



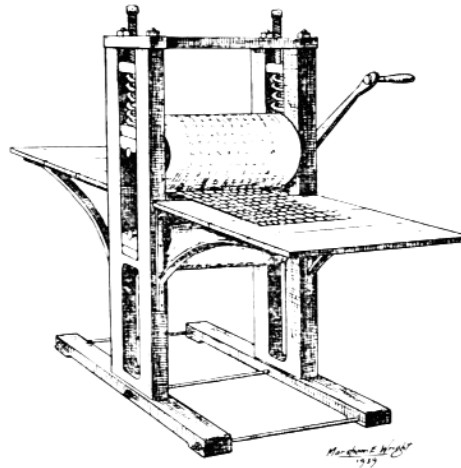
## 1867-68 GRILLED ISSUE

**D**URING THE LIFE OF THE 1861-66 ISSUE, postal officials became somewhat obsessed with their fear that significant revenue was being lost due to the cleaning and reuse of cancelled stamps. The reality of stamp reuse was nowhere near the perceived threat. Still, the concern inspired efforts to devise a means to thwart the reuse of postage stamps. Some inventions employed a special canceller that would cut or scrape the stamp—these so-called patent cancels were equipped with a blade or sharp point and were used by several post offices. Other mechanisms were more elaborate, involving special paper or inks that would dissolve if cleaned. Some farfetched or totally impractical ideas never progressed beyond the essay stage.

The concept that was eventually integrated into stamps at the production level was the grill, an embossed waffle-like pattern in the paper of a stamp that was intended to increase absorption of cancelling ink and improve the adhesive quality of the gum. The grill's creator was Charles F. Steel, a National Bank Note Co. supervisor who had much to gain if the government could be convinced to adopt his invention. Correspondence from 1865 reveals Steel's efforts to persuade officials to employ stamp grilling. In August 1867 an experimental grill—the all-over A Grill—was tested through a small number of post offices. Evidently satisfied with the results, the P.O. Dept. extended National's contract to provide a "new style" of stamps—not new in denomination or design, but modified with Steel's grill, for which he received patent papers and a royalty arrangement with National beginning in late 1867.

Although Steel's concept had been generally stated on paper and implemented on a trial basis, the actual grilling of thousands of sheets per day had not been worked through completely. The first modification, from the all-over A Grill to the smaller C Grill, was a quick remedy to the problems caused when the grill weakened the paper, making perforation and separation almost impossible without damaging the stamps. In anticipation of regular grill production, Steel experimented with many different variations to improve the product and, we may also presume, to speed production. Steel's essays and correspondence related to grill production reached collectors through the old Nassau Stamp Co., but the sad fact is that too many details, including the machine's appearance, were never recorded for historians. A hypothetical sketch of the grilling machine is reproduced from the Brookman book in Figure J.

Grills issued before January 1868—the issued A and C Grills and the essay material—are considered experimental. [However, the line between an essay and issued stamp is sometimes unclear, as lot 214 demonstrates]. Beginning in January the Stamp Agent in New York City, who was responsible for supervising stamp production and delivery, began to account for grilled stocks as a separate and



**Figure J.** Hypothetical drawing of grilling machine

distinct category. National Bank Note Co. was paid extra for grilling stamps, and Steel earned a royalty based on quantity, so all parties had a vested interest in counting the number of grilled stamps delivered.

Grills produced from January 1868 on are considered regular-production grills, and the Stamp Agent records enable philatelists to determine how many of each denomination were delivered grilled during each quarter of the year. It must be remembered that stamps were considered either grilled or not, and the type classifications created by collectors have no relevance to official records of grill production.

The grill types A, B, C, etc., are part of a classification system perfected by William L. Stevenson in the early part of this century. Stevenson published a series of articles between 1913 and 1916, in which he redefined the families of grills according to the grill characteristics, as well as dimensions (the size of the grill had previously been the major distinction made between types). It was while writing this series that Stevenson cautiously observed the 11 by 13 mm grills with horizontal ridges, a scarce type he later labelled the "Z Grill" after gaining confidence in its authenticity. Stevenson's system became the standard reference to grills and was fully adopted by the Scott Catalogue in 1926.

To understand the grill types, it is helpful to visualize the device itself. Imagination is essential, because there is no contemporary description or drawing of the equipment. The drawing in Figure J is based on proof presses of the era and is possibly accurate if the grilling device used a roller and flat bed. On page 130 opposite, enlargements and descriptions of the all-over grills, both issued and essayed, will be a useful primer to the text that follows.

