Nov. 20, 1928. 1,692,405

C. A. FREEMAN

TICKET AND METHOD OF PRODUCING THE SAME

Filed March 19, 1924

FIG. 1.

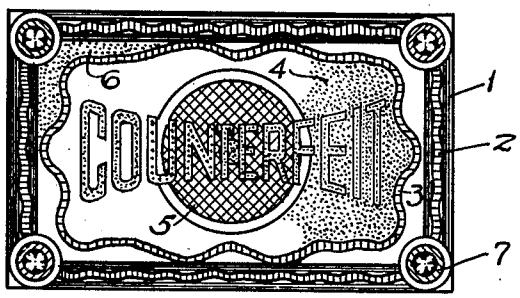


FIG. 2.

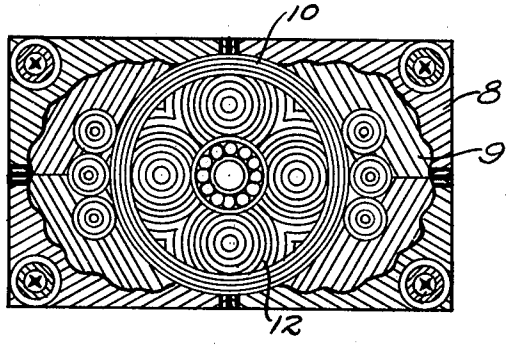


FIG. 3.

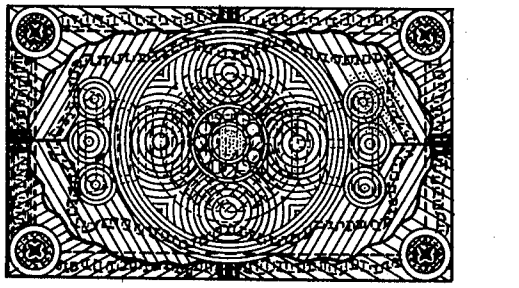
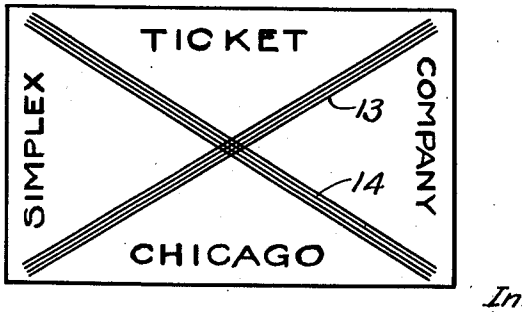


FIG. 4.



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UNITED STATES PATENT OFFICE.

CHARLES A. FREEMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE SIMPLEX TICKET COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

TICKET AND METHOD OF PRODUCING THE SAME.

Application filed March 19, 1924. Serial No. 700,360.

My invention relates to the printing of tickets, checks, currency, stock certificates, bonds and other securities and consists in the production of a design which is adapted to prevent counterfeiting of the original.

The object of my invention is to produce a design which cannot be duplicated readily by photo-engraving. I attain this object by printing two different designs, one upon the other to produce a third design differing from either of the originals and formed by the merging or blending of the two original designs with each other. One of the original designs may have significant words, characters, or other marking which, so far as the natural eye is concerned, will be substantially obscured in the completed design, although still present on the ticket or like article. The different original designs are so printed that an attempt to photograph them will produce substantially one of them only. This is done most easily by the use of differently colored inks for the two original designs.

In the accompanying drawings, which are largely diagrammatic due to the prohibition of the use of colors on Patent Office drawings,—

Figure 1 sets forth one form of an original design preferably forming the base imprint.

Figure 2 shows a form of a second design to be imprinted upon the first in a different color.

Figure 3 is a combination of the two designs shown in Figures 1 and 2 in which the design shown in Figure 1 is dotted so as to approximate the effect thereon of the imprint of the design shown in Figure 2.

Figure 4 illustrates a modified base design.

