkish-mauve tone. Due to the large volume of production, fresh paper had to be used several times. This explains the differences that exist between individual stamps in terms of color, transparency and thickness. The most important in this case is the 4 fl value, for which the thinnest pile paper that can be found in Austrian stamps was used. This value is also the safest reference type for this mauve-colored paper. After its theoretical reactivation on the occasion of stamp regulation, it was first printed in May 1865 on the bluish paper of the first creation with watermark No. 1 - and then again in February 1867 on the mauve-colored paper. The other editions of this value already belong to the 1870 issue. Because of the large size of the VII. Creation, all guilder values can be found on this paper, as far as they were printed during the existence of the legendary issue (1866 to 1870). The only values missing are

of 6 fl., 7 fl., 12 fl. and 15 fl. The leading types of guilder values also include those of 3 fl., which, apart from the blue-clouded white paper of the VI.
Creation only appears on the mauve-colored paper. The use of the latter paper for the guilder values took place, as can be deduced with some certainty, mainly in the first half of 1867, but also partly in the second half of this year.

With regard to this paper of the seventh edition, it should be mentioned that a peculiarity has come to light, namely a 15 kr stamp on which the watermark does not appear crosswise, but in the same direction. This value belonged to the format 12 x 14 inches. Since a plate of this value without manipulation latitude had the dimensions 10½ x 12¾ inches, the stamp images could not fit completely on it if the printer accidentally placed the sheet crosswise. It can therefore be assumed that in this case the mistake must have been made in the paper factory, as a sheet was cut to the format 12 x 14 inches, but on it the watermark did not run in the longer direction, but in the shorter direction. This stamp cannot therefore really be described as a misprint.

The sale of the Schlöglmühle did not go as quickly as had been expected. Consideration also had to be given to the workers, who would have been largely left without a job if the business had been restricted as far as was envisaged, whereas if the business had been sold there was still the possibility and probability that they would remain in their positions. In May 1866, the workers' petition to His Majesty allowed the factory to continue operating until the planned sale, and the restrictions on business that had been imposed were lifted until further notice. In 1869, however, the sale became serious. The Ministry of Finance had been authorized to sell this piece of immovable state property by the law of June 20, 1868, RGBl No. 68. After rejecting several unfavourable offers that wanted to "print" this property off the state treasury, and after negotiations with the *Waisnix* brothers in Reichenau had also failed because their offer did not reach the amount of 500,000 fl, the privileged Vienna Commercial Bank for Products and Trade appeared as a serious buyer. After reaching an agreement, the licensed joint-stock company of the Imperial and Royal Privileged Paper Factory Schlögelmühl (this spelling now replaced the earlier "Schlöglmühle") was founded under its auspices and the purchase contract was concluded with it on June 1, 1869, after the operation and administration of the factory had already been "provisionally" handed over to it on April 4. The purchase price was stipulated at 700,000 fl, plus 100,000 for paper and rag stocks to be redeemed. The fact that these amounts were still to be included in the same was stated in the most humble speech of 13 June 1869,

the

years in cash

with which approval of the contract was requested, was highlighted as a significant financial advantage. In addition to the factory, the purchasing company was also to receive a partial amount of 25,000 fl, which the Treasury had to receive from the City of Vienna because the water power of the factory had been impaired by the diversion of the Höllental springs for the Vienna water main. The purchase contract was also a supply contract, in that the new company was assigned (and in an exclusive manner) the supply of the papers for the value effects of the financial administration and generally for the needs of the court and state printing office for a period of five years. The prices were to be regulated quarterly; however, the prices which had been paid to the Treasury factory since 1866 were to be regarded as the maximum prices that could not be exceeded.

The company submitted to all precautionary measures and monitoring orders to be taken by the financial authorities, so that the production of stamp paper could only continue to take place under the supervision of supervisory commissioners. It was also determined that paper of the types intended for credit securities or other valuable securities could not be passed on to third parties, otherwise the rights would be lost and full liability would be assumed, which meant that rejected watermarked paper had to be sent for pulping as before.

On June 23, 1869, the Court and State Printing Office was instructed to direct its correspondence directly to the joint-stock company from the time of the final handover of the works. The handover was already complete on July 3, 1869.

From the dates of the provisional and final handover it is clear that - as should be mentioned here in advance - the 13th creation of the stamp paper (160 reams), which took place on the order of April 21, 1869 and was completed on July 10, was already carried out on behalf of the joint-stock company and partly by its own staff. This was also the last creation whose product was still used for the Kreuzer issue.

The next XIVth creation was ordered on October 20, 1869, completed on November 23, and involved 65 reams of 9½ x 14 and 230 reams of 10½ x 14 inches. Since it was used to print the first stock for the 1870 issue, which required all four formats, there were evidently still stocks of the 12 x 14 and 12 x 16 inch formats from earlier creations.

If we ignore the papers of the IVth, Vth and VIth creations used in the first stockpile and the mauve-coloured paper of the VIIth creation, a further six papers are considered for the Kreuzer issue.

However, because the printing of the stamps for Hungary and the military border took up a significant part of this, there is not much left over for this part of the Austrian stamp system.

Since the files of the State Debt Directorate for this period are more fragmentary than for the period of the first production of watermarked paper, when these were still unusual and considered important actions, and since the protocol entries were no longer made as precisely as before, there is a certain amount of uncertainty here. This is also due to the fact that the institutions of the stamp system had reached a state of calm inertia, so that there are now no incidental changes in the graphic method or the types that could be used as chronological clues. The only such supporting factors are: the production of the stamps for Hungary and the Military Border; furthermore, the lists of the paper used for stamp printing; and finally a change in the perforation that occurred during this period.

With regard to perforation, official opinions have varied on whether narrow or wide perforations are preferable. At the time when perforation first appeared, the Ministry of Commerce had urged a narrower perforation. Now the opposite has happened. In an instruction from the Ministry of Finance to the Court and State Printing Office dated July 26, 1868, Z.23474, in which several basic instructions were given regarding a planned new issue, the order was included to "prepare the greatest possible serration of the stamps compatible with mass production."

There is no indication whatsoever that would indicate what prompted this arrangement. It is likely that a fundamental change in attitudes had occurred. Perhaps this was also due to the fact that the existing perforations were failing at that time and in May 1868 a complaint was received from the St. Pölten district finance office that “the teeth between the individual stamps were often so poorly cut that part of the stamp was torn off when they were torn off”. Something similar had already been observed in 1863 and was probably the reason for the departure from the original close perforation. There seems to be an idea - not entirely correct - at play here: that larger holes can be “cut out” more easily than small ones.

The step that has now been taken in this direction was radical. The previous perforations of 12 and 12½ will soon disappear completely and new, very wide perforations will appear, ranging from 11 to almost the widest that is still common in stamping (9). This Goliath perforation occurs on both Austrian and Hungarian stamps. Of the latter, the values of 1 kr, 4 kr, 5 kr, 10 kr, 25 kr, 50 kr, 2 fl, 2 fl 50 kr, 3 fl and 5 fl have this perforation. In the case of the “German” stamps, as the stamps intended for this half of the Reich are now officially called, this perforation can be found on far more denominations, namely, as will be mentioned here in anticipation, on straw-coloured paper on 1 kr, 5 kr, 7 kr, 12 kr, 15 kr, 25 kr, 36 kr, 50 kr,

1 fl, 2 fl, 10 fl and 20 fl; on cream-coloured paper at 5 kr, 7 kr, 15 kr and 50 kr; finally on whitish paper at 3 kr, 2 fl, 2 fl 50 kr, and 5 fl.

The Hungarian stamps do not provide any clues as to when the Goliath perforation was introduced. The stamp categories mentioned are precisely those that were printed in the small reorders in January and in June, July and August 1870. However, it is already known from the stamps of the Austrian issue of 1870 (the printing of which began in December 1869 and in which the older perforations 12 and 12½ no longer appear at all) that the perforation in question had long been in use at that time. In contrast, the last stamp production for Hungary in May 1869 produced values that had not previously been found in the Goliath perforation. There is therefore only one thing that can be deduced with certainty from the Hungarian stamps: that this perforation was only introduced *after* May 1869.

Of the German stamps, the ones listed last (3 kr, 2 fl, 2 fl 50 kr and 5 fl on whitish paper), which correspond conspicuously with the print lists for November 1869 - the last month in which production for the Kreuzer issue still took place - indicate that the Goliath perforation must have begun before November 1869.

It is not easy to decide which of the five months between the two given limits - June, July, August, September and October - was the time when the new perforating machines were activated, because the denominations with wide perforations are among the most common, and are constantly being reissued almost every month. The given period is somewhat limited by the fact that in July 1869 a rare denomination, the 2 kr stamp, was printed, which is not known to have been perforated with Goliath. Furthermore, since the 1 fl denomination was only delivered around mid-August during this whole period, this would in all probability be the time when the new perforation was already in place. The only difficulty is the denomination of 10 kr, because it is stated to have been delivered at the end of August and the beginning of September and has not yet been found with the wide perforation.

Three distinct papers can be clearly distinguished among the Hungarian stamps; whether there are not further differences remains to be seen, given the uncertainty associated with assessing minor differences in color, structure, thickness, transparency, etc. One of these papers is distinguished by the fact that it has a bluish color and reacts blue with acids. In addition, these stamps bear watermark No. 2. Since the production of Hungarian stamps began in April 1868, but the last creation of paper with watermark No. 2 took place in October and November 1865, this is physical proof that

Paper scraps had been kept for more than two years and were now being used up due to increased demand

According to its appearance, this paper can only belong to the VIth creation (the last one with watermark no. 2), which formed the main stock for the first stockpile of the legend issue and for which the 2 kr stamp of the older and newer type is the leading value. This creation included all four paper formats, so that the printing of Hungarian stamps, for which two of these formats (9½ x 14 inches for the guilder categories and 12 x 14 inches for the kreuzer categories) were required, appears possible. In addition, very few guilder values of the German stamps are known on this paper, so that there must still be considerable stocks of the first format in particular.

A striking fact in the case of Hungarian stamps, namely that the paper of the guilder denominations is much more blue than that of the kreuzer denominations, also provides the clue as to why this paper had not been used up long ago. It is worth remembering that at that time there was a strong tendency to no longer allow blue-coloured paper to be used for stamp printing.

As mentioned, an entire batch was even scrapped because of this coloring.
It could have happened that there was also paper which was not so blue that it had to be destroyed, but which was nevertheless rejected by the printers in accordance with the instructions received, as long as lighter paper was available. The latter had, however, been the case since then, because the very extensive VIIth Creation had resulted in a very light mauve-colored product.

The Hungarian stamps clearly show that the 12 x 14 inch format of the VIth creation was lighter than the 9½ x 14 inch format. The fact that both papers belong together despite the gradual color difference is evident from the blue reaction and should also be evident from the watermark if larger, connected sections of the sheet of the Kreuzer values could be found. The following Hungarian stamps appear on this paper of the VIth creation: 1 kr, 4 kr, 5 kr, 10 kr, 15 kr, 25 kr, 36 kr, 60 kr, 1 fl, 2 fl, 3 fl, 5 fl, 10 fl, 12 fl and 20 fl. Regarding the values of ½ kr, 2 fl, 50 kr and 6 fl, no clearly reacting pieces have yet been found.

The same paper is also found in some values for the military frontier. Since the first stock of this was not printed until September and October 1868, it follows that the bluish paper stocks were only used in these months, which also represented the peak of production in Hungary.

The other papers of the stamps for Hungary (and the Military Border), which have the watermark No. 3, are yellowish or whitish. It is not always possible to clearly produce the blue reaction on them. However, since the papers for the German stamps of the same period also give the same impression, it is still possible that the Hungarian papers are exactly the same as those that were printed for German stamps. The whitish paper would have an analogue in the similar one to which the

The denominations produced with Goliath perforation in November 1869 are 3 kr, 2 fl, 2 fl, 50 kr and 5 fl; the German stamps of the same period also contain yellowish paper, and apparently a majority of such papers. It is not possible to establish a chronological order in the use of the light and yellow paper for the Hungarian stamps. But something similar can also be said for the German stamps from the fact that the Goliath perforation, which began about 3½ months before the end of the legend issue, can be found on three papers. However, since stamps with the older perforation (12 and 12½) can also be found on all three papers, and since the stamps show that, for example, the format 10½ x 14 inches had to be represented on all three papers, the conclusion cannot be dismissed that all three papers were used *promiscuously* alongside one another. It should be noted that a section of the whitish paper has such strong, but mostly quite irregularly distributed, reaction clouds that it can usually only be distinguished from the paper of the sixth creation by its greater thinness and smoothness. Pieces with watermarks, however, easily reveal watermark No. 3 and provide evidence that this is the product of a later creation. Some of these marks also show a more obvious reaction.

The question of which creations these papers should be assigned to is not easy to answer.

