

UNITED STATES PATENT OFFICE.

EDWARD MENDEL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN INKS FOR PRINTING PROTECTIVE TINTS ON COMMERCIAL BLANKS.

Specification forming part of Letters Patent No. **216,625**, dated June 17, 1879; application filed January 27, 1879.

To all whom it may concern:

Be it known that I, EDWARD MENDEL, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ink for Printing Protective Tints on Commercial and other Blanks; and I hereby declare the following to be a full, clear, and exact description of my invention, such as will enable others skilled in the art to make and use the same.

My invention consists in the ink which I employ for printing such protective tint, the ingredients of which are glycerine, starch, zinc-white, and grape-sugar or glucose, combined with any suitable coloring-matter.

To enable others skilled in the art to which it appertains to make and use my invention, I will proceed to describe completely the process by which I print the protective tint aforesaid.

The method which I employ for producing the plates from which the protective tint is printed is as follows: The designs or forms are put upon the stone or other material by the ordinary transferring process. The stone or plate is then rolled up with—that is, passed over by—rollers coated with an ink composed of lamp-black, borax, bees-wax, and asphaltum, made up with ordinary printers' varnish, this ink being repeatedly applied by means of the rollers alternately with sulphuric or nitric acid until an etching is completed and the plates ready for printing on any kind of cylinder-press.

The ink used for printing the work is produced, as above stated, by using color combined with glycerine, starch, zinc-white, and grape-sugar or glucose. I prefer to employ the following substances and proportions, viz: glycerine, five parts; grape-sugar, one part; starch, one part; French zinc-white, one part.

"French white," or "French zinc-white," is the commercial name for the finest quality of zinc-white, which is manufactured in France.

In making my ink I mix the above-named

four ingredients together mechanically, first melting the grape-sugar by means of moderate heat. I do not limit myself absolutely to the above proportions, since these may be varied considerably without materially affecting the result. This mixture may be kept on hand in any required quantity, and portions of it, when needed, colored to suit the occasion. For this purpose I use, by preference, the well-known aniline coloring substances reduced to an impalpable powder, though I do not limit myself to these. The proportion of any such aniline coloring-matter necessary to be used is very minute, and, partly for this reason and partly owing to the fact that the different-colored substances vary greatly in their coloring power, it is impossible to indicate the proportion with exactness. It is proper to suggest, however, that the effect sought is not a pronounced color, but a tint merely. With this end in view, and the relative effects of the substances being known, no difficulty in the matter of determining as to the proper quantity can possibly present itself to persons practiced in the art of mixing lithographic inks.

This composition constitutes an ink or dye perfectly free from grease, and subject to removal from the paper on which it is printed by the action of alkalies, acids, or even water—in short by any substance whatsoever having a tendency to remove ink—leaving the paper perfectly clean wherever the chemicals used for the removal of ink have been applied. The tint, pattern, or design prevents alteration also by mechanical erasure.

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

An ink composed of glycerine, starch, zinc-white, grape-sugar or glucose, and coloring-matter, substantially as described, for the purpose set forth.

EDWARD MENDEL.

In presence of—

THOS. P. POWER,
SAML. W. PEASE.