UNITED STATES PATENT OFFICE.

JOHN HENDRICKS, OF BROOKLYN, NEW YORK.

SAFETY-PAPER FOR CHECKS, &c.

SPECIFICATION forming part of Letters Patent No. 237,746, dated February 15, 1881.

Application filed January 16, 1880.

To all whom it may concern:

Be it known that I, JOHN HENDRICKS, of the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Safety-Paper for Bank-Checks or other Monetary Instruments, of which the following is a specification.

The object of this invention is to furnish an improved safety-paper for checks, bonds, drafts, &c., in which, by the employment of proper chemicals and vegetable dyes embodied into the body of the paper, and of a surface tint of fatty ink made of corresponding chemicals and suitable pigments, a doubly-protected safety-paper is produced.

The invention consists of a double safety paper the body of which is prepared with chemicals and vegetable dyes and printed with a surface tint of fatty ink made of an admixture of similar chemicals as those in the body of the paper and of a suitable pigment or pigments, as will more fully appear hereinafter, and finally be pointed out in the claims.

The different kinds of safety-paper for bank-checks, bonds, drafts, and other monetary instruments hitherto manufactured have failed to give entire satisfaction, partly because in some of them simple water-tints were employed, which were not durable and had to be protected against moisture and the influence of the sun; others, again, because the writing could be washed off and the color could be restored, especially when using copying-inks; still others because only one protecting-tint, embodied either in the paper or in the surface-ink, was employed.

The essential feature of my invention is the combination of a safety-tint in the body of the paper with a safety-ink by which the surface tint is printed, and the employment of such chemicals that the check or other document is instantly discolored by acids in a twofold manner—namely, by the solution of the surface tint and by the discoloration of the paper-tint, so that a restoration of the original colors is absolutely impossible and an indelible spot the result.

For preparing the paper it is dyed in the mill, when in its pulpy state or afterward, with a solution of a suitable vegetable dye, such as cochineal, yellow-wood, redwood, logwood, or a mixture of two or more of the same, that has been mixed with an aqueous solution of bichromate of potash, so that a paper is obtained which is not affected by water, but is instantly discolored by any acid, as the latter destroys the vegetable dye and restores the bright yellow color of the bichromate of potash. This safety-paper so tinted and prepared is provided with a surface tint by any of the known printing processes, a net-work of any suitable design being preferably used. The ink employed for this purpose is a fatty ink obtained by a mixture of pigments of any suitable color with a varnish, preferably made from linseed-oil. To this surface-printing tint bichromate of potash is also added, so as to establish a certain affinity between the tint of the body of the paper and that of the surface ink. If, for instance, a greenish tint is desired, sulphate of iron (copperas) and cobalt (ultramarine) are successively dissolved in water, an aqueous solution of bichromate of potash being then added and mixed therewith. The mixture is dried by evaporation and mixed with a varnish of linseed or other oil. By varying the proportions of the different pigments and chemicals and adding substances such as carbonate of potash, surface-printing inks of any desired tint can be produced. This printing-ink is insoluble in water, but instantly discolored by acids, which interrupt the net-work of the surface tint, and then attack the tint of the paper, so as to produce a stain of yellowish or brownish color thereon. The effect of the acids on the surface tint, as well as on the tint of the paper, discolors the paper to such an extent that the original colors can never be restored, so that a check or other instrument which has been tampered with shows ineffaceably the marks of any attempted alteration. The regular check form is finally printed on the surface tint, in the usual manner, with common printing-inks.

The double safety paper may also be used advantageously for postage and revenue stamps.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A double safety paper having a safety-tint embodied into the paper and an auxiliary surface tint of a fatty ink printed thereon, both

the paper and surface tints containing bichromate of potash, substantially as set forth.

2. A double safety paper having a safety-tint embodied into the paper, and prepared of a vegtable dye or dyes and bichromate of potash, and having an auxiliary surface tint of a fatty ink prepared of pigments, bichromate of potash, and linseed-oil varnish, substantially as set forth.

3. A safety-paper the body of which has a safety-tint, consisting of an aqueous solution of a vegetable dye or dyes and bichromate of potash, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 15th day of January, 1880.

JOHN HENDRICKS.

Witnesses:
PAUL GOEPEL,
ADOLF DENGLER.

Corrections in Letters Patent, No. 237,746.

It is hereby certified that in Letters Patent No. 237,746, issued February 15, 1881, for an improvement in "Safety Paper for Checks, &c.," the name of the grantee, wherever it appears in said Letters Patent and in the printed specification forming a part thereof was erroneously written and printed "John Hendricks" instead of "John Hendrichs;" that the correct name is "John Hendrichs;" and that the proper corrections have been made in the papers and records pertaining to the case in the Patent Office, and are hereby made in said Letters Patent.

Signed, countersigned, and sealed this 6th day of December, A. D. 1881.

[SEAL.]

A. BELL,
Acting Secretary of the Interior.

Countersigned:

V. D. STOCKBRIDGE,
Acting Commissioner of Patents.