For the legendary issue (apart from creations V and VI for the first stockpile), creations VII to XIII inclusive are considered, since the paper of creation XIV was already used for the issue in 1870. Creation VII and its easily recognizable mauve-tinted paper, on which the vast majority of the stamps of the Kreuzer issue can be found, have already been mentioned.

Creation VIII is also easy to distinguish. The 90 kr value serves to identify it. According to the printing lists, it was produced in October 1865, in February and May 1866 and then in February 1867. This stock lasted until the issue in 1870. The first of these four editions was on the very bluish paper of Creation IV, the second edition on the light bluish paper of Creation VI. Then there are 90 kr stamps on the mauve paper of Creation VII. Finally, however, this value also appears on a very thin and transparent, pure white paper that shows no reaction clouds and shows a plain weave ribbing when viewed through.

This stamp must be attributed to February 1867. Since such a paper does not originate from any of the first seven creations, the inevitable conclusion is that it was the product of the VIIIth creation.

This creation was acquired on 15 January 1867, with the factory
This meant that by the end of March half of the amount ordered for stamps

A quantity of 42 Ries was required. On March 2, 1867, the protocol on the termination of production was presented, according to which an excess delivery of 18 Ries had resulted. In February, paper from this creation could already be used up.
The identification of this paper is also supported by the fact that (as already mentioned above in the case of the last Lombard paper) the Ministry of Finance was insisting on the use of very thin stamp paper at that time and the paper mill was obviously trying to comply with these intentions.

In addition to the 90 kr values, this thin white paper also contains the 4 kr, 5 kr and 1 fl stamps. The 1 kr and 15 kr stamps are questionable. The 5 kr value has a very remarkable peculiarity. In addition to the not uncommon stamps with the arched value legend “Five Kreuzer”, there have also been isolated pieces found on this paper that lack this text. It therefore appears that these were stamps issued in 1858 from the period before 1866 and, more precisely, because of the wide perforation, from the period from autumn 1863 to the end of 1865. But neither at that time nor at any time before or after was such paper in use, only now. This leads us to assume that this is a misprint, in that the printer overlooked the fact that the value legend was omitted from one or several sheets.

There is documented evidence from the time of the Kreuzer issue that something like this actually happened. In 1869, the wearer *Michael Schober* intervened, claiming that the central stamp wearer's warehouse had given him, among other things, a sheet of 36 kr stamps on which the overprint was missing. He only realized this when he had already sold 67 of them. He submitted the remaining 33 for replacement. This request was granted after the printer admitted that it was not impossible for the printer to take two sheets at once instead of one and put them in the press, where the sheet underneath would then remain unprinted. If this were overlooked during the inspection, such an imperfect sheet could become worn. None of these 36 kr stamps have yet come to light among collectors. This incident, however, confirms the assumption that the above-mentioned 5 kr stamp had the same effect - an assumption that already existed before the documented case of *Michael Schober* became known.

The chronology of the other eligible for the legend emission
Paper creations are as follows:

The IXth creation was the second and last of the year 1867. The purchase took place around the middle of August; on December 4th the supervisory commissioner announced the end of production. According to the index of the State Debt Directorate, among the purchased valuable papers were 42 reams of stamp paper.
On 12 January 1868, the State Printing Office requested, in response to a communication dated 6 December 1867, in which the

The State Debt Directorate announced that the need for stamp paper by the end of April 1868 was to increase the order by 50 reams of 12 x 14 inches and 30 reams of 9½ x 14 inches; this additional requirement was due to the fact, which has only just become known, that the Hungarian stamp characters were also to be printed on the paper intended for the stamps. According to the factory records, the 10th creation took place in the period from January 21 to February 6, 1868. What and how much was produced in addition to the 80 reams mentioned above is unknown. In 1868, only two creations took place; these were also the last ones that were still handled by the state administration of the Schlöglmühle.

On April 30, 1868, 112 reams and 14 reams of paper for stamps were purchased. The implementation was very delayed. The delivery was not made until September 4, namely 113½ reams of 10½ x 14 inch format and 19½ reams of 12 x 16 inch format (11th creation). In response to a request from the Directorate of the State Debt, the State Printing Office announced on September 12 that the paper requirement for Austrian stamps was covered for six months; however, in the same period, 250 reams of 12 x 14 inch and 150 reams of 9½ x 14 inch would be needed for Hungary. In fact, the delivery of stamps for Hungary reached its peak in September 1868 with 118,652 sheets, as mentioned above, and in October it still amounted to 103,684 sheets, after which it suddenly dropped and from then until August 1870 it only amounted to 99,159 sheets in total. The last large paper version for Hungary took place in September 1868 (64,608 sheets), i.e. from no later than the 11th century.

Creation. It is therefore doubtful whether the 400 reams mentioned were actually ordered for the Hungarian stamps. The XIIth creation was indeed very extensive according to the minutes. However, since the purchase of these had taken place before the aforementioned correspondence, namely on July 17, 1868, no consideration could have been given to the needs of Hungary. In addition to all these uncertainties, the purchase according to the minutes was for 50 reams 9½ x 14 inches; 2000 reams 10½ x 14 inches; 300 reams 12 x 14 inches and 100 reams 12 x 16 inches. The quantity of 2000 reams for the second format is so far outside the scope of the experienced needs - it was not even one of the two Hungarian formats - that one has to suspect a typo. Even with 650 reams, the XIL creation would still be one of the most extensive.

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Nothing more is known about the XIIIth creation than that the order was placed on April 21, 1869, and related to 160 Ries. Production was completed on July 10. These dates show that this creation was already under the management of the new joint-stock company.

In contrast to the five paper creations (IX to XIII), there are only four distinct paper varieties from this period and even with regard to these there is much uncertainty regarding the chronology. These papers are: three yellow

(in decreasing intensity of coloration, it can be described as straw-colored, sulfur-yellow and cream-colored) and a white one with a light bluish-green tint (in the Hungarian stamps, sometimes more intensely colored by blue reaction clouds). Of these four papers, two can be identified with some degree of probability. The straw-colored paper probably belongs to the XIIth creation. This is suggested by the fact that dated pieces with such stamps appear in September 1868, when this creation took place. Likewise, the further fact that the large number of stamps on this paper corresponds to the large scope of this creation; and finally the occurrence of so many values that all four formats had to be available, which was the case with the XIIth creation.

In a similar way, it can be concluded that the cream-colored paper belongs to the 11th creation. The values known on this paper (3 kr, 5 kr, 7 kr, 10 kr, 15 kr, 26 kr and 50 kr) require two paper formats (10½ x 14 and 12 x 14 inches). In fact, paper of the dimensions 10½ x 14 and 12 x 16 inches was produced in the 11th creation. It is quite possible that the small quantity of 19½ reams of 12 x 16 inch paper would have been used instead of the 12 x 14 inch format, which would have been sufficient. It is only a hypothesis (for which there is no documentary evidence until the 1970s) that the 10 kr, 15 kr and 50 kr stamps that previously (authentically) belonged to the 12 x 16 inch format were later assigned to the 12 x 14 inch format for reasons of economy. Even if this hypothesis were correct, there could still have been some reason to use the larger format for these stamps. 12 x 14 inch was a Hungarian format and was in high demand at the time.

The sulphur-yellow paper most likely belongs to the 10th creation (reorder of the dimensions 9½ x 14 and 12 x 14 inches with reference to the stamp printing for Hungary). The majority of the yellowish paper found on the Hungarian stamps belongs to this creation. It is also possible, however, that straw-coloured paper was used for Hungary. Nothing can be said for sure about this, because in the case of the Hungarian stamps, the assessment is made very difficult by the fact that almost the entire space of the paper is covered by black or green printing. But some of the dated yellowish Hungarian stamps date from a time when the straw-coloured paper had not yet been created, so a different yellowish paper must have been used for them. The same conclusion that the sulphur-yellow paper is the older one is also drawn from the German 60 kr value known on this paper. It was printed in November 1865, February and March 1866, February 1867, March 1868 and September 1868. This stamp appears on paper of Creation VI, on mauve-tinted paper, on sulphur-yellow and on straw-coloured paper. The straw-coloured stamps must belong to the last printing: this paper did not exist before. Up to and including the printing of

The sulphur-yellow paper cannot be considered for February 1867, because such paper did not exist until then. So it was precisely this paper that was used for the 60 kr stamp in March 1868.

For the IXth edition, the thin, whitish, sometimes bluish-cloudy paper is then left over, on which a large proportion of the stamps for Hungary and the Military Border are printed. There must have been considerable remnants of this paper until the end of 1869; because, as already mentioned, in November 1869, just before the first stockpiling for the 1870 issue began, stamps were produced on this paper (3 kr, 2 fl, 2 fl, 50 kr, 5 fl) which had the Goliath perforation. The fact that the cream-coloured and straw-yellow paper also appear with this perforation shows that all of these papers were used alongside one another. The relative rarity of cream-coloured stamps with perforations of 12 and 12½ also shows that not much of this paper had been used until the introduction of the Goliath perforation.

From the above it can be seen that there are no stamps from the Kreuzer issue that can be attributed with certainty to the paper of the XIIIth creation. This was indeed made at a time when this issue was still in force and when it would therefore have been possible to use this paper for the legend stamps. However, since very large stocks had been taken out in view of the impending closure of the Imperial Paper Factory and the straw-coloured paper in particular was available in such quantities that even stamps from the 1870 issue were still being printed on it, the paper of the XIIIth creation was never used for the legend stamps. If this had happened, a fourth type of paper with Goliath perforation would have had to be found.

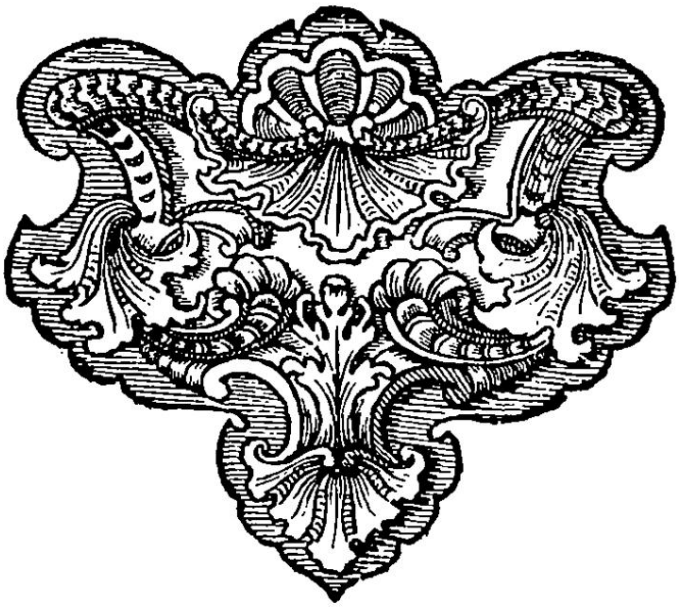
The introduction of the sheet-shaped value overprint, as mentioned above when mentioning the paper of the 8th creation, gave rise to a special type of misprint in which this overprint was accidentally omitted altogether (5 kr, 36 kr). However, another type of misprint has become known in which the value legend (in letters) is upside down. It therefore accompanies not the lower but the upper edge of the round stamp plate and has the opposite reading direction to the short value legend engraved in the stamp plate. These misprints arose because the printer turned the sheet (already provided with the copper and natural print) by 180 degrees when inserting it into the press. Due to the asymmetrical position of the stamp plate in the rectangle of the entire stamp image, the legend was in the stamp plate itself in these cases. The value of 60 kr is known to be of this type.

A falsification of the Kreuzer issue has also become known. A 30 kr stamp from the period 1858 to 1865 was redesigned by hand in such a way that the legend Ninety Kreuzer with

the pen and the number 3 in the shield was changed to 9. This resulted in a one-line legend, whereas the engraved value legend for the 90 kr values that have existed since the stamp regulation was in two parts.

If we could summarize here what has been shown to be probable regarding the paper varieties of the first issue of Hungarian stamps produced by the Imperial and Royal Court and State Printing Office, we would say the following: Of the blue-clouded paper of the VIth creation with watermark No. 2, lighter colored sections (formats) were used for kreuzer denominations, while more intensely colored sections were used for guilder denominations. All other paper has watermark No. 3 and some already have Goliath perforation. A whitish, light blue-tinged, often quite thin paper belongs to the IXth creation; the yellowish papers are of the Xth (sulphur yellow) and XIth (cream-colored)

creation. They can also belong to the XII (straw-colored) creation.
In the subsequent deliveries to the Hungarian government up until August 1870, even later documents may have been used.



