

UNITED STATES PATENT OFFICE.

GEORGE SMILLIE, OF NEW YORK, N. Y.

IMPROVED GREEN INK.

Specification forming part of Letters Patent No. 37,984, dated March 24, 1863.

To all whom it may concern:

Be it known that I, GEORGE SMILLIE, of the city, county, and State of New York, have invented a new and Improved Green Ink for Printing; and I do hereby declare that the following is a full, clear, and exact statement of the component parts of and mode of manufacturing the same.

The basis of green ink commonly used in steel-plate and other printing is composed of anhydrous oxide of chromium. This, by reason of the hard and sharp character of its particles, wears away the plates or other printing-surfaces very rapidly, and when used for bank-note printing rapidly wears away the points of the pens used in signing the notes if the signatures happen to come on the printed impression.

The object of my invention is to obtain a green ink which is not liable to the above objection, and which at the same time is indestructible; and to this end it consists in the employment, as the basis of an ink, of a compound of chromium and asbestos or analogous material.

My mode of preparing the ingredients is as follows: Take the hydrated oxide of chromium, dissolve it in muriatic acid, and evaporate the solution. The resulting compound of chromium thus obtained is washed and dried and reduced to an impalpable powder by trituration. The asbestos, having been also reduced to the same condition by trituration, is incorporated with the chromium by mixing, stirring, and triturating them together in a dry state. This compound forms the basis of the

ink, which is made by mixing it with oil in the manner commonly practiced with other bases employed in the manufacture of printing-ink. The proportions of the chromium compound and asbestos may be varied according to the desired color of the ink. As the chromium constitutes the coloring-matter, the ink will be paler or darker as a greater or less portion of asbestos is used. I generally use about one (1) part, by weight, of asbestos to two (2) parts of the chromium.

This ink, having its basis composed of two entirely indestructible elements, is unassailable by any or all of the known reagents, as iodine, chlorine, alkalies, and acids, while, owing to the extreme smoothness to which the chromium compound and asbestos can be brought by trituration, it neither wears the plate or other printing-surface nor the pen employed in writing over its impression in the same manner as the ink made of the anhydrous oxide of chromium as already used. The asbestos gives the ink a more unctuous character, which renders it capable of being easily worked in printing.

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

A printing-ink having for its basis a compound of chromium and asbestos or other analogous and suitable material, substantially as herein described.

GEORGE SMILLIE.

Witnesses:

HENRY T. BROWN,
GEO. W. REED.