

G. W. CASILEAR.

Methods of Engraving Bank-Note Plates.

No. 138,613.

Patented May 6, 1873.

Fig. 1.

|    |    |    |
|----|----|----|
| AA | BB | CC |
| AB | BA | CB |
| AC | BC | CA |
| AD | BD | CD |

Fig. 2.

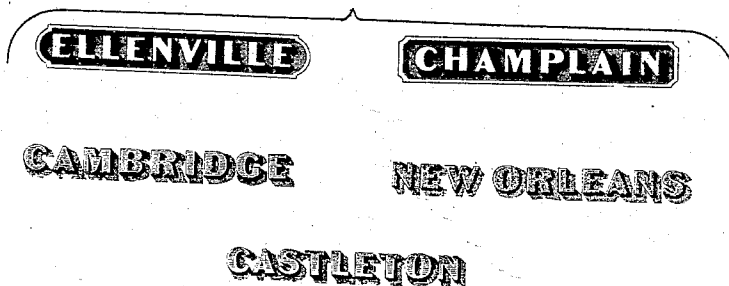
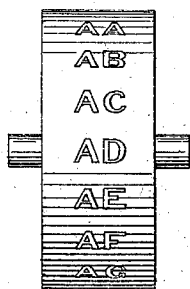
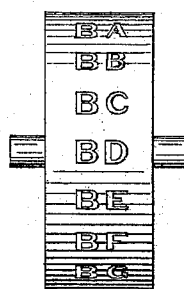


Fig. 3<sup>a</sup>



ELMIRA

Fig. 3<sup>b</sup>



WITNESSES

George W. Fitchman  
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# UNITED STATES PATENT OFFICE.

GEORGE W. CASILEAR, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN THE METHODS OF ENGRAVING BANK-NOTE PLATES.

Specification forming part of Letters Patent No. **138,613**, dated May 6, 1873; application filed March 29, 1873.

### CASE B.

*To all whom it may concern:*

Be it known that I, GEO. W. CASILEAR, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in the Method of Engraving Bank-Note Plates; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making a part of this application.

My present invention relates to an improvement upon a novel method of engraving titles, names, &c., on plates for printing bank-notes, as fully described in another application, A, filed simultaneously with this.

To enable those skilled in the art to more fully understand the same, I will proceed to describe the successive steps taken and the result accomplished, referring to the accompanying drawing, in which—

Figure 1 represents a series of alphabets in couplets, engraved upon one or any number of plates, by hand, or by means of the alphabetical roll described in application of even date with this. Fig. 2 represents a series of titles or words compounded from rolls taken up from the plate or plates represented at Fig. 1. Fig. 3<sup>a</sup> and Fig. 3<sup>b</sup> represent the rolls with the duplex alphabets taken up upon their peripheries.

Sufficient is shown at Fig. 1 to illustrate that twenty-six alphabets are engraved in couplets—that is, each one is a complete alphabet—with an initial letter, which is prefixed in the order of the letters of the alphabet; for instance, the first alphabet has the initial letter A prefixed to each one, so that the couplets will be A A, A B, A C, &c.; the second has the initial letter B, so that its couplets will be B A, B B, B C, &c.; the third has the initial letter C, so that its couplets will be C A, C B, C C, &c., and so on through the twenty-six combinations. These compound alphabets having been taken up on rolls, they are then hardened in the usual way and ready for use in the following manner:

The word Washington, for instance, being

that which it is desired to engrave upon the final or printing plate, I select the roll having the alphabet with W as its initial letter; I roll into the plate the couplet W A; I then take the alphabet with the initial letter A, and select the couplet A S. The A rolled into the plate from the first couplet serves as a matrix for the initial letter of the second couplet, and the S is rolled into the plate. The next alphabet selected is that having S as the initial letter, and the couplet S H so directed as that the S shall fit its matrix and the H be rolled in, and so on, rolling in one letter at the time, until the word or a sentence is finished.

The advantage of this method is the accurate spacing of the letters, and the opportunity of shading and ruling them in couplets upon the original or mother plate, so that when taken up on the rolls and words formed therefrom onto the final plate, the process of etching and ruling does not become necessary.

I am aware that bank-note plates have been engraved by means of rolls having movable type or letters inserted in their peripheries; and I am also aware that engraving-rollers with words, signs, and characters produced in relief upon their peripheries, substantially in the manner described in my invention, have been employed; but neither of these, in their respective methods of operation, produce results similar to mine, and consequently such I do not claim; but

What I claim as new, and desire to secure by Letters Patent, is—

The method herein described of engraving names and titles upon bank-note plates, &c., by means of a roll or rolls having a compound alphabet produced upon its periphery, and operated substantially in the manner hereinbefore fully set forth.

In testimony whereof I have hereunto set my hand and seal this 27th day of March, A. D. 1873.

GEO. W. CASILEAR. [L. S.]

In presence of—

WM. C. MCINTIRE,  
ARTHUR L. MCINTIRE.