

UNITED STATES PATENT OFFICE.

SOLOMON SCHWARZSCHILD, OF ROCHESTER, NEW YORK.

COMPOUND FOR PROTECTING COMMERCIAL PAPERS.

No. 822,556.

Specification of Letters Patent.

Patented June 5, 1906.

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To all whom it may concern:

Be it known that I, SOLOMON SCHWARZSCHILD, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Compounds for Protecting Commercial Papers and the Like, of which the following is a specification.

My present invention relates to improvements in compounds for preventing the falsification or alteration of negotiable paper, records, documents, and the like.

In putting my invention into practice the compound, in the form of a solution, may be applied over the face of the paper and writing thereon which it is desired to protect from alteration, by which three results may be obtained, all acting in a different way to accomplish the desired end—the prevention of the falsification of the paper. First, if the writing is in the usual black or blue-black ink it changes to a peculiar shade of brown, differing in color from the ordinary writing-inks; second, the application of the compound to the paper also changes its ink-receiving quality, so that the matter written on the paper after the protective compound has been applied thereto and allowed to dry will spread and blur as ink does when one attempts to write therewith on blotting-paper, thus rendering it practically impossible to add to or change writing on paper treated with my improved compound without producing such a result as may be readily detected; third, if it is attempted to change the writing by the application thereto of an acid ink-removing fluid the paper will become discolored and readily indicate change or attempted change.

The compound which forms the subject of this invention consists, in one form, of the following ingredients or their equivalents combined in the following proportions, viz: sodium hydroxid, ten parts; potassium hydroxid, twenty-five parts; sodium carbonate, 7.5 parts; potassium carbonate, 7.5 parts; sodium iodid, 2.5 parts; potassium iodid, five parts; ammonium iodid, 2.5 parts; potassium bromid, one part; sodium bromid, one part; ammonium bromid, one part; ammonium nitrite, 2.5 parts; sodium nitrite, 2.5 parts; potassium nitrite, 2.5 parts; lactic acid, twenty parts; water to make two hundred and fifty parts.

The sodium and potassium hydroxids and

the sodium and potassium carbonate act to change the color of the writing-ink over which the solution is applied and to destroy the sizing of the paper and render it porous. If it is attempted to change the writing by the application of an acid-removing fluid, the acid will liberate the iodids and bromids of the alkaline metals and discolor the paper. The nitrites also assist in the discoloration by aiding the weaker acids in breaking up the iodids and bromids. The lactic acid is used to neutralize a portion of the hydroxids and carbonates of the alkaline metals and is preferred to other acids, for the reason that when in combination with the alkaline metals it forms salts which do not crystallize on the roller or other applying device. The alkaline hydroxids being deliquescent absorb moisture from the air, so that as the water which is used in compounding the solution evaporates from the roller the hydroxids absorb moisture from the air, and this keeps the roller constantly damp.

While I have given above a formula containing a large number of ingredients, I may modify this formula by omitting some of the ingredients and change the proportions of those which remain. All of the sodium compounds may be omitted and the remaining proportions of the potassium compounds increased so that they will equal in amount the combined proportions of the sodium and potassium compounds. The same holds true when potassium compounds are omitted, or I may employ potassium hydroxid, potassium carbonate, potassium iodid, potassium bromid, sodium nitrite, ammonium nitrite, lactic acid, water, or potassium hydroxid, potassium carbonate, sodium iodid, ammonium bromid, potassium nitrite, lactic acid, water. I may further change the ingredients of the said compound without departing from the spirit of my invention.

What I claim is—

1. A protective compound for paper-writings and the like, formed by mixing a hydroxid of an alkaline metal, a bromid, a nitrite, and a weak acid.

2. A protective compound for paper-writings and the like, formed by mixing a hydroxid of an alkaline metal, an iodid, a nitrite, and a weak acid.

3. A protective compound for paper-writings and the like, formed by mixing sodium hydroxid, sodium carbonate, sodium iodid,

sodium bromid, sodium nitrite, ammonium bromid, ammonium nitrite, lactic acid, and water.

4. A protective compound for paper-writ-
5 ings and the like, formed by mixing potas-
sium hydroxid, potassium carbonate, potas-
sium bromid, potassium nitrite, potassium
iodid, ammonium bromid, ammonium ni-
trite, lactic acid, and water.

10 5. A protective compound for paper-writ-
ings and the like, formed by mixing potas-
sium hydroxid, potassium carbonate, potas-
sium iodid, potassium bromid, sodium ni-
trite, ammonium nitrite, lactic acid, and
15 water.

6. A protective compound for paper-writ-
ings and the like, formed by mixing potas-

sium hydroxid, potassium carbonate, sodium
iodid, ammonium bromid, potassium nitrite,
lactic acid, and water. 20

7. A protective compound for paper-writ-
ings and the like, formed by mixing sodium
hydroxid, potassium hydroxid, sodium car-
bonate, potassium carbonate, sodium iodid,
potassium iodid, ammonium iodid, potas- 25
sium bromid, sodium bromid, ammonium
bromid, ammonium nitrite, sodium nitrite,
potassium nitrite, lactic acid, and water.

In testimony whereof I affix my signature
in presence of two witnesses.

SOLOMON SCHWARZSCHILD.

Witnesses:

D. CLINTON SEE,

L. LA VERGNE LEE.