*continued on next page*

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The grill types listed in the Scott Catalogue are arranged below in order of production:

- A Grill First experimental grill**  
Female with points up, covering the entire stamp  
*Earliest known use (EKU) 8/13/67 for 3c; also known on 5c and 30c; Similar male all-over grill exists on 1c and 5c, but it is considered an essay grill*
- C Grill Second experimental grill**  
Female with points up (also known with points down), cut down from A Grill; Measures 12.5-13.5 x 16-17mm or 16-17 x 18-21 points  
*EKU 11/19/67 (11/18/67 also reported); Similar male grill exists on several other values, but it is considered an essay grill*
- Z Grill First regular-production grill**  
Male with points down; horizontal ridges on grill points (— — — —); Measures 11-11.5 x 13.5-14mm or 13-14 x 17-18 points  
*EKU 2c 1/17/68; 3c 1/25/68; 12c 2/15/68; Also issued on 1c, 10c and 15c (all rare); identical grill exists on 3c and 12c essays*
- D Grill Second regular-production grill**  
Male with points down; vertical ridges on grill points (I I I I I); Measures 12 (always) x 14-14.5mm or 15 (always) x 17-18 points  
*EKU 3c 2/2/68; 2c 2/15/68; Does not exist on other values and no reported essays*
- E Grill Third regular-production grill**  
Male with points down; “X” or “I” ridges; Measures 11 x 12.5-14mm or 14 x 15-17 points  
*EKU 3c 2/19/68; 10c 2/29/68; 12c 2/29/68; 1c 3/9/68; 2c 3/11/68; 15c 5/2/68; Does not exist on 5c, 24c, 30c or 90c values and no reported essays*
- F Grill Fourth regular-production grill**  
Male with points down; “X” or “I” ridges; Measures 8.5-9 x 13-14mm or 11-12 x 15-17 points  
*EKU 2c 3/27/68; 3c 4/23/68; 15c 5/4/68; 10c 5/26/68; 12c 5/27/68; 1c 8/11/68; 30c 11/14/68; 5c 11/19/68; 90c 5/8/69 (two covers known)*
- B Grill Transitional grill**  
Male with points up; “X” ridges; Measures 18 x 15mm or 22 x 18 points  
*Only known cover and the source of four recorded copies dated Mason Tex. 2/17/69; Similar in size to Partially Erased C Grill, but has the characteristics of a male grill*

Our purpose in listing the 1867-68 Grills in order of earliest known use is to establish the order of production. The timeline on page 144 covers the first three months of regular grill production, the period in which the most significant changes occurred. While the reasons for creating the 1867 experimental grills (A, C) are obvious and documentable, the grill changes during the first quarter of 1868 raise some intriguing questions. The relationship between the types of early contract

grills and what they might tell us about grill production in its initial stages are explored in the introduction to the rare Z Grills.

Based on contemporary sources, the order of production finally settled upon was Printing, Gumming, Pressing, Grilling, Perforating and Final Pressing. There was some discussion about (and possibly actual production) printing stamps on gummed and grilled paper, but printing from engraved plates requires moistened paper to achieve a satisfactory impression, and wetting gummed paper would be impossible.

Looking at the grill types and varieties from the viewpoint of a National Bank Note Co. manager, the foremost objective must have been to increase the speed and efficiency of the grilling operation without sacrificing the quality of grill impressions. Keeping this objective in mind as we study the material, it is obvious that manufacturing-line supervisors tweaked the process to obtain faster production and better grills. The move to smaller grill surfaces on each stamp improved the depth of impression. Thinner paper, which appears to have been introduced in early March 1868, also provided a more satisfactory grill and probably allowed the grillers to put a few sheets together for each impression, thereby improving productivity.

However, looking at the surviving stamps, it is also obvious that they frequently got it wrong. For example, the grilling of sheets printed on thicker paper from the pre-1867 period created many weak grill impressions, forcing a second pass through the machine. Thin paper solved the grilling problem, but caused trouble for the perforators, leading to the unpunched or choppy perms frequently found on grilled stamps. Double grills, inverted grills and nearly-missing grills are evidence that National had some difficulty grilling 350 million stamps per year.

