

UNITED STATES PATENT OFFICE.

LEWIS FRANCIS, OF NEW YORK, N. Y.

IMPROVEMENT IN INK FOR PRINTING AND OTHER PURPOSES.

Specification forming part of Letters Patent No. **102,243**, dated April 26, 1870.

To all whom it may concern:

Be it known that I, LEWIS FRANCIS, of the city, county, and State of New York, have invented, made, and applied to use a new and Improved Ink for Printing and for other Purposes; and that the following is a full, clear, and exact description of the same.

The nature of my invention consists in combining glycerine, saccharine matter, and some gummy substance with coloring matter, to form an ink for printing and other purposes, as more fully hereinafter set forth.

To enable those skilled in the art to make and use my invention, I will describe the same.

I take one pound of glycerine and add to the same two pounds of white sugar and six ounces of gum-arabic, softened by some proper solvent before being added; then add the coloring matter in sufficient quantity to give to the ink the desired color. I then heat the ingredients in a steam-kettle to dissolve the saccharine matter, and to unite it with the gum, glycerine, and coloring matter, after which it is ground, as in the case of printing-inks, in any suitable mill.

By the process just recited, the glycerine can be made to "set" or dry, giving the glycerine an advantage over the oils usually used in the manufacture of many kinds of printing-ink; and when the ink is employed in the printing of tinted grounds for checks or other

work, it causes no inconvenience to the writer, as the writing-ink flows freely upon it, and cannot be removed without first destroying the tinted ground, and canceling-marks placed upon printing done with this improved ink cannot be removed without first destroying the printing.

When the ink is required of a more permanent nature, some bituminous or resinous substance may be substituted, in whole or in part, for the gum, care being taken that the same shall be first dissolved by its proper solvent before being added in the manufacture of the ink.

I do not intend to confine myself to the proportions stated, as it will be found necessary to vary the ingredients forming the ink to suit the various kinds of work to be accomplished, and the character of the coloring matter used, and in some cases the gum or saccharine matter may be omitted.

Having thus set forth my invention, what I claim as new is—

The use of glycerine, saccharine matter, and gum, or their equivalents, when combined with any suitable coloring matter, to form an ink for printing or other purposes, substantially as herein set forth.

LEWIS FRANCIS.

Witnesses:

A. SIDNEY DOANE,
WM. HASTINGS.