FIFTH SECTION

THE FIRST PHASE OF REFORM EFFORTS AND THE EMISSION 1870

CHAPTER XXIV

HÖHNHOLDS BRAND PROJECT

The temporal priority on the one hand and the *effective* first stimulus on the other hand, from which a series of developments takes its real starting point, do not always coincide. This is also the case in the field of revenue stamps. The priority of the idea of producing "irremovable revenue stamps" (as they said at the time, meaning stamps that could only be removed with an easily recognizable injury) belongs to an employee of the Court and State Printing Office, who later left this service to join a private printing company. This was the printing company factor *Franz Höhnhold.* In July 1863 , he presented the Ministry of Finance with a project for revenue stamps (together with the manager of Karl *Ueberreiter's printing company,* W. *Fickert,* and with the aforementioned printing company owner himself), which, according to the complainants, had been produced by someone who was not familiar with the entire production process.

could not be copied and which, once stuck on, could not be removed in such a way that this fact would not be immediately apparent to everyone.

The aforementioned document does not contain any detailed description of what the test stamps presented looked like. However, from a fact mentioned therein, namely that in addition to the print on the top of the stamp, "a royal and imperial eagle" was also printed on the back, it can be concluded that a stamp known to collectors comes from the three designers mentioned. This stamp with cut edges, 13 x 17 lines in size, is made on a dull reddish paper, which has a watery, slightly grainy appearance when viewed through. A fine guilloche pattern is printed in red across the entire front. In the upper part, evidently based on the usual shape and position of the previous stamp shields, a circular ornament is applied, in the middle of which a square space is left out, where the legend 2 kr is written. Both the round shield and the square space are framed with multiple lines.

Delicate leaf ornaments are placed between the circular lines and the square lines. All in black print. A black double-headed eagle is printed on the gummed back at the bottom, corresponding to the front inscription field.

The State Printing Office was asked to give an expert opinion on this project. *Auer,* who was still in service at the time, then submitted a detailed report, which does not make the comment contained in the files elsewhere (State Printing Office report of April 1, 1889, No. 1014) that *Auer* had resisted every attempt to improve his creations seem unjustified. *Auer* first outlined the requirements that, in his opinion, usable stamps must meet. The stamps must have such a degree of artistic and technical perfection that they are prevented from being copied or misused; their color must be durable and unchangeable so as not to cause inconvenience to the public and to those who use them carelessly and store the stamps under unfavorable conditions; finally, mere letterpress printing is not sufficient for an artistic stamp image that would pose obstacles to falsification; for this, copperplate printing is required, which allows a much more delicate, artistically perfect execution. When *Auer* adds, particularly on the last point, that the State Printing Office used copperplate printing in conjunction with letterpress printing for security reasons, this is not entirely understandable and is probably based on a memory error. *Auer* had probably used copperplate printing and letterpress printing side by side in the first stamp design that he presented and suggested as an alternative for stamp paper or stamps, and pointed out that hardly any forger would have a copperplate printing press and a letterpress printing press at his disposal at the same time. But even when the first stamp design was being made,

samples (with the leaf lobes) this combination was omitted. If the natural printing was then carried out as a letterpress, this was only done for economic reasons; and if the legends were added by means of letterpress printing since 1866, this was again done in accordance with an order from the Ministry of Finance.
However, Auer himself had described the temporary use of auxiliary printing as something unfortunate and not at all a desirable means of protection. In his statement on *Höhnhold's project , Auer* emphasized that the stamps produced by the state institute met all the requirements in the best possible way and, moreover, thanks to the "endless copper printing presses" in use, were produced so cheaply that no private institute could achieve this.

Then he moved on to the stamp project that had been sent to him. He said that Franz *Höhnhold* had been a member of the State Printing Office as a non-stable printer and that he had given him samples of his planned stamps on June 24, 1862. Since these stamps were “neither suitable for higher production due to their very poor execution nor their practical application,” he had *shelved* them. W. *Fickert* had also been a typesetter and factor in the Court and State Printing Office; both of them were simply pushing their then boss *Ueberreiter* forward. *Auer* added a sentence that sheds some light on his position: “About these two, ... who found their livelihood for so many years in the State Printing Office and had the opportunity to expand their knowledge of typography, to which they owe their current position in particular, but who nevertheless felt that they were beyond all gratitude after leaving, the undersigned, after so many bitter experiences, considers it superfluous to add a further word.” *Auer* therefore viewed the proposal of stamps other than those produced in the State Printing Office as an act of personal ingratitude.

From this point of view, it is understandable when he states in his report that the presence of the project stamps received by *Höhnhold* in 1862 in the files of the printing office shows that he did not conceal the matter.
Likewise the statement that he had delegated the testing of the new test stamps to the senior factors *Wöhlert* and *Worring* and had refrained from influencing them in any way. The result was that these stamps "have proven to be completely impractical to use, and indeed their introduction would cause incalculable harm to the Treasury and innumerable embarrassments to the public."

In particular, he complained that the preparation of the paper required letterpress printing and therefore did not allow for a high artistic quality, and that even insignificant private institutions could reprint such works. The printed image itself was so short-lived that it would be damaged by even the slightest careless handling. This was particularly the case if the top of the stamps became wet when they were stuck on and

then, as is generally the case, if the stamp is smoothed out with a finger, the colour of the print disappears. Finally , *Auer* emphasised that the eagle on the back of the stamp does not offer the slightest protection against the misuse of removing the stamp, but rather disappears partially or completely when the stamp is moistened with the tongue, and the parties can thus “get into embarrassments, even into investigations and criminal proceedings through no fault of their own”. One must think about the necessary “subtle” and “delicate”
He also stated that he would issue formal instructions on the proper handling of these stamps. There are also cases where stamps that appear to have been covered in ink are handed over for exchange and the printer can now reliably give an opinion on the authenticity of the stamps after removing the ink stains using chemical agents. There are also cases where whole packages of stamps cake together in damp rooms but the printer can determine the number of pieces available after dissolving them in water. Both of these would be impossible with the proposed stamps because of the water-soluble printing ink. *Auer* concluded his report with the strongest terms: he could say openly that of all the impractical projects he had come across during his time in office, he had never come across a work as completely unsuitable as these stamp samples and that he was astonished that the designers could bother the minister with such an unsuccessful product.

It seems that the designers received a short message about *Auer's* negative opinion . The file contains a new inspection order from *Schwarzwald* to the State Printing Office, in which it is informed that "the designers attach particular importance to the fact that the proposed stamps (not because of the eagle on the back, but in and of themselves) cannot be removed again without the stamps breaking into pieces, either because of the nature of the paper or because of the nature of the adhesive, which is still their secret." *Worring* then managed to remove two stamps undamaged. The accompanying statement said that anyone removing stamps for further use would of course proceed with care and caution. However, if the stamps were of such a nature that they broke into pieces even when removed carefully, they would not be suitable for circulation due to their short durability - further proof that the designers were unaware of the requirements placed on practically usable stamps. Following this report, the project was rejected by the Ministry of Finance on 9 November 1863.

It is very regrettable that *Auer’s* irritated attitude and his stubborn refusal to consider any manufacturing possibilities with regard to stamps that differ from his own ideas,
have been successful and that no closer examination of the project

It appears that there were three new ideas: the use of easily destructible colors for the stamp image, the use of the transfer principle when printing on the back of the stamp, and finally the use of a stamp carrier that could not withstand the intensive moistening required to remove the stamp. There may also have been something special about the adhesive, as is clear from the above hint. In any case, what was later the laborious work of many years would have been significantly accelerated if this project had not been abandoned so hastily. It was undoubtedly wrong for *Auer* to focus exclusively on the careless handling of the stamps by the public and those who wear them out. This consideration should not be ignored, and the stamp material should not be made more sensitive than necessary. Far more important, however, is the interest of the state treasury, which is obviously damaged when the very special immutability and durability of the stamps actually encourages their replacement and reuse.

XXV. CHAPTER

KLETZINSKY'S PROPOSALS

The starting point for the reform efforts that began around this time was, as far as the files show, the fact that Dr. *Nejedly* studied chemistry under Professor *Kletzinsky* for two winters and that a student of this course happened to discover the so-called mineral paste in *Kletzinsky's* laboratory, which was very durable and highly resistant to moisture. This invention, for which *Kletzinsky* strangely enough ascribes authorship to himself in a somewhat unclear manner in the files, gave *Nejedly* the idea that it could perhaps be used to protect the stamp gradient, since a stamp adhesive that could only be dissolved again with chemicals would make it very difficult to remove the stamps. Nejedly reached *an* agreement with *Kletzinsky* via verbal authorization and then in April 1883 the latter received a written invitation from the Ministry of Finance to submit proposals regarding a suitable stamp adhesive. The resulting negotiation has already been mentioned above, when an attempt was made to explain the conspicuous blueing of the back of the chameleon paper.

In response to the request, *Kletzinsky* submitted two adhesive recipes in July 1863: the mineral adhesive “invented by him” and an improved brand adhesive. The submission was submitted to the Court and State Printing Office

with the instruction to carry out tests on the samples that were also submitted and to report on the results. This order, however, referred expressly only to the improved stamp adhesive. The mineral paste was no longer mentioned. In a later summary document (Z.31019 ex *1865),* in which *Nejedly* recapitulated the entire history of stamps and all reform efforts, it is briefly indicated that neither scientific research nor a lucky coincidence had yet produced the ideal stamp adhesive that would allow stamps to be stuck on but would prevent them from being removed. As long as moistening is required to stick stamps on, the stamp must also be able to be removed again by getting wet. The mineral paste, which silicifies after use and drying out, is then only attacked by the most violent acids, which also destroy the paper. It could perhaps be used to produce stamp paper from prepared paper with stamps glued on.

This view *of Nejedly* is probably out of date. If one wanted to introduce stamp paper, the direct printing of the mark on the paper would be preferable to any kind of gluing of the stamps. *Nejedly's* comment also misses the point, which is that the mineral paste does not allow the stamps to be glued in advance. If the stamps had been coated with it during production, the paste would have become insoluble when it dried. But the parties could not be required to coat ungummed stamps with an adhesive themselves when they were gluing them, and specifically with this mineral paste. It seems that *Nejedly* did not want to simply admit the practical uselessness of the method he mentioned.

That is why he also made the not entirely understandable statement that, just as blotting paper loses its structure through sulphuric and nitric acid and “turns out to be artificial parchment”, there may be substances which have a chemical effect on the paper of the stamps in the intended sense, but at the same time, by applying it more strongly, an excess of this effect on the paper of the document is unnecessary. How little he himself thought of this is evident from the fact that in his own report on *Kletzinsky's* submission , the mineral paste was tacitly dropped and testing was ordered only with regard to the improved adhesive.

The report of the State Printing Office, written by *Worring* in September 1863, was negative. The main objection was that the added iron vitriol turned the prepared paper blue and left an unpleasant metallic taste when the stamp was moistened with the tongue. The paste also became brittle and fragile after drying and came off when the paper was bent. The printing office reached an agreement with *Kletzinsky* and composed a new adhesive, leaving out the iron vitriol and reducing the amount of sulphate of alumina to half. The

The recipe reportedly read: 1 lot of glue with ½ a side of mirban water; ½ lot of sulphate of clay, ¼ a side of mirban water and 5 lots of gum arabic.
The mirban water is not essential, as it only serves to protect against rot and fermentation during long-term storage. The sulphate of clay also alters the prepared paper, as it contains excess acid, and makes the glue layer brittle and fragile. If both are omitted, the only innovation that remains is the mixture of glue and rubber. Since the bone glue used up to now has greater adhesive power, is cheaper and more difficult to dissolve than rubber, it is the best and most suitable branded adhesive. In a later submission (from 1864), which concerned another proposal *by Kletzinsky ,* he demanded an "unbiased and impartial" test of the adhesive in his presence, so that "the true nature of the object could be proven, and not the presumed uselessness of it, as was the case when the adhesive he proposed was applied so thickly that the thin paper seemed to be of secondary importance." In this case, *Nejedly* noted in the aforementioned summary document that the improved adhesive had failed due to the fact that Professor *Kletzinsky* was completely unaware of the use of chemically prepared paper for the production of stamps; moreover, as the samples available show, these were not produced by the then management of the State Printing Office with any particular care and by no means in a manner that would encourage the applicant to undertake further, sometimes costly, research.

Kletzinsky's proposal , which had no immediate effect, coincided by chance with a revival of the question of how to cover the Court and State Printing Office's need for glue.

