

(No Model.)

F. X. KRITTER.

PROCESS OF PRODUCING FROM A COPY A PLATE OF TYPE FOR PRINTING.

No. 412,760.

Patented Oct. 15, 1889.

Fig. 1.



Fig. 6.



Fig. 2.



Fig. 3.

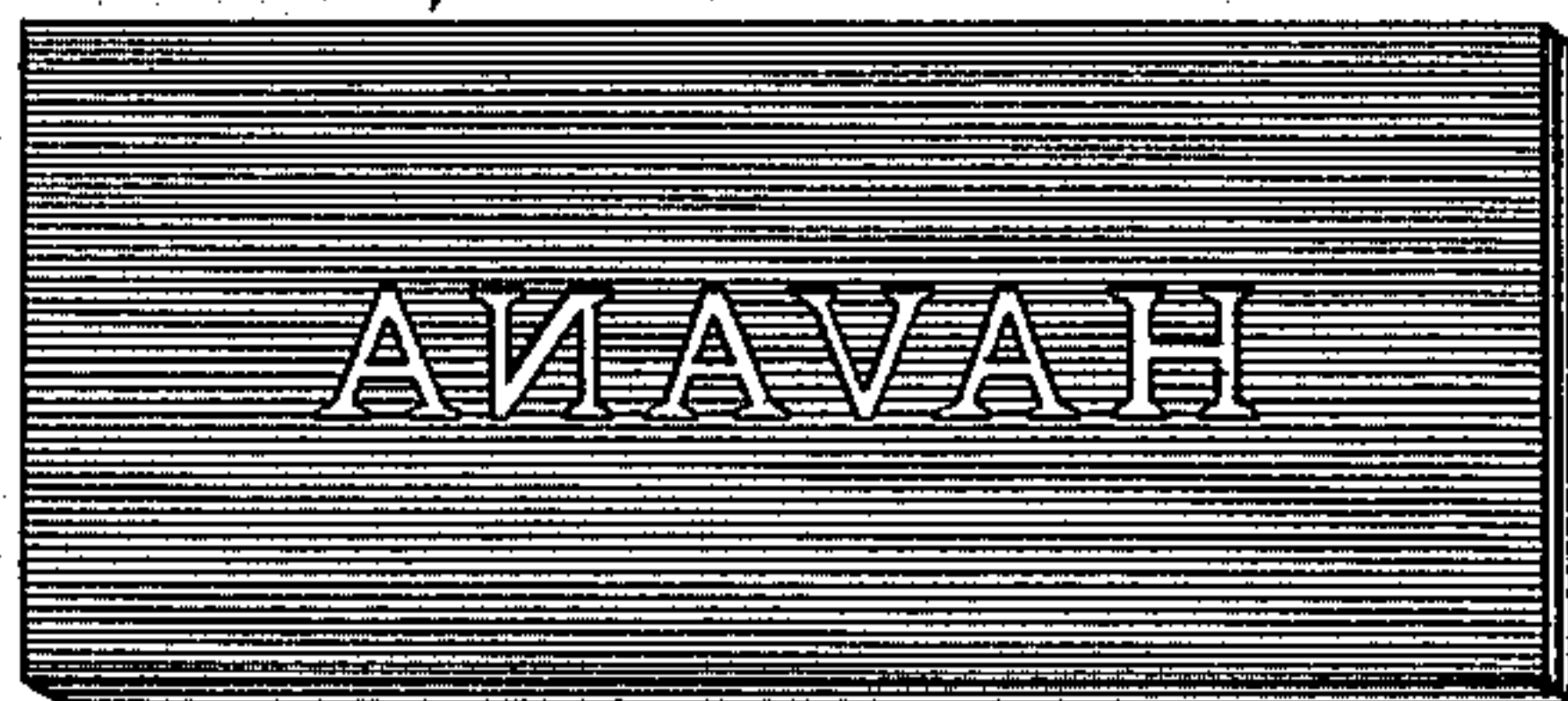


Fig. 4.

