

1,428,278.

Patented Sept. 5, 1922.

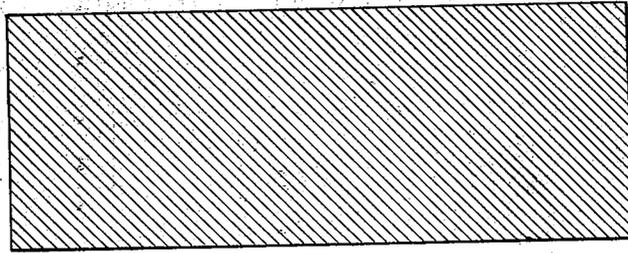


Fig. 1

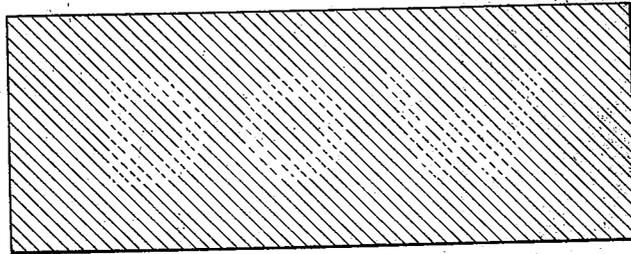


Fig. 2

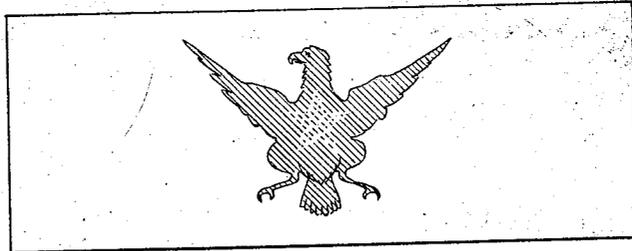


Fig. 3

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UNITED STATES PATENT OFFICE.

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PROTECTIVE PRINTING.

Application filed December 11, 1920. Serial No. 429,878.

To all whom it may concern:

Be it known that I, HERBERT H. Dow, a citizen of the United States, and a resident of Midland, county of Midland, and State of Michigan, have invented a new and useful Improvement in Protective Printing, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The object of the present invention is the production of a printed article, such for example, as a postage or other stamp, green-back or evidence or value of any kind, that will be difficult to counterfeit, and that will permit the ready and instant detection of a counterfeit by one equipped with proper apparatus.

To the accomplishment of the foregoing and related ends the invention then consists of the stated means hereinafter fully described and particularly pointed out in the claims, the annexed drawing illustrating but several of the various ways in which the principle of the invention may be carried out.

In said annexed drawing:—

Fig. 1 illustrates a sheet uniformly printed in color, in accordance with the present invention, either solid or with a ground composed of more or less parallel lines, such sheet being shown as it appears to the ordinary observer, i. e., to the naked eye; Fig. 2 illustrates the same sheet when subjected to test as hereinafter described; Fig. 3 is a view similar to Fig. 2, but showing the effect that may be secured where the impression consists of a figure or design instead of a uniform color or groundwork.

As indicated above, the underlying principle of the invention consists in printing different portions of the figure or design with inks having the same color to the naked eye but possessing different optical properties in another respect. Thus, for example, one portion may be impressed with an ink consisting of a single color, and another portion impressed with an ink composed of a plurality of colors giving the same effect to the eye as such first-named ink. Malachite green will serve as an illustration of such single color and obviously a similar shade of green may be secured by mixing in proper propor-

tions any of the known yellows and blues. However, the effect of such different colors or color combinations when viewed through a spectroscope or equivalent optical instrument that is sensitive to the true or fundamental colors, will obviously be different in the case of the two portions of such figure or design.

In the case of a solid green such as shown in Figs. 1 and 2, a portion of such ground may be thus printed in a different color composition or dye to show the effect of a water mark "Dow" or other name. Similarly, a figure such as that of an eagle as shown in Fig. 3 may have a portion in the form of a star printed in a different ink from the remainder so that when subjected to test such star will stand out.

The coloring matter employed in the inks thus used may be ones that appear different when examined under a monochromatic light, or through a color screen.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the method herein disclosed, provided the step or steps stated by any of the following claims or the equivalent of such stated step or steps may be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. A printed article having a figure or design impressed in different portions with inks having the same color to the naked eye but possessing different optical properties in another respect.

2. A printed article having a figure or design impressed in different portions with inks having the same color to the naked eye but different colors when viewed through a suitable optical instrument.

3. A printed article having a figure or design impressed in different portions with inks having the same color to the naked eye but different colors when viewed through a spectroscope.

4. A printed article having a figure or design impressed in one portion with an ink consisting of a single color and having another portion thereof impressed with an ink composed of a plurality of colors giving the same effect to the eye as said first-named ink.

HERBERT H. DOW.