After the *Rollinger* contract for the bookbinding work, which also included the gluing of stamps, ended, the state institute took over this work itself and set up its own bookbinding shop. The glue was supplied by *Wenzel Bodenstein,* "exclusively privileged chemical bone glue manufacturer in Gaudenzdorf", as he called himself. The bone glue for the stamps was paid to him at 80 fl. per hundredweight in Vienna. In December 1863, an offer came in from the factory owners *J. Fichtner* and Sons from Atzgersdorf, offering the following for 1864: dry glue for single-ball rollers, best quality equal to Cologne glue at 33 fl.; glue jelly for postage and stamps with 35 to 40 percent dry matter at 10 fl. and gelatin at 130 fl. per hundredweight. *Bodenstein* must have been aware of the *Fichtner* company's intention to make an offer, because he submitted a relevant petition on 27 November 1863. He referred to his many years of impeccable deliveries, his investments of more than 4000 fl. and the fact that, given the current high price of horn, it was impossible to produce glue that was only made from the inside of the horn tubes, as he

This was done much more cheaply; therefore, leather and other cheap but harmful waste must have been used in *Fichtner's* products. Finally, he offered a discount of 5 fl. Tests in the gluing shop showed that *Bodenstein's* glue was more efficient, as 10 pounds of jelly was sufficient for 1000 sheets of stamps, while 16 pounds of *Fichtner* 's jelly were required. Nevertheless, the cost of gluing 1000 sheets with the existing glue was 2 fl 50 kr, but with *Fichtner's* glue it was only 1 fl 60 kr. The gluing shop did not want to change the tried and tested material and objected that *Fichtner's* jelly decomposed quickly, gave off a bad smell and was not usable at all without the addition of *Bodenstein's* glue because the percentage of dry matter was too low. *Auer* quickly decided that in future each of the bidders would have to supply half of the glue required.

In July 1864, *Kletzinsky* submitted new suggestions for improving stamps to the Ministry of Finance, which referred to a more suitable adhesive and a better chemical preparation of the stamp paper. He suggested adding gum containing mucilaginous acid to the bone glue. This mixture would have a spicy smell and taste and a much greater binding power, making it more difficult to remove the stamps. With regard to the stamp paper , *Kletzinsky* mentioned that in England it had long been common practice to add ferrocyanide compounds to the paper pulp for bills of exchange and similar documents. If such paper is moistened with clover acid, hydrochloric acid or similar writing erasers, it takes on a bluish color and thus gives away the forger. In Austria, this ingenious idea of an indicator substance was unfortunately not successfully implemented, since experience has shown that stamps that have been worn out already have the greenish-blue color tones that should actually be used to reveal a forgery. The light blue stamps, which have also become worn out, make checking even more difficult. If one of these stamps were to be "counterfeited", only an almost imperceptible change in colour from greenish-white to greenish-blue and bluish would occur, which is not sufficient to prove that the stamp has been illegally manipulated. The aim would be to make the colour suddenly change to the complementary colour, for example from green to red, from orange to violet, or, most effectively, from yellow to blue. However, this should not occur when the stamps are stored and under normal conditions, but only as a result of abnormal handling of the stamp.

As an improved indicator substance to achieve this purpose, which should be added to the paper pulp, *Kletzinsky* suggested a mixture of 1 part of caustic lime dissolved in air, 5 parts of satin or finest gold ochre and 13 parts of roasted yellow prussiate. None of the usual inks could then be destroyed by a chemical caustic without turning the stamp blue, which would otherwise be invariably yellow. Even stamp overprinting could, even if

it does not consist of printer's ink, it cannot be erased from such stamps without leaving traces if the print was sufficiently strong and dried a little. *Kletzinsky* assumed that the indicator must be 2 to 5 percent, but demanded to be present when a test production of prepared paper was carried out, so that he could intervene immediately in the event of any unforeseen defects arising at the Dutchman's. The Ministry of Finance accepted the idea of a test production, which was to take place in the Schlöglmühle with *Kletzinsky's* intervention , and gave the factory management the corresponding instructions on August 1, 1864.

In the aforementioned summary document, *Nejedly* states that *Kletzinsky* made these requests at his *(Nejedly's)* request. He then continues: "However, since an otherwise completely correct theoretical formula encounters difficulties in practical implementation, *Kletzinsky* himself traveled to Schlöglmühle to be on hand to help with this production and to help overcome the obstacles that stood in the way." Despite this explicit statement, it appears from the documents that *Kletzinsky* did not actually travel to Schlöglmühle. There is a report that he submitted to the Ministry of Finance on September 27, 1864, according to which he had already learned during an initial consultation with the Vice-Director *Kaltenbrunner* that the works manager *Pleniger* had objected to the proposed use of air lime because lime had the fatal property of preventing the sizing of the paper pulp using resin soap. *Kletzinsky* then goes on to say that while he is not at a loss to suggest theoretical remedies for this problem, he does understand that time-consuming and costly preparatory work is necessary to realize the hoped-for advantages of the improved indicator system he proposes. This sonorous phrase, however, was probably intended only to mask the retreat that *Kletzinsky* had made in this regard.

Before going into the further suggestions that *Kletzinsky* made in response to this report, it should be noted that the tendency mentioned above, which came into effect immediately after the introduction of watermark paper, to completely exclude the bluing of stamp paper and to produce it with a yellow hue, can obviously be traced back to *Kletzinsky's* idea of complementary colors and to *Nejedly's* efforts to follow in the spirit of his teacher. *Nejedly* mentions in the summarizing document from 1865 that paper prepared with ferrocyanide (potassium cyanide; yellow prussiate of blood) should have "a noticeable yellow tint, analogous to the chemical additive." *Kletzinsky* had only predicted this color when using his indicator combined with air lime, and *Hausner* had at the time noted that the paper turned green when using prussiate of blood and added Prussian blue to compensate for this. Despite these circumstances, the yellowish

Paper coloring was pursued. In doing so, it is clear that they once again went astray. Just as at that time the blue coloring went far beyond what was necessary to neutralize the green tint, with the dark blue, which contradicted the purpose of the impregnation, becoming an end in itself, they now strived to exclude any bluish tint by all means. It seems that the paper factory, in order to do justice to these suggestions, once again chose an inappropriate solution by reducing the impregnation as much as possible. This could explain the fact that the paper used for the 1866 Kreuzer issue *(after* the first stockpile) and for the main stock of stamps for Hungary and the Military Border does not have a bluish tone, but also does not produce any or only an almost imperceptible blue reaction.

In his submission of September 27, 1864, after setting out *Pleniger* 's objections, *Kletzinsky* stated that these circumstances had prompted him to look into the matter in more detail and that he had finally found a completely new, very obvious indicator principle for branded paper in ultramarine colors, which had previously been completely overlooked despite or perhaps because of its infallible simplicity . The experiments carried out had produced such brilliant results that he had decided to "completely abandon his earlier proposal to amend the traditional English or *Auer* indicator, namely the use of ferrocyanide, and to pursue only the newly acquired idea." Ultramarine blue and ultramarine green in all shades had the remarkable property in common of bleaching very quickly when in contact with acids, whether in the form of moist vapors or in a dripping liquid state, with the development of hydrogen sulphide (a faint smell of rotten eggs). Since the acids, acid salts or chlorine used to destroy and bleach all writing inks in circulation will certainly also destroy the blue or green basic colour of the mark, the further usability of the mark will thereby be lost.

According to his own statements, *Nejedly* often discussed these questions with *Kletzinsky* and with Professor *Pohl* from the Vienna Polytechnic Institute, and these two were also called upon at the beginning of January 1865 to provide an expert opinion on a brand proposal by the tax inspector *Johann Fährer* (from Szirák in Hungary).
The only thing that is remarkable about these remaining *driver's* stamps is that the paper was made translucent by impregnation with an agent.
It is not clear what role this translucence was supposed to play. The Commission did not even address this issue. It only investigated whether the stamps could be removed by moistening them after they had been stuck on. Since this was successful, the project was declared worthless.

Kletzinsky's suggestion regarding ultramarine was pursued further. *Nejedly* took up this idea in the aforementioned summary act

Applause. He added that both the blue and the green colours each had around 17 shades. Both colours were extremely sensitive to any type-destroying agent, whereas the current *Hausner* indicator was a fairly inert chemical factor, which betrayed manipulations that were detrimental to the print quality, and failed particularly when the print was applied using nitric acid and then chlorine. *Nejedly* went on to say that two objections could be raised against these colours: namely, that after the print had been etched out and the ultramarine colour had faded, someone could dye the stamp paper again with ultramarine, and furthermore that the two colours were only sufficient to indicate the existing difference between the stamps for the German and Italian provinces, and that in future the frequent colour change of the stamps, which is desirable in principle, would not be possible. He would like to counteract both objections by not soaking the paper itself with ultramarine, but by having the natural print made with this colour. The first objection was raised in the same way in 1859 with regard to *Hausner's* idea and he attempted to resolve it in the same way. *Nejedly's* second objection is not easy to understand, as the cardinal regulation did not envisage a change in the color of the paper, but clearly understood "change in color" of the stamps to mean a change in the color of the natural printing.

Nejedly then stated that the advantage of his proposal was that by choosing ultramarine for the “coloured overprint” it would be possible to “use a different colour of stamp paper every year or at least more often than before”. He then added the suggestion that instead of the natural self-printing, another artistic design should be used that corresponds to the current state of printing and that this should be applied over the entire stamp (i.e. without any gaps).

This suggestion, however, did not originate from his own ideas. Rather, it was expressed in June 1865 by the Court and State Printing Office in a report that dealt with the "washing out" of the cashier marks from the stamps, which was very common in Galicia at the time, and with the remedies recommended by *Leo Geller* from Kaÿusz. The State Printing Office came up with the suggestion of choosing a delicate guilloche pattern instead of the previous design (tree leaf), printing this over the entire stamp and choosing an orange-yellow oil paint, as the most acid-sensitive color. Printing the entire stamp surface was obviously intended to prevent etchings, as had occurred in the so-called Czernowitz forgery.

In pursuit of *Kletzinsky's* indicator proposal , the Court and State Printing Office was instructed on August 26, 1865, to print four sheets of stamps of any category on paper dyed with ultramarine (two on light blue and two on light green) and to glue one sheet of each.

The “inner circle” (i.e. the stamp plate)

as before, black, but the coloured overprint (natural self-print) is produced with an ultramarine blue of a darker kind than the paper colouring.
The printing works carried out this order using a 5 kr printing block. The stamp plate in letterpress black shows the regenerated type of this stamp. The relevant document from the printing works states that, based on verbal instructions, 6 more sheets (two blue, two green and two sheets of "white-prepared" stamp paper) were printed with blue guilloches. The last-mentioned stamp paper was to be *without* a watermark and therefore had to come from the stocks left over when watermark paper was introduced. It looks quite bluish-green, by the way. As *Nejedly* states, some of these samples were given to *Kletzinsky* for testing purposes.

The bluish ultramarine paper is ribbed and the greenish paper is vellum-like. Both are said to be corn fiber paper (according to information in a document from the State Printing Office).

In mid-September 1865, *Kletzinsky* submitted a new report. He does not appear to have made many experiments with the material given to him. He limited himself to sticking a few stamps with blue natural self-printing onto indicator paper using mineral paste and presenting this. Nor did he say a word about whether he thought *Nejedly* 's order to use ultramarine blue as the printing ink for natural self-printing was appropriate. With regard to the indicator, he merely pointed out that this ink, in addition to its extraordinary sensitivity to etching, was completely "light and air-resistant" and that it would withstand the possible rigors of careless and negligent storage while remaining usable for years, as is clearly demonstrated by its ancient and proven use as an indestructible fresco paint. It is a pity that *Kletzinsky's* recipes were not distinguished as much by proven usability as by rhetorical verve.

Kletzinsky then returned to the subject of adhesives without mentioning the mucilaginous gum again and presented samples of mineral paste. According to the latest experience, this is produced by mixing 20 parts of commercially available liquid sodium silicate with one part of strong spirit (0.83 specific gravity) and then pressing the kneaded clot well from the spirituous liquid. The paste remains in this state. To use it, it is dissolved in its own weight of water and evaporated to any desired thickness. The initially low adhesive strength increases over time until finally the sodium silicate forms a kind of petrifying cement with the alumina content of the paper. However, the glued papers then become brittle. Experts must judge whether the advantages of this paste outweigh its disadvantages and whether its use can be recommended. Another method for irremovable stamps seems to lie outside the realm of physical possibility; at least he himself

not able to give any further factual hints or explanations on this. This explanation was not even necessary, because the mineral paste seemed unusable for branding from the outset. The same applied to two other suggestions *by Kletzinsky:* an obliterating paint and an indelible document ink (hemin ink). The obliterating paint was a composition of aniline bases and indigo *(Kletzinsky* himself calls it indigo sulphate rosein) and was described by *Nejedly* as unusable , since both are decoloured by acids and chlorine, and aniline is also dissolved by alcohol ; it was even more dangerous for the gradient than the previous oil paint, which could be removed by “saponifying” the oil. The hemin ink, the recipe of which *Kletzinsky* kept secret and concerning which he only hinted at the “principle” of creating carbon-rich compounds in the paper fibres, similar to brown coal, which are absolutely insoluble and unbleachable, would probably only have been of any importance if the parties could be forced to use only this and no other ink when overwriting the stamps.