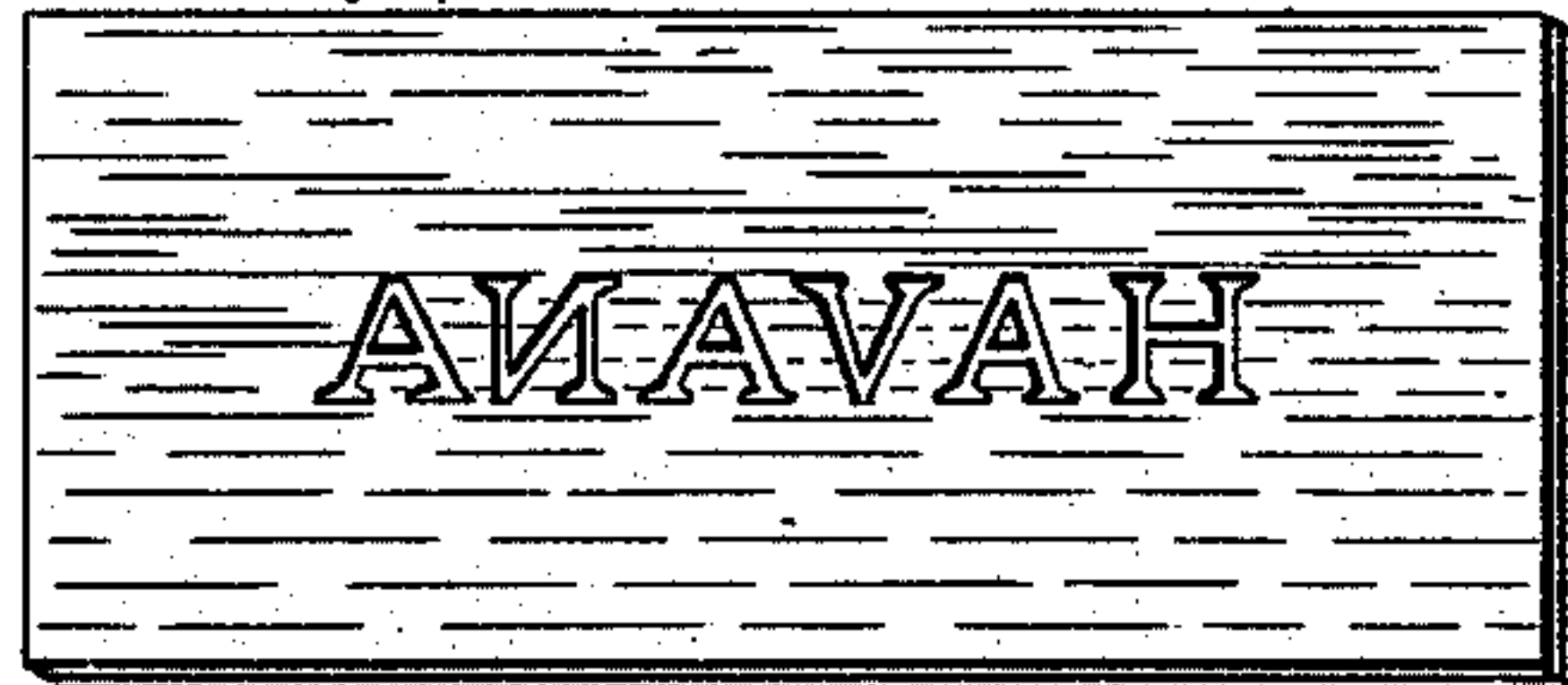


Fig. 5.



Witnesses.

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# UNITED STATES PATENT OFFICE.

FRANK X. KRITTER, OF MILWAUKEE, WISCONSIN.

PROCESS OF PRODUCING FROM A COPY A PLATE OR TYPE FOR PRINTING.

SPECIFICATION forming part of Letters Patent No. 412,760, dated October 15, 1889.

