

G. W. CASILEAR.

Safety-Paper.

No. 167,223.

Patented Aug. 31, 1875.

Fig. 1.

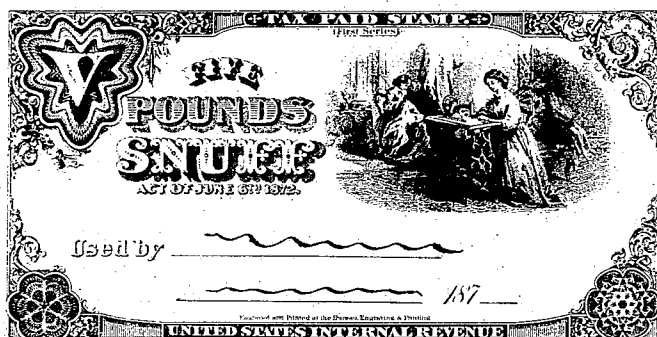


Fig. 2

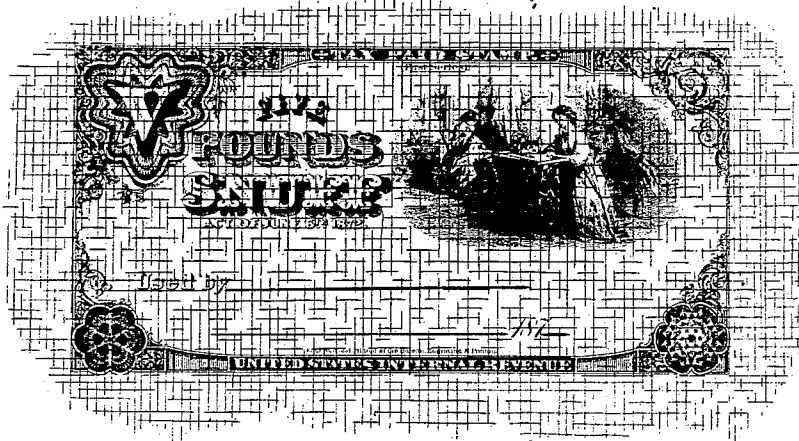


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN SAFETY-PAPERS.

Specification forming part of Letters Patent No. **167,223**, dated August 31, 1875; application filed July 8, 1875

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 Safety-Paper; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to a novel means for preventing the alteration or re-use of revenue and postage stamps, or the raising or otherwise changing the character or value of any evidence of value printed on paper, or counterfeiting the same by transfer, photography, photolithography, &c.

With these objects in view, my invention consists in a paper of ordinary structure or ingredients, with its top surface covered with a woven fabric, or with a warp of fragile open texture and meshes, or the warp secured to and embedded in the paper body or foundation during the process of manufacture of the paper, or afterward by uniting the two under pressure; the natural moisture of the pulp in the manufacture of the paper, or the dampening slightly of the sheet after manufacture, serving to sufficiently moisten and soften the starch or gluten in the textile covering, or the sizing of the paper, to induce to a perfect union of the fabric and paper when pressed and dried and calendered. The paper thus prepared with a textile-fabric face or upper surface may be readily printed upon either by type or plate, and may also be written upon with a pen; and any effort made to erase any of the printing or writing from the face of the paper by the use of a knife will necessarily result in the destruction of the lace-work or fabric covering, for the ink, being absorbed by the fibers of the fabric, can only be thoroughly erased by completely cutting away such portions; and as the weft and warp (or the warp, if preferable) give character to the face of the paper, the absence thereof at any particular place would be readily recognized, and suspicion awakened, resulting in the certain detection of any effort at tampering. Another resulting benefit from my invention is the fact that by using colored textile fabrics a "surface tint" may be given the paper without the

use of ink; and as this tint can be composed of intersecting and interlocking lines, or otherwise, and of such colors as may be preferred, it will become impossible to reproduce the print fac-simile by photography or photolithography. It will also be impossible to extract the color, or transfer to a plate, or erase any figure or evidence of value for any of the purposes of counterfeiting or alteration by any liquid or acid treatment, for the reason that the surface covering of lace or other woven fabric or warp readily and quickly absorbs, by capillary attraction, any fluid coming in contact with it, and draws away from its paper foundation to a greater or less extent, according to the treatment it receives, but in every case to such an extent as to magnify and make patent any effort at erasure or alteration.

My invention is designed more particularly for internal-revenue and postage stamps, checks, bonds, &c., though, of course, it may be used to great advantage elsewhere; and for a full and more perfect description of the advantages attending the use of my improved paper for revenue-stamps, &c., I refer to another application filed myself and W. C. McIntire, jointly, for improved revenue and postage stamp.

In the drawing accompanying this specification, Figure 1 represents a five-pound snuff-stamp made or printed upon ordinary paper in black, and Fig. 2 represents a similar stamp printed upon paper embodying the elements of my invention, the broken lines crossing each other at right angles representing a woven fabric of pink or other desirable color, secured in the manner hereinbefore described to the paper body, (the paper and textile cover being both exposed to view,) and afterward printed upon, the impression necessarily being partly on paper and partly on spun fiber; and Fig. 3 is a cross-section, on an enlarged scale at *xx* of Fig. 2, showing the woven or other fabric embedded in the surface of the paper.

Having described my invention and its advantages so that those skilled may make and use the same, and not wishing to be understood as claiming, broadly, a paper and woven fabric combined,

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

As a new manufacture, a safety-paper having embedded in its face side a woven fabric or warp, in such manner that both the paper-stock and embedded fabric or warp shall lie, practically, in the same plane, exposed to

view, and be capable of separation, in the manner and for the purposes hereinbefore set forth.

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

Witnesses:

F. A. CASILEAR,
JOHN HARRISON.