In *Kletzinsky's* last report there was another suggestion which must be highlighted here, although he himself did not attach any importance to it. He said that certain varnishes insoluble in alcohol could be used as stamp adhesive. Translucent, reverse-printed stamps would have to be produced which could be stuck to the printed side. Even if the attempt to remove them were successful, they would leave all their print on the sheet of paper and come off as empty, unusable pieces of paper. *Kletzinsky* concludes with the remark that this method could not be considered any further, since its practical implementation would still be the distant goal of numerous experiments and would bring about a total revolution in the usual stamp production. There can be no doubt that here was again a clear allusion to the transfer principle. But even this allusion did not serve directly as a starting point for further development in this particular direction.

In March 1866, *Kletzinsky* was paid 800 fl for his efforts. He was informed that it was intended to have test sheets of stamps produced in a different way from the previous ones using the ultramarine indicator. They would send them to him and he would be invited to help overcome any obstacles that might stand in the way. There is no further record of these new test prints. There are two prints that presumably belong here because there are some similarities with the test prints of the 5 kr denomination mentioned above. They are made on whole sheets without perforation; one paper is vellum-like and the other ribbed; and finally, one paper is blue and the other green. The decisive factor, however, is that these test prints must date from around this time based on the printing blocks used and there is not the slightest documentary evidence of a

It was not possible to find a place for them elsewhere. The blue sheets were printed with the 3 kr plate activated in November 1864 and the green sheets with the 36 kr plate from the same period. The natural print is brown in both cases. The blue and green colours are much more vivid than in the printing tests with the 5 kr type. The paper colours are chemically sensitive. It cannot be said whether Professor *Kletzinsky* was given such printing tests and thus had the opportunity to comment on them. There is no statement from him. This second type of ultramarine print also appears to have been used no further.

However, in June 1867, reports on the ultramarine indicator were obtained from the Polytechnic Institutes in Vienna and Prague. However, only the first-mentioned test stamps of the 5 kr value with the ultramarine blue natural print were submitted for testing. The reports stated that obliterations from these stamps could be removed without damaging them (with petrol, ligroin and carbon disulphide). When removing overwritings, acids and chlorine destroy the natural print. Caustic or carbonic alkali does not attack the blue print, but does not completely destroy the inks either. The Prague report also mentioned in particular that Professor *Balling* had found that paper and cotton fabric blued with ultramarine, stored in compact masses in damp places, developed rust spots due to the decomposition of the ultramarine and thus became unsightly.

These reports, as far as they concerned the ultramarine stamps, were of no importance for the subsequent negotiations. The question of the ultramarine indicator was not pursued any further. Evidently, this question had lost all interest for the leading figures since another idea had come to the fore: to use the *transfer principle* in the manufacture of the stamps.

XXVIII KAPITEL

THE DECAL PRINCIPLE

The first explicit and effective suggestion to produce the stamps using the decal process comes from *Nejedly* and can be found in the often mentioned file 31019 ex 1865. This extensive file was issued on June 27, 1865; its completion dates from March 10, 1866. The report was probably written in December 1865, as it refers to events that took place on September 18, October 11, November 5, and December 9, 1865.

At that time, *Nejedly* must have been aware not only of *Höhnhold's stamp project,* where the transfer principle was probably implemented, even if not explicitly mentioned, but also of *Kletzinsky's* aforementioned suggestion regarding the use of varnishes insoluble in alcohol. Whether the idea of applying the transfer process (metachromatotype, decalcomania), which was already generally known at the time, to the stamps was awakened in *Nejedly* by one of these two suggestions remains to be seen.

In any case, he deserves credit for having purposefully set his sights on this idea and pursuing it with energy and persistence.

In a special vote which the head of section *Dessary* attached to file 31019 ex 1865, he declared that the most radical way to combat the under-circuiting of the stamps would be to invent a new type of stamp which would not be exposed to the danger of being removed and reused in an unrecognisable manner. He then continues: "Such an invention would indisputably be of quite unusual value and benefit to the state treasury, because it would prevent the previously grandiose reduction in the rate by hundreds of thousands of guilders per year. It seems that this important invention has been attributed to the concepts intern assigned to Department 14, Dr. *Nejedly,* who enjoys studying chemistry and who, in conjunction with Professor Dr. *Kletzinsky* has carried out numerous chemical experiments at his own expense - at least on a small scale - and has already succeeded, as the first test prints of the 'stamps printed on the back' show, which, when removed from the paper, leave the black stamp print on the paper, making transfer to another paper impossible. The only question is whether this idea can be safely implemented on a large scale, and whether the technicians will have the means to control the easy vulnerability and the ease of forging or copying it. Efforts will have to be directed towards finding and producing a paper that is sufficiently transparent and suitable for printing. It will also be a matter of applying an overprint on the front of the new stamps with a color that "indicates washing out or the use of acids more reliably than before, if the printed obliteration stamp is removed and the stamp is to be used repeatedly." *Nejedly* himself describes the basic experiments carried out as follows:

“In order to prevent the reuse of previously used stamps, I also carried out experiments using a completely different principle. A completely transparent goldbeater's skin (varnished, as goldbeaters usually use) was printed on the back in reverse, left to dry, and then the reverse side printed on was covered with a layer of glue.

If this stamp is now stuck on and then again

“, the transparent film peels off the paper completely and the imprint of the stamp remains on it. In Austria, however, the production of stamps according to this principle and on goldbeater's skin is hampered by the fact that these skins appear on the market in uneven and irregular, smaller shapes (about a small octave) and at a price that precludes the use of this material for the indicated purpose and in the required large quantities. 100 pieces cost 8 to 9 fl. I therefore asked the head of the *Worring* State Printing Office to carry out an experiment of this kind on a fairly transparent corn paper produced in Schlöglmühle, the first of which ... show that the implementation of this principle is hardly impossible. The stamp paper was treated with diluted sodium silicate before printing in order to achieve greater adhesion to the paper of the document than to that of the stamp. Now it remains to complete this process in such a way that the transfer of such stamps cannot take place under any circumstances. For further security, the stamps would then have to be overprinted in color on the upper side with the indicator specified by *Kletzinsky ,* a combination which would then make it almost impossible to use a stamp again once it has been used.”

These basic experiments, carried out on a small scale on a few sheets of paper, were printed in black in the court and state printing office; the drawing used shows an ornament roughly heart-shaped, formed by leaf runners into an equilateral square (8 x 8 lines in size). While the goldbeater's skin is extraordinarily thin and completely transparent, the corn paper impregnated with water glass appears coarser and leaves something to be desired in terms of transparency.

Nejedly has not given a complete account of the basic experiments that were carried out on his initiative and with his participation, as he only begins the presentation with a mention of the experiment with goldbeater's skin, which had already achieved a notable success. However, surviving specimens show that the oldest experiments were carried out in the most primitive way with sheets of paper, the transparency of which was to be achieved by coating them with a wax solution, which was just as imperfect as the attempts to print a decal on these sheets that would quickly peel off. These experiments with wax paper were arranged in two ways, with some printing being done first and then gluing, while with other sheets the print only appears on the glue layer. The latter process produced the better results.

The somewhat unclear passage in Nejedly’s remarks , which describes the purpose of the coating with water glass, is to be understood, as later documents show, as this impregnation of the stamp paper improves the adhesion

of the applied glue to it. Consequently, after sticking the stamp onto a second (document) paper, the glue layer should adhere more strongly to the document than to the stamp sheet.

The time when these basic experiments were carried out and when the first embodiments of the transfer principle took place cannot be determined with complete accuracy. However, since it is certain that these test prints were made before December 9, 1865, and since *Nejedly* only mentioned the production of the ultramarine stamps and the experiments that were being carried out with them in a vote of September 11, 1865, the time when the first transfer prints were made must be placed in October or November 1865.

On the basis of the summary act 31019 ex 1865, further experiments were carried out using the transfer principle. On March 10, 1866, the Court and State Printing Office received the order to “continue experiments with the production of stamps on which the stamp image is printed on the back, in such a way that the print is applied to the suitably prepared paper, but under no circumstances to the glue layer. Finally, the paper factory in Schlöglmühle should be asked how much higher the cost of the thinnest and most completely transparent corn paper would be than that of the paper currently used for stamps.”

At the same time, the printers were given the recipes for two printing inks, invented by the Parisian manufacturers *M. Anatole* and *Auguste Hulot ,* which were designed to be washed away at will. These inks were made by mixing dry (vegetable or mineral) colors with a varnish made by melting honey with glycerine or molasses with glycerine. These inks were to be used to make printing tests.

When the paper factory was asked to carry out these instructions, the State Printing Office added from its point of view that the corn paper should not be too brittle and fragile and should not become wrinkled after moistening and sizing. The Schlöglmühle replied on March 28, 1866 that corn paper would curl more at the “pound price” than rag paper, but that because it was lighter it would have more surface area, so that both would almost paralyze each other. It also sent sample sheets made from three quarters corn pulp and one quarter rag, adding that pure corn paper was not suitable for the intended purpose due to its brittleness and that the watermark could not be applied well to pure corn paper or mixed paper if transparent paper was required.

Worring now produced new proofs, partly on sheets of corn paper already in stock, partly on the sample sheets of mixed paper, and presented them to the Treasury on May 14, 1866 *(Worring's* First Larger Scale Test Prints). The (6½ x 9½ inch) paper sheets were

on the side to be printed, prepared with diluted water glass solution and then printed according to the order and then glued. The stamp images, printed in black (30 on each sheet), represent different leaf and line ornaments from piece to piece. One of them resembles the drawing in the basic test, only it is a little higher (8 x 10 lines). The printing company expressly states that it had to use durable oil paint for this, since if an erasable paint had been used, the drawing would have been destroyed when the glue layer was applied. Tests carried out with these stamps, however, showed that when the stamp was removed, the printed image remained on the stamp and not on the sheet of paper (on which the stamp was stuck). The intended purpose, that the printed image should be destroyed when stamps are removed once they have been stuck on, "should therefore not be achieved". At the same time, some sheets printed with the erasable honey colors were presented. *Worring* spoke out firmly against the use of these inks for printing the stamps, citing all the arguments that had been put forward at the time against the erasable printing on *Höhnhold's* experimental stamps.

Worring also stated that it would hardly ever be possible to find an effective means of making any attempt to reuse trademarks that had already been used impossible.

In doing so, he made it clear that he did not think much of any of the new ideas. However, this dismissive attitude of the self-confident expert towards ideas that might seem amateurish to him was also unmistakably mixed with a tendency to reduce the proposals *to absurdity .* In fact, it would probably not have been necessary to carry out the first attempt under more difficult conditions by using the most durable printer's ink.

Perhaps it would have been easy to find colors that adhered less tenaciously, but would nevertheless have resisted sizing without being smeared.

When approving this report, *Kaltenbrunner* - these first attempts had already taken place during the “interregnum” at the court and state printing office - added the following objections: that pure corn paper caused difficulties in printing due to its brittleness; that the glue did not adhere well to it; and finally that etchings could easily be made on this paper.

As existing pieces show, *Worring* had already carried out the basic experiments on the small corn paper sheets not only in the manner described by *Nejedly* in the summarizing act (impregnation - printing - gluing), but in the same way as had been done with the wax paper sheets, he had also varied the order of the manipulations so that the gluing preceded the printing.

The same modification was now also made in what is euphemistically referred to in the files as the “first *large-scale experiment”.* In the negotiations

In the following, new test prints of black ornaments on three-quarter corn paper are mentioned *(Worring's* Second Test Prints), in which the print is not *under* the glue layer, but *on top* of it. Since the expected effect of coating the paper with water glass, namely that the print applied to it would only adhere loosely and would form an intimate bond with the glue subsequently applied, did not occur, it was logical to modify the test by reversing the order of the procedures. As mentioned above, this must have actually taken place (and probably soon after mid-May 1866). For later, as will be shown below, test prints of this latter type were issued for testing. They must therefore already have been in stock.

With these new prints, impregnation with water glass was probably superfluous, unless it was to make the corn paper transparent. The fact that the glue layer was partially covered by the print on top did not necessarily prevent the possible use of such printed pieces of paper as stamps. The print could be designed in such a way that the majority of the glue surface remained unprinted, thus saving a sufficient amount of active adhesive surface. However, it was difficult to expect that this print should stick to the base and remain behind when removed: the printer's ink came to rest on the document paper immediately when it was stuck on and was only bonded to it by a little moisture, while on the other side a (albeit more or less dissolved) glue layer held the print in place with far greater force.

The insignificance of the success achieved by these first steps on the new path, the uncertain conditions of the State Printing Office during the interregnum, which by no means encouraged far-sighted undertakings, and probably also the above-mentioned conservative persistence of the organs of this State institution in the beaten path, meant that this matter was left to itself for the time being. It was not taken up again until the following year (1867).