National did manage to fulfill the terms of the contract and win renewal for the 1869 Issue after a bitterly-contested fight with Butler, Carpenter. Grilling played a significant role in National's effort to keep the contract, and in the course of nineteen months the presence of embossing on 1861 Issue stamps created an extraordinary supply of scarce and fascinating material for collectors.

Early discoveries of the 5c and 30c A Grills appeared in the *Philatelic Journal of America*. In May 1889 a 30c was noted, and in July 1891 a 5c was identified with mention that “Several copies of each have since been found.” At one point Warren H. Colson, one of America's leading dealers during the first half of the 20th century, obtained several copies of the 30c, each with a similar cork cancel.

The greatest holding of grill essays came from the Earl of Crawford. Some of this material was obtained from Henry G. Mandel, who was the official counterfeiter and color expert for the American Bank Note Co. in the 1880's and 1890's. Lord Crawford also acquired essays and the original patent documents from Charles F. Steel.

## Types and Characteristics of 1867 All-Over Grills

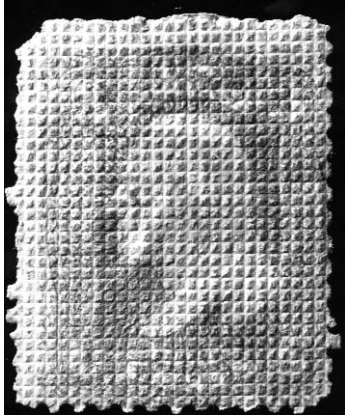


Figure D. 3c A Grill (Scott 79)



Figure E. Back of Figure X

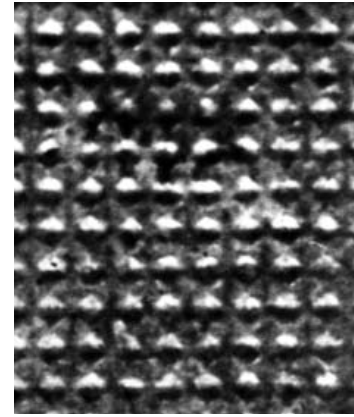


Figure F. Back of A Grill essay

The two classes of grills are called *male* and *female*. The 3c A Grill pictured above in Figures D and E shows the signature characteristics of a female grill. The embossing is created by pressing the paper into an area of small depressions, which creates an irregular fracture at the top of each point (points up on this example). The grill in Figure F, as seen from the back, is a male grill, made up of raised pyramidal points that leave a regular pattern of small X-shaped pits on the surface (the photo pictures the back of a points-up essay). The orientation of the points—up or down—depends on which side of the stamp sheet faces the grill.

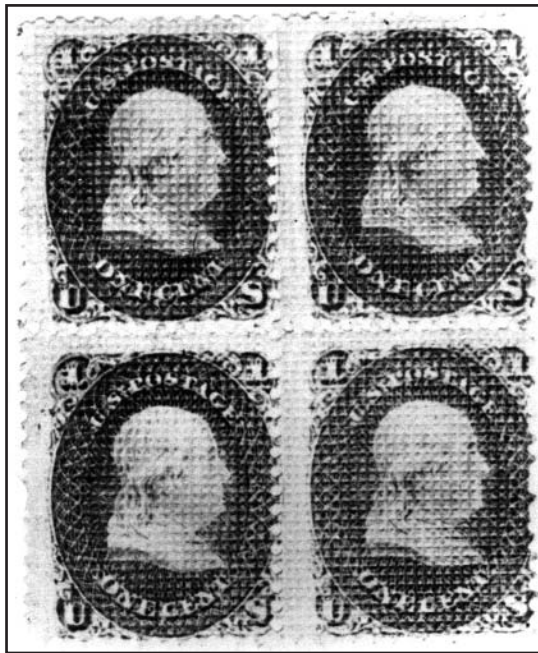


Figure G. 1c Male All-over Grill Essay—the Earl of Crawford block before it was broken into singles



Figure H. 5c A Grill—digital reconstruction of the Earl of Crawford block



Figure I. Issued 5c and 30c A Grills (80, 81)

The only A Grills now classified as regular stamps are the 5c and 30c (the Zoellner copies are pictured in Figure I). The 1c all-over grill exists unused—the four known singles come from the Lord Crawford block—but it is a male essay grill (detail in Figure F). The 5c block in Figure H is a digital reconstruction of the Lord Crawford block (ex Steel papers).