In the design shown in Figure 1, various portions 1, 2, 3, 4, 5, 6 and 7 are shown as shaded usually with straight lines of substantial thickness but in the practical embodiment of my invention these portions will be produced by suitable engine engraving consisting of a much greater number of finer lines curved and interlaced in a manner which is familiar to those skilled in the art and is apparent to any one upon inspection of a bond, a piece of currency, or similar printed matter. It will be understood that a substantial area of the original stock is uncolored after the first imprint has been made. The first imprint, which I call the base imprint, will be of one color and in a selected embodiment of my invention this color may be yellow. Superimposed on the base design is the second design of another color, blue for instance. This design, shown in Figure 2, includes areas 8, 9, 10, 11, 12, 13, etc. composed of engine engraved lines forming patterns totally unlike those formed in the portions 1, 2, 3, etc. of the base design but resembling the latter in consisting of a plurality of slightly spaced fine lines.

When the design shown in Figure 2 is printed in blue ink over the design shown in Figure 1 in yellow ink, the two designs merge to form a complete design which is suggested in Figure 3 and in which none of the distinctive features of either of the original designs is clearly apparent to the eye. The crossing of the blue and yellow lines produces areas having a greenish yellowish tinge and the borders of these areas will not be well defined to the eye due to the blending of a portion like 1, comparatively well filled with yellow marks, with a portion like 8 of comparatively thin scattered blue marks. If the proper shades of yellow and blue are used for this work, yellow will predominate in these portions. If an attempt is made to photograph this design, the rays of light of high actinic value reflected from the uncovered white areas and the distinct blue areas will quickly act upon the photographic plate while the distinct yellow areas and the yellow tinted areas, where the blue has been superimposed without suppressing the yellow, will have little effect upon the plate. This will produce a plate which is practically a negative of the original base design on a white or light background although the portions of the second design, which was printed upon the white areas provided in the base design, will appear faintly. It would be impossible to reproduce either the second design or the completed design from such a negative. By a long series of color filtering operations plates containing each of the original designs could be produced but their production would involve equipment which is possessed by few plants and would require an amount of time which is not always available for exploitation of the counterfeits and in many cases would involve

an expense out of proportion to the results obtained.

In the ticket illustrated in Figures 1, 2 and 3 the base design includes the word "Counterfeit" which, it will be noted, is distinguishable in Figure 3 only after it is sought for.

While the pen and ink drawings forming a part of this application cannot duplicate the patterns of engine engravings nor the effects of a blending of differently colored designs, Figure 3 does closely approach the result of such operations in the obscuring of the word "Counterfeit" without obliterating the same.

It will be understood that the word "Counterfeit" is but one significant marking which can form part of the base design and that any letters, numerals or figures could be substituted therefor.

In Figure 4 a modification is shown in which the design is quartered by diagonals 13 and 14 and a lettering having a misleading ostensible purpose is used.

The modifications of the base and second imprints are numberless and those skilled in the art will realize that other colors may be substituted for those mentioned herein so long as there is a difference in the actinic value of one of the colors and the result of the impression of one of the colors upon the other.

I claim:

1. In a ticket or the like, a warning imprint and a warning-obscuring imprint, said imprints having different actinic values, and cooperating to form a completed design not disclosed by either of said imprints alone.

2. In a ticket or the like, a warning imprint, a secondary imprint superimposed on said warning imprint, said imprints being of different actinic values and cooperating to form a completed design in which neither of the original imprints is apparent to the eye.

3. In a ticket or the like, a warning imprint of one color and a warning-obscuring imprint of another color, said colors having different actinic values.

4. In a ticket or the like, an imprint containing certain characters or markings, and one or more imprints superimposed thereon containing characters or markings which merge with said first-mentioned characters or markings so that no single imprint is apparent by itself, said imprints possessing different actinic qualities.

5. In a ticket or the like, an imprint containing certain characters or markings, the said imprint being of one color, another imprint superimposed thereon, the said secondary imprint differing both in design and color from the first imprint, and merging with the said first imprint to form a unitary design in which neither of the original imprints is apparent by itself, the colors used being such whereby both the original imprints and the composite imprints have different photographic reproducing qualities.

6. In a ticket or the like, an imprint in yellow ink, another imprint in blue ink superimposed thereon, said latter-mentioned imprint differing in design from the first-mentioned imprint, said imprints merging to form a unitary design in which neither of the imprints is apparent by itself.

In testimony whereof I hereunto affix my signature this 23 day of November, 1923.

his
CHAS. A. × FREEMAN.
mark