An interesting document from the meantime is worth mentioning, which summarized all the results that the Court and State Printing Office had achieved up to that point in the field of stamp production, which it had pioneered. The reason for this was the fact that the Imperial and Royal Governor appointed to the Duchy of Holstein after the Danish War intended to introduce stamps there instead of stamp paper, and therefore wished to learn “the most practical and perfect way of technically producing the stamps so that they offer protection against forgeries and imitations.” On April 12, 1866, the printing office submitted a report on the relevant request, which included a description by *Worring* of the technical process “for the production of Austrian stamps in the Court and State Printing Office in Vienna.” In the beginning of this

The aim of the representation is to produce the stamps with such artistic and technical perfection that imitation is made as difficult as possible. They should also have a certain degree of durability and color immutability, since they are often affixed to important documents and papers that are often used for many years or are stored in places where air or moisture has a destructive effect on the image. Stamps are also often carried around by people in their purses or pockets, and physical perspiration or sweat should therefore not change the color of the stamps. Even when stored in the various sales vaults, it is not always possible to protect the stamps from the weather and other atmospheric influences, and yet they should withstand them, because otherwise, if the stamp image spoils, the stamp would no longer be suitable for distribution. Likewise, the public is not always careful when sticking the stamps on. They are often touched with wet or dirty hands and stuck on in a defaced manner; In any case, the authenticity of the stamp should be immediately recognizable. It is therefore of great importance that the quality of the printing ink resists the various effects of sun, air, humidity and even moisture and does not “disappear when the stamp is moistened.”

The whole thing reads like a plea against the planned decal process and like a credo regarding *Auer's* ideas about the sole correctness of the absolute resistance of the stamps.

Worring further mentions the use of copperplate printing to produce the stamp image, because this printing method allows for a more perfect execution. For the background, he recommends orange-yellow color and a delicate guilloche pattern, over which the repetition of the value would be printed in words, so that an etching of the value would also destroy the guilloche pattern. This value legend print should, however, be made under one with the stamp image in copperplate printing. As mentioned above, this was actually done with the Hungarian stamps. *Worring's* information on the copperplate printing of the stamps is not without interest. Two different stock preparations were then used. The first consisted of Frankfurt black, which was well rubbed with burnt linseed oil and linseed varnish; the second was made from lead sugar and Paris blue, which were finely ground with linseed varnish and then dissolved in turpentine oil. Before printing, the first preparation was diluted with the second until the color could be easily rubbed into the engraving.

After filling all the depressions of the printing plate with a ball of canvas, the excess ink was removed from the surface of the plate using tulle rags moistened with a weak potash solution and finally using a rag dipped in pure water.

Regarding the production of the galvanic printing plates, *Worring* stated the following: “From the original, originally engraved in copper, several deposits (relief plates) are produced using the galvanic current, these are cut to the required dimensions and soldered together using a soft tin solder. This plate, consisting of several stamp images, is again copied using the galvanic process and this continues until the stamp images required for a printing plate (100 or 50 pieces) are produced. After the individual pieces have been combined into a whole plate by soldering them together, the galvanic copy is taken in a whole plate, the existing joints of the soldering points are leveled and polished, after which the duplication of the relief and printing plates is continued as required.” *Worring* then describes in particular detail the coating of the printing plates with a thin layer of iron (counting), a sign that this process was still something relatively new at the time.

Finally, what Worring said about the production of the stamps is also illustrative: “After the printing manipulations have been completed, the stamp sheets are coated with glue on their backs while still wet, as they have just come off the printing press. Good bone glue is used for this, which is dissolved in warm water to the right consistency and applied with a broad brush. The glued sheets are then hung up to dry either on wooden poles or on stretched cords. After drying, the sheets are put together in layers and pressed for several hours in the packing press.

After this pressing, the stamps are modified, i.e. the serration of the stamp edges, using machines specially designed for this purpose. The various types of stamps currently produced by the Court and State Printing Office also have different dimensions, so the serration must be done in rows, both in terms of the length and width of the sheet. When producing the new stamps, it would be advantageous to use only two different dimensions, one for all rates under one guilder and a slightly larger one for values of one guilder and above. The designs of the stamp images would have to be significantly different from one another, however. This device would only require two paper formats and would simplify paper production considerably. The serration of the edges could also be done simultaneously in both the length and width of the stamp sheet when it is passed through the perforating machine once.” *Worring* apparently forgot that he had to give a description of the actual manufacturing process and carried his (with the exception of the square perforation, actually later realised for Hungary)

Reform plans without realizing that they might not be suitable for Holstein at all.

Since a shift in the focus of the staffing of the Court and State Printing Office was already beginning to take place at that time, whereby *Worring* gradually took a back seat in the field of stamps and their further development and his work had to be limited to day-to-day service, the act detailed above could be seen as his professional testament, in which he summed up his previous experience and achievements and indicated the guidelines for the technical development of what he not wrongly considered to be largely his creation. His program offered such obvious advantages in some areas that many of them were later repeatedly returned to.

In particular, he also referred to the limitation of the number of stamp formats. In addition to the reasons given - in the same way as he had already done in the negotiations before the introduction of centesimal denominations - he could also have argued that all stamps of the same format could then be printed using the same natural printing plate, which would simplify the machine and preparation considerably.

XXVII. CHAPTER

THE RESUMPTION OF REFORM EFFORTS

A. WORRING AND KLETZINSKY

When the continued existence of the Court and State Printing Office was secured and the provisional management of this state institution had come to an end with the appointment *of Beck* as director, *Nejedly* again came forward with his projects. At first only in a hint and “short way”, but then also emphatically and in written form.

A report from the Finance District Directorate of Esseg dated November 8, 1866, in which it pointed out the frequent cases of reuse and mentioned the use of water baths to which nitric acid or ammonia is added as a means of printing, gave the Ministry the reason to request a statement from *Beck* on January 31, 1867. The report pointed out the frequency of similar advertisements and the urgent need for a remedy. The suggestions made by various parties for improving the stamps had been sent to the “previous directorate” of the Court and State Printing Office for review. However, the latter believed that it had to reject them all without making any independently feasible applications. The Ministry was convinced that the daily progress in typographical

Art and chemistry would provide sufficient means to make it considerably more difficult, if not entirely, to prevent the removal of stamps and to clean them of writing and over-stamping.
The improvement of the stamps has become increasingly important as the Ministry is pursuing the tendency to replace cash payments as far as possible by paying fees by stamps.

From a report submitted by *Beck* in July 1867, it can be seen that in January 1867 he had also received verbal instructions to carry out tests using the transfer principle in such a way that the print was to be applied *over* the adhesive layer. According to this report, the prints produced in this way initially produced favorable results, as the image remained completely attached to the base when the stamp was removed. However, further removal tests carried out three to four weeks after the stamp had been applied showed that the printer's ink gradually bonded so closely to the adhesive during oxidation that it could no longer be removed. This somewhat unclear statement is probably intended to mean that the image remained on the stamp when it was removed. The samples submitted at the same time *(Worring's* third test) were made on greenish sheets of paper. The prints are black arabesques, with the exception of two, exactly the same as those used in the previous tests. A heading indicates that the "attempt" was made on February 12, 1867. It remains unclear whether this refers to the printing attempt or an attempt to remove the stamp, or whether both occurred at the same time. A special feature of this attempt, and evidently an adaptation to *Nejedly's* suggestions , is that a delicate drawing appears printed on the top of the stamp sheets. *Beck* added to his report that the failed attempts to remove the stamps had prompted him to come to an agreement with a chemist and industrialist outside the institute, pointing out this problem. The material provided by this person had, however, met the expectations in the first attempts. However, he would only be able to comment further on this after a thorough examination. *Beck* also presented some prints made "recently" (i.e. at the beginning of July) in the state institute, which also showed a square foliage pattern (vine leaves or ivy) on greenish paper *(Worring's* Fourth Attempt). One of these stamps shows the date of July 6, 1867. He was assured that these stamps were suitable for their purpose and that the printed image would remain on the substrate when removed; however, it would only be clear after a few weeks what effect the oxidation of the ink would have on the print.

Even before this report with the enclosed test stamps had reached the Ministry of Finance, the same had already resumed the negotiations in writing (June 1867).

The reason for this was a suggestion by the clerk of the Cameral Economic Office in Smolna, *Julius Krakowinski,* to make the stamps twice as wide as before and correspondingly higher, so that the place of issue could be inserted above the stamp image and the date of issue below it. In his decision of June 29, 1867 , *Nejedly* rightly objected that this change in format alone would hardly prevent malversations. He recapitulated what had already been done to ensure this and the attempts made up to that point. With regard to the large format, he foresaw difficulties in using such stamps for bills of exchange. Strangely enough, he then added the following: "just as the earlier, somewhat larger stamps were reduced in size due to numerous complaints about their use on documents of smaller formats." Absolutely nothing is known of such a reduction. It could not have happened anyway, because the original engravings from 1854 remained in use until new designs were created for the 1875 issue. In the meantime, the question of dimensions only played a role once, when choosing the design for the 72 kr stamp.

Perhaps *Nejedly* wanted to allude to this one case.

With this act, the Ministry of Finance resumed its efforts to improve the quality. Samples of the 5 kr stamps on green and blue paper with ultramarine blue natural printing and samples of the black ornamental prints on corn straw paper prepared with water glass were sent to the rectorates of the polytechnic institutes in Vienna and Prague for testing.

The statements of the two polytechnic institutes regarding the ultramarine stamps have already been mentioned above. These definitively concluded the negotiations on these blue and green stamps. With regard to the decalcomania, it can be seen from the letters to the polytechnic institutes that the black print was first applied to the thin layer of glue, which means that they can be identified with *Worring's* second test prints. *Nejedly* expressly stated: "The intention here was that, similar to the so-called metachromatic or decalcomania, the stamp could be removed, but that the printed image would then have to remain on the document paper and would not be transferable, while the stamp paper would be removed clean and unprinted." The first attempts on a small scale were quite satisfactory. However, as the appendices showed, production on a larger scale did not meet the expectations, since the printing ink adhered so poorly to the glue layer that it was smeared when moistened. The Ministry of Finance expressed its confidence that a useful result would be achieved in this way and announced its intention to apply the stamp image to the top of the stamps as before, while having the back printed with decorations using the new process. At the same time, the institutes were invited to carry out tests on the production of a new

Obliterating ink that would not resinify as easily as before in the ink pads and stamps, would dry quickly on the paper, would not smudge easily and would be resistant to etching agents.

Strangely enough, it was believed that something particularly important for the stamp gradient had been found in the use of the self-moistening stamps that had emerged in Paris at that time for obliteration, and there were lengthy negotiations on this matter.

Kletzinsky was also invited to carry out experiments with the prints. Finally, the following programmatic decree was sent to the new State Printing Office Director: “The frequent reductions in the stamp rate, which are made possible in many ways by the detachability and reuse of stamps, make it seem urgently necessary to produce the latter according to a different principle or at least according to a significantly improved method, so that they cannot be so easily removed, or even once removed, cannot be so easily reused without immediately showing traces of their previous use. The daily progress in the art of printing and the latest experiences in chemistry do not make the achievement of the above goal seem unlikely. We therefore have the honor to invite Your Excellency to devote the most careful attention to this subject and to have experiments carried out. The most appropriate way to carry out the next experiments would seem to be to produce stamps on which the stamp image appears on the top of the stamps using letterpress ink, as before, but a colored top print on the back, and in such a way that the latter remains as a print on the document paper after the stamp has been removed and cannot be transferred any further.” *Beck* then submitted the aforementioned report of July 7, 1867, on this decree, bringing the experiments carried out partly in February and partly in July to the attention of the Ministry of Finance.

Of the four reports on the experiments carried out using the transfer process, which were requested in June 1867, the second, submitted by Professor *Kletzinsky ,* arrived soon after the report from the Court and State Printing Office (on August 28, 1867). *Kletzinsky* used the opportunity mainly to explain that he felt insulted by the disregard of his suggestions (ultramarine indicator; indigosulphate of rosein as an obliterating dye; chloride of potassium drying boxes for cigar magazines; botany bai resin or acaroid gum as a soda resin soap broken down by sulphate of alumina for the production of natural brown cigarette paper). Then, with regard to the transfer process proposed by his student *Nejedly ,* he declared in a rather spirited manner that he could not help expressing his modest reservation that this new variant of insured stamps, however sensible its theoretical conception might be, would nevertheless fail due to insurmountable difficulties of mass production, since a perfectly rapid production of this

Detail of extremely sensitive article could only be achieved with virtuoso manipulation.
He then suggested that the side of the stamp paper intended for gluing should first be coated with a concentrated aqueous solution of chlorine containing alcohol, and that the gelatine coating should be applied after it has dried and then printed on. The chlorine reduces the adhesion of the glue to the paper considerably, while the upper side of the glue layer, which has not come into contact with the chlorine, retains the full adhesive strength for the printed image and the document paper. In order to eliminate the easy smudging of the printed design when the stamp is moistened, he recommended adding a substance to the printing ink that “forms a solid chemical molecular bond with the glue, tanning it”; for water-based printing inks this is tannic acid (tannin), and for oil-based printing inks it is phenyl acid, which is unpleasant due to its persistent tar smell.