Application filed May 9, 1889. Serial No. 310,093. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK X. KRITTER, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and  
5 useful Process of Producing from a Copy a Plate or Type for Printing; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and  
10 to the letters or figures of reference marked thereon, which form a part of this specification.

Heretofore it has been common in preparing electrotypes or types for printing to  
15 use a negative produced by photography for the purpose of transferring the print, cut, or other thing to be reproduced on the electrotypes; and the object of my invention is to transfer from types, or from a copy produced by types or otherwise, to the prepared  
20 plate a proper reproduction of the copy without the use in the process of such negative.

My process is particularly adapted for producing from a copy obtained from ordinary  
25 printing-types a zinc block, from which a print is obtained having white or unprinted letters, with the surrounding surface printed or covered by ink, though my process may be used for producing from a copy the ordinary form  
30 of printing with type giving a black letter or cuts.

In the drawings, Figure 1 represents a small sheet of paper, on which is printed the word "Havana," for illustration, printed from the  
35 ordinary movable types used in printing. Fig. 2 represents a zinc plate coated with asphaltum, showing the black asphaltum surface. Fig. 3 illustrates the same plate shown in Fig. 2 after the word "Havana" has been reversely  
40 reproduced thereon by removing the asphaltum where the letters exist, showing the letters in zinc through the asphaltum. Fig. 4 illustrates the same plate shown in Fig. 3 after acid has been applied and the plate has  
45 been eaten thereby, and the asphaltum has been removed from the remainder of the surface of the plate. Fig. 5 illustrates a small sheet of paper, on which, by the use of ink, a reproduction has been made of the surface

of plate 4, leaving the letters in white. Fig. 50 6 shows the form and arrangement of the type as set up for producing the impression shown in Fig. 1.

The plate from which the prints or impressions are to be obtained is originally a plate  
55 of zinc having its surface covered with asphaltum, as shown in Fig. 2. The copy shown in Fig. 1 is placed on the asphaltum of the plate shown in Fig. 2, with the letters or printing of the copy downwardly, directly in contact with the asphaltum, and the ink from  
60 the copy is transferred by pressure upon the asphaltum, the ink being in proper condition therefor. The paper copy is then removed and the plate is exposed to the light, where-  
65 by the asphaltum not covered with the ink becomes hardened. The plate is then washed with turpentine or other proper preparation, and the unhardened part of the asphaltum is removed, exposing the zinc that was beneath  
70 the parts covered by the ink, as shown in Fig. 3. The surface of the zinc being thus exposed in the form of the letters, a weak solution of acid, preferably nitric acid, is applied  
75 to the exposed zinc, which is thereby eaten sufficiently to form therein depressed letters. The plate is then washed and the asphaltum is removed from the other parts of the plate  
80 by peeling or scraping it off as it readily separates from the zinc, and the plate is left with letters depressed in the zinc in the form shown in Fig. 4. The plate thus constructed is ready  
to be used as a type, and therefrom, by the use of proper ink, an impression is reproduced on  
85 paper or other material having white or unprinted letters with the surrounding surface colored or printed, as shown in Fig. 5.

In preparing the plate shown in Fig. 3 the copy on the paper shown in Fig. 1 is transferred to the asphaltum and the paper is then  
90 commonly removed; but if a thin or oiled paper sufficiently transparent is used for the copy it is not necessary to remove the paper from the surface of the asphaltum before exposing it to the light.

In the manner hereinbefore described the type-plate can be so lined by parallel ruling, or by ruling and cross-ruling, as to produce  
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tints on the paper printed therefrom on the surface about the type instead of a completely-colored surface, as shown in Fig. 5.

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

1. The process of producing a plate for printing from types or from a printed copy by transferring the same directly upon a prepared asphaltum-covered zinc plate and producing the printing-plates therefrom, substantially as described.

2. The process of transferring ink from a

printed copy upon an asphaltum-covered zinc plate, removing the asphaltum beneath the ink, and producing the type in depressed letters in the zinc plate by the use of acid, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK X. KRITTER.

Witnesses:

C. T. BENEDICT,  
ANNA FAUST.