Oct. 10, 1933. J. SCHLITZ 1,929,828

FRAUD PREVENTING PAPER

Filed Nov. 24, 1931

Fig. 1.

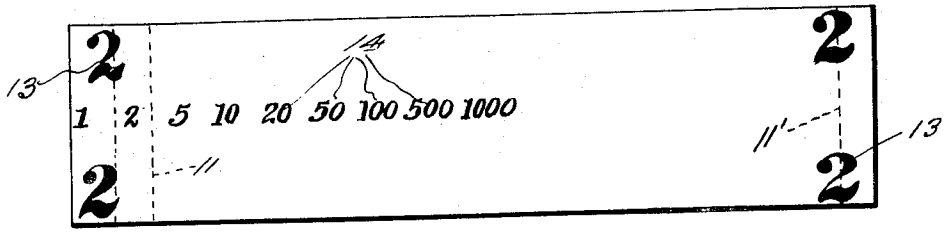


Fig. 2.

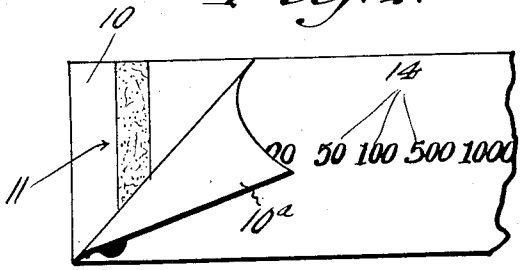


Fig. 3.



Fig. 4.

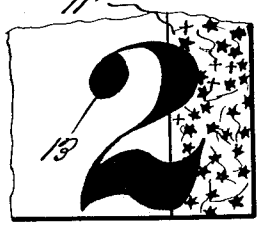


Fig. 5.

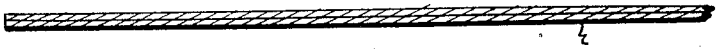
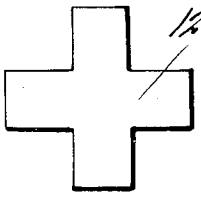
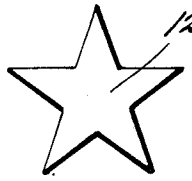


Fig. 6

Fig. 7.





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UNITED STATES PATENT OFFICE

1,929,828

FRAUD-PREVENTING PAPER

John Schlitz, Leavenworth, Kans.

Application November 24, 1931
Serial No. 577,076

4 Claims. (Cl. 283—8)

This invention relates to means of preventing fraud or the counterfeiting of bank notes, bonds, checks and governmental currency; and it consists particularly in the application of micro-metal forms or geometrical figures, in a large amount, to the paper pulp, to designate the character or denomination of such particular currency, bill, note, check or other security and render the counterfeiting thereof a highly improbable and almost impossible the counterfeiting of the particular security.

Other objects and advantages of the invention will become apparent from a study of the following description, taken in connection with the accompanying drawing wherein:

Figure 1 is a plan view of a bank note, bill or similar security having my invention applied thereto.

Figure 2 is a similar view of an end portion of the security one lamina being rolled back to clearly teach the invention.

Figure 3 is a plan view of a portion of the bank note having the invention applied thereto, with the part of the bank note affected by the invention being viewed through a magnifying lens or similar instruments.

Figure 4 is a view similar to Figure 3 showing a second portion of the bank note with the invention applied thereto.

Figure 5 is a fragmentary sectional elevational view taken through the security or bank note.

Figures 6 and 7 are plan views illustrating several geometrical figures the microscopic form may attain, or be shaped.

Referring more in detail to the drawing, the paper from which the bank note or other security is made, in the present instance consists of laminæ 10 and 10*a* between which, during the process of making the sheet is applied the anti-fraud, or safety medium designed generally by the reference character 11, which latter, in accordance with the present invention, consists mainly of a larger quantity of micro-metallic forms 12 of metal foil of any desired metal having sharp defined outlines.

As for example the geometrical figure which these forms attain, may be a star as suggested in Figure 7, or a maltese cross as shown in Figure 6 and designated by the reference character 12′, or any other sharply cut microscopic shape.

Such micro-metallic forms when applied to the paper pulp are rendered obscure by reflected light, but are clearly discernible by transmitted light, and when viewed by the eye, or through an enlarging device, and being especially discernible through a water mark.

It is of course to be understood that suitable dies for cutting such micro-metal forms in large amounts either from lead foil, tin foil or any other metal and having the desired geometrical configuration, will be necessary and the cost of such dies will be such as to render the use of the same almost prohibitive by prospective counterfeiters.