Kletzinsky's suggestions were communicated to the Court and State Printing Office. At the same time, *Kletzinsky* was given the reassuring information that the use of ultramarine for the planned stamps was indeed intended. The stamps were to have both transfer prints on the underside and a stamp image on the top, and the latter was to be made using ultramarine, which had also proven itself as a copper printing ink.

But *Nejedly* tried in vain to conceal the fact that the colouring of the paper itself (with ultramarine) proposed by *Kletzinsky* had already been abandoned; in vain he stressed that the proposed ultramarine indicator was planned for all new stamp categories; finally, in vain he repeatedly referred to the future top printing of the stamps as an ultramarine indicator: *Kletzinsky* - well known as a political firebrand in the Viennese suburbs at the beginning of the 1960s - was himself too well versed in the art of whitewashing not to see through the situation.

Apparently resentful, he ignored the invitations to continue working with him. In August, he reported on another request in January 1868 to examine new test stamps, saying that he had completed the examination of the bilateral stamps in the previous trimester and declared that the principle of these as true guarantee stamps had been solved. He hoped that the eminent virtuosity of the State Printing Office would surely and quickly succeed in overcoming and eliminating the minor irregularities and inconsistencies of the new method with its usual mastery. However, he refrained from addressing the technical questions. As a result, he was not called upon again and his name no longer appears in the files. The State Printing Office's suggestion of coating the paper with chlorine aluminum and adding 1 percent phenyl acid to the printing ink was tried. The result was negative.

B. THE EMERGENCE OF PECHER AND FICHTNER

When presenting the last-mentioned experiments carried out by *Worring* according to *Kletzinsky's* instructions (black ornaments on yellowish paper of ordinary type using chlorine aluminum and phenyl acid), *Beck* also reported on 15 December 1867 on further experiments that had been carried out in the meantime. He had seriously and eagerly tackled the solution to the problem that had been set before him and did not want to wait for the answers from the somewhat slow-moving bodies of scholars at the two polytechnic institutes. These further experiments by the State Printing Office, which were also documented with sample stamps, were initially three samples made by *Worring (Worring's* Last Experiments). In these, he replaced the materials previously used to coat the paper before applying the glue layer (water glass, chlorine aluminum) with new ones, namely albumin in one of the experiments, and in the other two, in consideration of the cost of albumin, he used just starch paste mixed with alum solution. One of these latter samples also comes close to the stamp design in that not only square greenish paper sheets were used, but they also have the edge perforation (12 x 22 lines). According to *Worrings,* a thicker layer of consistent alum paste produced a very satisfactory result. At the same time, *Beck* also presented test stamps of a different type, with regard to which he only hints: “No less commendable were other efforts in the state institute, which, although using a different method, nevertheless achieved the same goal.”

The author of these new experiments, as later documents show, was the factor *Alois Pecher.* As mentioned, under the new management, there were gradual changes in the people whose advice was called upon, and *Worring* now increasingly took a back seat. *Pecher's* emergence seems to have been met with very mixed feelings on the part of the institution's staff. In October 1868, *Beck* felt compelled to write to the management that the factor *Pecher* was not being supported with the desired enthusiasm in the work assigned to him for the new stamps. These first test stamps *by Pecher,* which were probably created in November 1867, look much more like stamps than all previous experiments. They are pieces of paper with perforated edges on all sides, which have a square colored print (10 x 14 lines) on the glue side. At the bottom of the drawing, a kind of writing field is demarcated in such a way that a square is left over above. In the latter there are two smaller squares crossing each other and in the octagon thus formed there is the number 15. A slanted grid of lines fills the entire drawing.

These stamps were printed in black, brown, green and red. The other side of the sheet, i.e. the top side of the stamp, has no printing.

Finally, the printing works presented experiments by the glue manufacturers, the *Fichtner* brothers , who had been “invited to such research with information about the principle and ultimate goal” by *Beck* and, as later documents show, had given him test stamps for testing on December 4, 1867. The partner of this company, *Leo Fichtner ,* who was in contact with the state printing works as a glue supplier, was the “chemist and industrialist outside the institution” of whom *Beck* had only mentioned in passing in the report of July 7. These first *Fichiner* test stamps, measuring 1 x 1½ inches, have a rectangle (10 x 13 lines) pushed upwards on the glue side and delimited by a black line, within which a black foliage and tendril thread leaves an almost round space in the middle. A black eagle is printed on the top of the stamp so that it stands exactly in the middle of the foliage ornament that shines through the transparent paper. At the bottom edge of the front, below the translucent rectangle, three-digit numbers are printed, sometimes black (136, 140, 144, 214), sometimes red (135, 137, 141).

According to a note made by *Leo Fichtner* in the files of the State Printing Office, he had two privileges for these stamps and they were produced using two different methods. The different colors of the printed numbers may indicate the different production methods, but nothing appears to be said about the nature and difference of these. According to *Fichtner ,* the numbers themselves are supposed to indicate the different provenance of the paper and other materials used. As *Fichtner* states, these stamps also included stamps that he had made in June 1867. The time of origin of these test stamps is therefore between May and December 1867. From a later file note, which mentions the cancellation of *Fichtner's* first privilege announced on May 14, 1869 , it can also be inferred that these stamps "represented glue pictures to which the thin paper treated with resin varnish, and thus transparent, only loosely adheres."

In its report on these stamps, the State Printing Office stated that in all of the tests submitted *(Worring's, Pecher's* and *Fichtner's) ,* the print image remained on the base when removed, so that there was no adverse effect from the oxidation of the printer's ink. It requested that these stamps be examined and added that, in order to prevent reuse, it would also be necessary to print the image on the front of the stamp with a color that would also disappear when acids were used "to destroy the obliteration." *Nejedly* noted on the file that a French manufacturer had already offered to supply the required color and that, according to the "Wiener Zeitung" of December 19, 1867 (dated November 20 and December 12, 1867), *Leo Fichtner* had obtained a privilege for "an improvement in the representation of the stamps and postage stamps."

At the same time, the three aforementioned brand tests were sent to the polytechnic institutes in Vienna and Prague for evaluation (10 January 1868).

At this point in time, the first report from Prague, requested in June 1867, had only recently been submitted; the first report from Vienna arrived towards the end of January. Both of these reports (Worring's second trial prints and the ultramarine stamps for 5 kr) offered valuable suggestions. Professor *Friedrich Kick* in Prague confirmed the inadequacy of the *(Worring)* trial stamps, which had already been highlighted by the Ministry of Finance itself . The smudging of the ornaments printed over the glue could be avoided by taking great care when moistening, but much more easily *by* coating the stamp again *(over* the print) with an adhesive (rubber).
However, when the stamp is removed, it turns out that the print adheres better to the glue layer than to the gum. This suggests the idea of reversing the whole sequence: first apply a thin layer of gum to the stamp, then print on it and finally coat it with a thin hot glue solution. *Kick's* other suggestions were to make the stamps out of very thin paper or to use paper made from colored material to "double" the stamps, the upper paper of which should be translucent. Finally, he also recommends perforations inside the stamps, but himself emphasizes how easily the stamps could then be damaged. Experiments in the directions suggested could of course only be carried out by the State Printing Office.

The other report, submitted by the Viennese professor of chemical technology, Dr. *Josef Pohl,* was limited to recommending that the print be placed *under* the glue layer to avoid smudging and that ox gall be added to the glue or gum. It was important to point out that stamps had already been produced in the United States using the transfer process. As the enclosed samples show, these stamps were made of a very soft, transparent paper made transparent with oil varnish, which was much more pliable than corn straw paper.

The print underneath the glue layer is not damaged by the usual wetting used to stick the stamp on; only stronger wetting and rubbing with a wet finger will destroy it. With regard to the Finance Ministry's suggestion that the stamps should be produced in such a way that there is a fixed black print on the top and the proof on the underside of the stamp, Dr. *Pohl* pointed out that the factory partner *Leo Fichtner in* Atzgersdorf had recently achieved very good results in this direction, as the enclosed sample stamps show, and that his process had been privileged for Austria.

These references to cases where similar efforts have already been made realization, had a stimulating and, above all, accelerating effect on

the negotiations that had been initiated. The realization of what results had already been achieved elsewhere and the means by which the deadlocks that had arisen everywhere had been overcome, informed us of the goals to be pursued and made what we should strive for increasingly clear. At the same time, feelings of ambition and rivalry arose, which were very conducive to progress in the development of the intended production process. On the other hand, however, the now repeated checks of the successes achieved in the state printing works by the technical schools mentioned above proved to be a very retarding factor. By the time the requested reports arrived, the tests sent out for examination by the institute, which was now devoting itself to this subject with full zeal, had long since been overtaken. The information in the files is therefore rather mixed up at this stage and it is difficult not to lose the thread. An example of this is the fact that the Vienna Polytechnic wanted to draw the attention of the Ministry of Finance to *Fichtner's* stamps at the end of January 1868, as mentioned above , while these same *Fichtner* stamps had already been sent to the Polytechnic by the Ministry of Finance for assessment on January 10th .

Before the second reports (on *Worring's* last and *Pecher's* first attempts, then on *Fichtner's* stamps) were produced in Prague and Vienna, the State Printing Office had to comment on the first two reports. Regarding the Prague report, it merely pointed out that the new attempts had made it more difficult and expensive to "double" the stamps, without making them significantly more difficult to remove. With regard to "breaking through or cutting through the inner stamp image", *Worring* referred to previous relevant tests which had shown that such stamps could easily be damaged before use, without making them particularly difficult to remove. He was probably thinking of *Baumgartner's* suggestions from 1858 and *Neuwall's* from 1865.

When issuing the first Vienna report, *Nejedly* also added what his own experiments with *Pecher's* first test stamps (grid drawings of the number 15, executed in several colors) had shown. On the basis of these experiences, he informed the printing works that the principle of printing on the underside could be considered to have been solved favorably with these stamps.

However, detachments were successful when dry; however, this was probably due to the considerable thickness of the paper, the inadequate preparation before printing and the insufficient binding power of the glue. In this regard, *Nejedly* referred to the postage stamps of the United States of America presented by the Polytechnic , where the extremely thin paper was able to detach from the

The printed layer can be lifted off completely cleanly and therefore offers exceptional security against shortening of the gradient. From this remark it can be seen what kind of American stamps Dr. *Pohl* recommended were. Philatelists are familiar with both postage stamps and revenue stamps (in several colors) which were produced at that time in North America as experiments using the transfer process, but neither was introduced. *Nejedly* recommended these stamps as a model worth imitating.

With reference to the urgency of introducing better stamps as soon as possible, *Beck* was invited to submit suitable applications, to submit drawings or sketches and to clarify all questions regarding the production of the plates and the appropriate paper. The directive was that artistically designed heads would protect the stamps most reliably against imitation. In this decree, dated January 23, 1868, it was also considered whether it would be possible to put the new stamps into obsolescence at the same time as the Hungarian stamps were introduced. As early as February 3, 1868, the printing works were able to present the Ministry of Finance with new test stamps *(Pecher's second* test) which were improved and closer to the American principle. At the same time, a request was made to arrange a new inquiry at the Vienna Polytechnic Institute with the involvement of the State Printing Office, a request which was granted. Once again, the (second) report on the earlier order (dated January 10, 1868), which arrived on February 6, and the new order (to the Polytechnic Institute) dated February 7, crossed paths. The latter was settled by the Polytechnic Institute by issuing its third report on March 3, 1868.

The *second* report (6 February 1868) concerned Worring's last experiments , *Pecher's* first experiments and Fichtner's eagle stamps . Professors Dr. *Josef Pohl* of chemical technology and Dr. *Ignaz Heger* of mechanical technology expressed themselves unfavourably on the first two experiments mentioned, while declaring that *Fichtner's* stamps met all the main requirements and were suitable for use for the intended purpose.

The *third* report (March 3, 1868) was based on *Pecher's* second tests . These stamps looked like his earlier ones, but the paper was thinner and more transparent. He had evidently intended to imitate the American samples by impregnating them. It is not possible to say what type of impregnation this was, since *Pecher,* unlike *Worring,* does not say a word in the files about the technical details of his tests. In any case, the impregnation was different from that of the American stamps; for while these still have an almost glassy appearance today, *Pecher's* second tests do not show much more transparency than is usual with paper of such thinness. Regarding these stamps

During the assessment, the progress made was noted and it was emphasized that the negative pressure remained completely on the substrate during wet removal and that the pure white branded paper could often only be removed piece by piece.

