

UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN THE MANUFACTURE OF PAPER FOR BANK-NOTES, BONDS, CHECKS, &c.

Specification forming part of Letters Patent No. **210,497**, dated December 3, 1878; application filed October 22, 1878.

To all whom it may concern:

Be it known that I, GEORGE W. CASILEAR, of Washington, District of Columbia, have invented certain Improvements in the Manufacture of Paper, of which the following is a specification:

This invention relates to the manufacture of bank-note and other commercial paper, or for any other purpose, by coloring the pulp contained in separate compartments with different coloring-matter, or by the use of different-colored fibrous substances while in the pulp, contained in separate compartments, all of which will be hereinafter more fully described, and set forth in the claims.

The pulp, having been prepared in the usual manner, is emptied into chests or tubs corresponding in number with the colors or distinct colors of fiber desirable to be used in making the paper. From thence it is delivered into the compartment-vats, each compartment being assigned for a color or alternate color, silk fiber, or other suitable material desirable for making distinctive paper. At the top of the vat is a series of gates, by means of which the flow of pulp is regulated as it passes over the trough and lip and falls upon the endless wire or web. The trough and lip is also subdivided by using thin partitions of brass, to correspond in number, and to connect with the compartment-partitions of the vat.

The operation being now apparent, the pulp of two or more colors passes over the lip or ledge in separate streams, the colors being divided by the thin partitions in their passage, and unite as they fall upon the endless wire, upon which it forms itself into paper of colored stripes, or other material, composed of whatever character of pulp is used in the compartment-vat, desirable for making distinctive papers.

I do not confine myself in the making of paper of this character to any particular machine, as the purpose is to make a continuous sheet of paper having the stripes or different colors of fiber intimately united; and many machines now in use may be readily adapted to accomplish this purpose by the addition of separate vats for the distinctive colors.

The fiber paper used for bank-notes, bonds, &c., would be a "distinctive" paper to prevent counterfeiting, and would prevent photographing or photolithographing. Paper with two or more distinctive colors would prevent photographing, as the colors used in combination, sensitive and permanent, would make a "safety-paper," and would enable fraud to be detected at once, if acids or other chemicals were used upon it.

I claim—

1. The process of making paper of two or more distinctive colors, by using different coloring-matter in separate compartments of paper-pulp, which is afterward united in one continuous sheet, substantially as described.

2. The process of making paper of two or more distinctive colors, by combining with the pulp, in separate compartments, the different-colored fiber, such as silk, jute, or other material, which is afterward united in one continuous sheet.

3. The process of making a sensitive or safety paper, by using fugitive or permanent colors, or these in combination, to be incorporated in the body of the paper while in the vats, to be afterward formed into sheets, substantially as and for the purpose described.

GEORGE W. CASILEAR.

Witnesses:

WM. R. SINGLETON,
W. I. SHERWOOD.