

UNITED STATES PATENT OFFICE.

HERMAN REMKE, OF NEWPORT, KENTUCKY.

PROTECTIVE PAPER FOR CHECKS, &c.

SPECIFICATION forming part of Letters Patent No. 547,289, dated October 1, 1895.

Application filed February 16, 1895. Serial No. 538,713. (No specimens.)

To all whom it may concern:

Be it known that I, HERMAN REMKE, of Newport, in the county of Campbell and State of Kentucky, have invented a new and useful

5 Process of Changing the Ink-Receiving Qualities of Paper and the Like, of which the following is a full, clear, and exact specification.

My invention relates to processes for preventing the falsification of checks and other documents, and has for its object to so change the ink-receiving qualities of the paper or other material after it has been written upon as to prevent any addition or alteration being made to the document in writing without producing such blurs that any intelligent person will notice the difference at a glance, and therefore will be enabled to detect fraudulent manipulations without a microscopic examination or like inconvenient procedure.

20 My invention consists in treating the paper or like material, after the proper matter has been written thereon, with certain solutions to change the ink-receiving qualities of the paper, all as hereinafter described and claimed.

25 In carrying out my invention I employ two solutions, which are applied successively. The first solution is composed of three parts, by measure, of some essential oil, preferably oil of lavender, sixteen parts of tincture of saffron, and twenty-one parts of alcohol, all stirred or shaken together. The second solution is a concentrated solution of some substance having alkaline properties, preferably a solution of sodium carbonate in water. The first solution is put upon the paper by means of a felt pad or stamp and should be allowed to dry or evaporate, and no blotter should be used to hasten this process. When the paper is dry, the second solution is put on in the same manner as the first and is then dried by heat. It will be obvious that other means may be used for applying the solutions. The action of the second (alkaline) solution on the paper and the oil and saffron of the first solution causes the grain of the paper to open up, precipitates the saffron, and destroys to a certain extent the ink-receiving qualities of the paper without, however, rotting or destroying the paper itself. The paper after being subjected to the above process will have approximately the same ink-receiving qualities as unsized paper—that is, any attempt to

write on it will produce blurs, which will be obvious evidence that the writing has been applied after the treatment of the paper. I have found by experiments that, although there is only a small proportion of solid matter in the tincture of saffron, better results in regard to the blurring qualities are obtained by adding the tincture than can be obtained without it, and, furthermore, the precipitate acts as an additional preventive of fraud, as it would be necessary to remove the precipitate before any attempt could be made to bring the paper back to its original condition. The change in the quality of the paper is permanent, and rubbing or polishing or any other process within my knowledge will not restore the paper to its former condition, in which it readily takes the ink. The surface on which the solutions are applied is so large that it could hardly be cut out and a piece of other material substituted without escaping detection. My invention therefore affords almost absolute safety against the raising of checks and other fraudulent alterations of documents. The writing is not destroyed by my improved process, as all ordinary inks are more or less acid in their properties, and the addition of an alkali only neutralizes but does not remove the ink. Moreover, all ordinary inks have iron or some other metal in their composition and this metal is precipitated by sodium carbonate, which precipitation would tend to fix the ink instead of removing it. It is thought probable that some of the sizing is removed by the application of the herein-described solutions, but not enough to cause the original writing to become blurred.

It will be understood that I do not limit myself to the exact composition of the solutions hereinbefore described; but the proportions may be varied and equivalents substituted without departing from the nature of my invention.

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

1. The herein-described process for changing the ink-receiving qualities of paper and the like, which consists in treating the material first with a solution containing oil, and then with an alkaline solution, substantially as described.

2. The herein-described process for chang-

ing the ink-receiving qualities of paper and the like, which consists in treating the material first with a solution containing an essential oil, and then with an alkaline solution, substantially as described.

3. The herein-described process for changing the ink-receiving qualities of paper and the like, which consists in first treating the material with a solution containing oil, allowing the material to dry, and then applying an alkaline solution, substantially as described.

4. The herein-described process for changing the ink-receiving qualities of paper and

the like, which consists in first treating the material with a solution containing oil, allowing the material to dry, then applying an alkaline solution, and finally drying the material by heat, substantially as described.

5. A solution for the treatment of paper and the like, containing oil of lavender, tincture of saffron, and alcohol, substantially as described.

HERMAN REMKE.

Witnesses:

E. C. RUNNER,
EDWARD CONSTANT.