Here it becomes clear for the first time that, strangely enough, the purpose of the experiments was now beginning to be misunderstood. Particular attention was paid to whether the underprint remained completely and undamaged on the substrate, as if the aim to be achieved had been to find a good process for producing decals! In order to prevent the stamps from being used again, it would be sufficient if the underprint was so damaged when removed that the stamp then stuck on again (to another sheet) would be recognizable as damaged at first glance. The requirement that the removed stamp sheet should appear pure white was clearly exaggerated. To what extent the establishment of such a rigorous requirement was not based on a suggestion by the Court and State Printing Office, which was now clearly trying to make its products stand out against *Fichtner's* test stamps, remains to be seen. This rivalry undoubtedly led to the printing works coming up with new stamps *(Pecher's third* attempt) before *Pecher* 's second attempt was examined . The representatives of the printing works, Hofrat *Beck* and Faktor *Pecher,* brought these directly to the hearing and submitted them for examination without first submitting them to the Ministry of Finance. The joint examination produced a favourable result, since glued-on stamps of this type, when attempts were made to remove them dry or after they had been covered with water, left the underprint on the backing. There was no doubt that these latest attempts surpassed all previous ones, and this was also explained to the representatives of the printing works, who hastened to report this success to the Ministry and subsequently submit samples. These are sheets that are perforated on all sides and are very transparent, so they have obviously already been prepared in a suitable manner. On the underside they have a black print (10 x 13 lines) depicting an intricate ornament framed by a lace, with a square space (6 x 6 lines) left in the upper part. On the place on the upper side corresponding to this space there is a double-headed eagle and a square border decoration in black print.

The time of origin of the *second* and the *third*
Pecher's test stamps can be dated fairly well: the former were made between 23 January 1868, when the printer received the American stamps, and 3 February, on which day it presented the tests; the eagle stamps, however, are likely to have been made after 7 February, on which day the printer benefited from the favorable
report from the Vienna Polytechnic Institute

about the *Fichtner* stamps, and were already produced on February 17th at the Enquete.

The *written* report from the Vienna Polytechnic, which was sent to the Ministry of Finance on March 3, 1868, brought an unpleasant surprise to the State Printing Office, which had reported a positive result to the Ministry. It initially confirmed the results of the joint tests, but also contained a continuation of the tests that *Pohl* and *Heger* had carried out the day after the commission hearing. They had thought of modifying the removal tests in such a way that not the stamps themselves, but the paper they were stuck to, was moistened from the back. The stamps were removed completely undamaged. Therefore, these stamps would not serve their purpose and, after their introduction, it would be just as easy to reduce the rate as before. The conclusion of the report was: “On the other hand, the undersigned consider it their duty to point out that the *Fichtner* stamps, which have already been repeatedly discussed , leave the negative pressure on the back of the document paper even when attempts are made to remove them by wetting them, and thus fully fulfil their purpose in this respect too.

The undersigned therefore take the liberty of expressing their unprejudiced opinion that it would be best if the Ministry of Finance, instead of encouraging the Court and State Printing Office to make further, perhaps futile, attempts , would adopt *Fichtner's* stamps for general use, with which the task at hand has already been solved.”

This firm stance in favor of *Fichtner* and against the Court and State Printing Office was all the more remarkable because *Leo Fichtner* (“Public Factory Partner of the Company J. Fichtner and Sons”) had already approached the Ministry of Finance on February 27th to offer to acquire the manufacturing process for another improved type of stamp, which would be produced on transparent paper like the North American ones. In addition to the privileges of November 20th and December 12th, 1867 for improvements in the production of postage and stamp stamps, which related to his first test stamps, he had now again taken out a privilege on February 18th, 1868 “for the production of factory and product protection marks.” He was probably worried that his first privileges could become invalid because the production of postage and stamp stamps was the exclusive responsibility of the state administration and it seemed doubtful whether a private individual could even acquire the relevant rights. The Ministry of Finance had actually raised this doubt with the Ministry of Commerce, but it was not successful. Since the protection of the privilege was now only dependent on the technical process itself, which could then be applied to postage and stamps as well as to other similar products, *Fichtner* evidently chose for his last privilege for these reasons.

a version that avoided any collision with the rights of the state administration and therefore seemed incontestable. The fact that *Fichtner* secured his position from the outset through privileges clearly showed that he was concerned with achieving a considerable profit. There was no need for the warning remark from the State Printing Office that "this private institution would certainly not demand insignificant demands as a reward if its invention were given preference". Of the new test stamps, which *Leo Fichtner* declared he would first present to a commission to be set up to examine them, to which he and his brother *Hermann* would also be invited, some of them had only a "back print", while others had both a back print and an overprint.

As the later negotiations show, the new *Fichtner* test stamps have cut edges on all sides. One type, which is only printed on the glue side, is divided into two types. The first type consists of a horizontal ellipse printed in black. Around it runs the inscription: Kk landesp. Knochenmehlfabrik Kk ausschl. priv. Glue factory of J.

Fichtner et Söhne in Atzgersdorf Comptoir Wien Wildpretmarkt 6. The ellipse itself is made up of the often repeated words J. in barely legible small letters.

Fichtner et Söhne. The second type also includes single-coloured stamps, which are known to stamp collectors in the colours blue, red, green and black.
The square stamp image consists of ornaments around a round space in which a kind of coat of arms is placed. The legend: Trademark runs under the circle. The other type of test stamp with top and bottom printing has a combination print of the same type as was already planned for the stamp stamps at that time: a stamp image (an eagle) on top and an ornament on the back, in such an arrangement that both complement each other to form an overall image. The bottom printing consists of the same ornament as on the trademark stamps just mentioned and also has this word as a legend. Only the outer edge of the whole design is less sharply defined and the round central space is completely left out. A double-headed eagle, white on a colored field, is printed on the completely transparent paper sheet, with a string of pearls around the edge, exactly the shape and size of the space left out in the bottom printing. These stamps are usually two-colored. Well-known are: green eagle with blue and red back printing; red eagle with black back printing and black eagle with red back printing; Finally, a brown eagle with a green background print. There are also plain green stamps.

The Ministry of Finance was not inclined to simply accept the somewhat hasty proposals of the Vienna Polytechnic, in view of the considerable expense that would probably be associated with the acquisition of *Fichtner's* privileges. Contingency negotiations were initiated to ensure the conditions under which *Fichtner's* method could be used by the state administration.

At the same time, however, the State Printing Office was instructed to continue its experiments. The matter dragged on because a decision from the Ministry of Trade on the continued existence of the privileges had to be awaited first. In response to an urgent verbal request, *Hermann Fichtner* informed the Ministry that the brothers would hand over their invention to the State Treasury for a sum of 12,000 fl. On April 22, 1868, *Leo Fichtner* was asked to provide a legally binding declaration to this effect and was promised that his stamps would be examined by a commission as requested. *Fichtner's* reply took almost nine months to arrive. When he submitted it on January 3, 1869 and explained that the delay was due to a long illness, the matter was already prejudged. From the relevant file, it can be seen that the State Printing Office's experiments had been so successful in the meantime that, in *Nejedly's* opinion, "the task had been satisfactorily solved." The only advantages expected from the acquisition of *Fichtner's* method were those relating to the preparation of paper, which the Court and State Printing Office had not yet been able to achieve to the desired level of perfection. A larger commission was planned, in which three professors from the Polytechnic Institute, the university professor Dr. *Josef Redtenbacher,* the former professor at the Polytechnic Institute Dr. *Anton Schrötter Ritter von Kristelli* (who had recently been appointed Director of the Main Mint) , the director of the Court and State Printing Office and an expert from this state institution were to participate. *Fichtner* objected emphatically to the involvement of such an expert , pointing out that the State Printing Office was a dangerous competitor for him. Since he declared that otherwise he would withdraw his offer entirely and since he wanted to show his stamps to the commission himself in the first place, his request was taken into account. These circumstances clearly show that considerable tension had already arisen in this matter. The fact that the printing company was not happy with the new competitor is evident from the diligence with which it set out the requirements that good photo-print stamps had to meet and which it was unable to satisfy. A questionnaire it designed lists nineteen such questions.

The Ministry of Finance took up the suggestion, but only presented the Commission with seven points on which the stamps would be examined: 1. Transparency 2. Components of the adhesive that are harmful to health 3. Ability to smudge the print on or transparency or have an unpleasant taste. the back. 4. Behaviour of the stamps in heat and cold, moisture and dryness, rolling up, unrolling, sticking together, tearing. 5. Behaviour of the stamps when removed immediately and later, when wetted for a long time with warm water; treatment with alcohol, petrol, acids, carbonic ammonia, ammonia solution, sulphuric acid.

carbon, hydrogen sulphide, potassium hydroxide, ether and turpentine. 6. Question of cost; applicability of the printing press. 7. Clearly recognizable reuse after replacement.

The commission carried out three detailed examinations of the stamps, each time newly submitted by *Fichtner :* on January 20, April 7 and June 16 , *1869.* During the first examination, the stamps met several requirements in a good manner.
In a letter to the Ministry of Finance, *Beck* himself emphasized that these stamps had the important advantage over those of the State Printing Office that their paper was completely transparent despite being thicker and stronger. *Beck* did not attach any great importance to the easy smudging noted by the commission, because this disadvantage is, after all, a natural feature of all proof prints. At the same time, however, *Beck* himself was the reason why the test of *Fichtner's* stamps was negative. When he took such stamps between his fingers and rubbed them lightly, the entire layer of glue immediately came off with the print on the underside. Even if you just held the stamps in your hand for a longer period of time and let them warm up, the two layers would spontaneously separate. This defect was so striking and the impossibility of causing such delicate stamps to wear out so obvious that even *Fichtner* thought that this must have been caused by the frost during production, and he promised to present new samples.

Professor *Pohl* also had to acknowledge the defects, noting that *Fichtner's* earlier test stamps had not shown these defects. *Beck* was unprejudiced enough to note that earlier test stamps from the Court and State Printing Office, by which he probably meant the eagle stamps, had shown the same defect, but that this had long since been remedied.

The second commission found that *Fichtner's* new samples easily peeled off when the stamps were bent and curved, as would be unavoidable in the inexperienced hands of the parties. *Leo Fichtner* offered to present improved stamps in which this defect had been eliminated. The result of the third test was stated in the commission's minutes, which *Hermann Fichtner* also co-wrote, as follows: "In view of the fact that the defects complained of do not appear to have been eliminated in the stamps now presented, and that the separation of the two layers is even easier than before, the commission has decided not to answer the questions any further. The commission has also decided to consider its work as now complete, to carry out no further tests or examinations, and to submit the minutes to the Ministry of Finance." *Fichtner* has not been rejected. The last relevant passage in the files is a sentence in a Finance Ministry decree of July 23, 1869, stating that in view of the last samples submitted by *Leo Fichtner,* the application of his production method should probably be abandoned.

As far as the available material allows us to judge, *Fichtner* only changed the production method in the submissions for the second and third commission hearings, but not the design of his test stamps. In the minutes, such stamps are referred to as No. 219 at one time and No. I and II at another, without this providing any information about the appearance of the stamps. A comment referring to a black and fully printed stamp also makes no sense, since such a stamp was among the single-coloured “protection stamps”, but the elliptical design with the minimal ladders was also made in this colour. At the same time as this passage relating to the last tests (14 June 1869) there is a note: “The print remained firmly attached to the paper and only the coloured shield could be removed, as it should be.” This comment evidently refers to one of *Fichtner* ’s two-coloured eagle stamps with top and bottom printing.

C. FURTHER ATTEMPT OF THE COURT AND STATE PRINTING WORKS

Negotiations on *Fichtner's* project lasted from February 1868 until the end of July 1869. During this time, the State Printing Office did not rest. Rather, it continued to work diligently on perfecting *Pecher* 's experimental stamps.

The Ministry of Finance had also expressly requested this. The third report from the Vienna Polytechnic had indeed culminated in the advice that the Ministry should not encourage the printing works to make further attempts, which might be futile. However, *Nejedly's* own experiments, which he immediately carried out, did not at all confirm the claim that the State Printing Works' eagle stamps could actually be removed without damage if the backing paper was wetted. The State Institute was therefore instructed to continue its experiments, and was told that the year of issue should be made clear on the stamps and that the underprint should express the value of the stamp. According to the relevant report, this instruction appears to have been the personal initiative of Section Councillor *Fierlinger .* The idea was not new, as the Central Inspector Dr. *Laurenz von Steinbühel* had already made a similar request in January 1860.

At the same time, eagle stamps were sent to the Prague Polytechnic Institute for assessment. This educational institution was still behind with the second assessment (on *Worring's* last, then *Pecher's* and *Fichtner's* first stamps). Now this and six weeks later the third assessment arrived. From these documents, it is only worth emphasizing that the easy vulnerability of the glue layer on the eagle stamps was pointed out and that the removal by means of