The medium 11 is so applied to the papers of the bank note or other security as to extend transversely of the finished bank note thus forming what may be termed a micro-metallic line which may be of any desired width.

The position of this referred to metallic line or anti-fraud medium 11 relative to the transverse line of the bank note paper will be determined according to the denomination of that particular bank note, as for example and as shown in the drawing, if the bank note be of the value of two dollars, the line 11 would be slightly spaced inwardly from one end of the bank note paper and between 1 and 2 of the denominal numerals 14 are printed or otherwise applied to the bank note paper in a manner well known in the art with 2 enveloped by the line 11 as clearly suggested in Figure 1.

From the above it will be also apparent, that in the event the bank note or security was to the value of say, one hundred dollars, the line 11 would be transversely of the bank note paper, the same distance to the left of the transverse line of the bank note paper as the 100 of the denominal numerals 14 shown in Figure 1.

Independently of the particular denomination of the bank note security, a similar micro-metallic line or anti-fraud medium 11′ extends transversely of the bank note paper immediate to the right hand side of the bank note paper as is clearly suggested in Figure 1. Line 11′ serves as a stationary line and renders more difficult the almost impossible counterfeiting of the paper.

It is to be also understood, that besides merely placing the denominal numbers such indicated by reference numerals 13 at each corner of the bank

note or security paper, a corresponding denominal number such as one of the numbers 14 may be placed on the longitudinal median of the bank note paper as suggested in Figure 1. In other words, if the value of the bank note is two dollars, such will be indicated at each corner of the bank note by the denominal numbers 13, and such will be additionally indicated by a denominal number two from the series of denominal numbers 14 and this denominal number 14, in the present instance a denominal two will be placed inwardly from one end edge of the bank note paper a predetermined distance either at the center or to either side of the center.

The advantage of the above is apparent from the fact that in attempting to raise the value of the bank note or security, for counterfeit purposes, the micro-metallic line 11 to the left of the transverse median of the bank note paper would be farther to the left of the paper than should be the case, for example if the valid or legal security has a two dollar value, and by counterfeit methods has been raised to a twenty dollar counterfeit value; the metallic lines 11 to the left of the transverse median of the note paper remaining in its original and intended position, would be too far to the left of the bank note paper and the attempted fraud, by holding the paper to transmitted light, would be readily detected.

In addition, it is intended that various shapes of the micro-metal be employed for various values, as for example star shaped forms could be used for two dollar bills, crosses for ten dollar bills, etc.

While several methods of applying the micro-metallic anti-fraud medium to the bank note, I have found it advisable to feed the metallic forms in dried condition by a suitable means such as a tube having its outlet mouth of the desired width of the finished line between the very thin sheets of wet pulp so that, as these two pulp sheets, for example the pulp sheets, 10, 10*a* are coming in contact, which thoroughly unites their fibers, the micro-metallic forms received between said pulp sheets are carried forward with the pulp sheets thoroughly incorporated as one mass.

When the paper is finished it may then be cut to sheets of the desired dimensions, each sheet containing the two metallic lines 11, 11′ properly positioned thereon in accordance with the particular denomination or value of each sheet.

These lines as before intimated, will be almost imperceptible by a reflection of light, while by transmitted light the forms of the micro-metal appear opaque and the geometric forms of the micro-metallic parts when viewed through an enlarging glass or like device, will appear true and sharp in outline, which would not be the case were such geometrical figures printed, for example with silver-gray ink on ordinary paper.

From the foregoing then it will be seen that I have devised a safety paper for use in the making and printing of bank notes and other securities, and which is of such a character that the possibility for counterfeiting is not entirely prevented, it will be highly improbable because of the almost prohibitive cost of the necessary instruments.

Even though I have herein shown and described the preferred embodiments of the invention, it is to be understood that the same is susceptible of changes, modifications and improvements as come within the spirit and scope of the appended claims.

Having thus described my invention, what I claim as new is:

1. A security blank comprising a sheet of fabric having denomination indica in form of a line of sharply defined forms of metal within the body of said fabric.

2. A security blank comprising a sheet of fabric having a solid particle of metallic product of sharply defined outline.

3. An article of manufacture comprising a sheet of paper having a continuous form comprising a solid particle of metallic product of sharply defined outline extending within the body of said paper.

4. An article of manufacture of the class described comprising a sheet of fabric having a continuous form comprising a solid particle of metallic product of sharply defined machined outline extending within the body of said fabric.

JOHN SCHLITZ.