

United States Patent Office.

GEORGE W. CASILEAR, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 104,554, dated June 21, 1870.

IMPROVEMENT IN PRINTING-INK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE W. CASILEAR, of Washington, District of Columbia, have invented an Improvement in Printing-Inks, of which the following is a full, clear, and exact description, sufficient to enable persons skilled in the art to make and use the same.

The object of my invention is to produce an ink for printing alone or in conjunction with embossing from steel plates and other printing media, or by surface-printing from the white line of geometrical lathe or cycloidal work upon ordinary printed checks, stamps, or other securities, using for that purpose a highly sensitive ink, to prevent washing, alteration, or photographing; and

The nature of my invention consists in incorporating with the ordinary coloring materials or pigments employed in manufacturing inks, a vehicle, which, while it prevents the inks from drying in an insoluble or permanent form, as is the case with the ordinary printing-inks used for surface and plate-printing, yet, at the same time, will permit it to dry so far as to lose all gummy or sticky nature inconsistent with the ordinary use of the stamps, checks, or other securities printed therewith, and yet be readily soluble and penetrable by acids and chemicals such as are used in washing stamps, erasing or altering values upon checks, bonds, &c., and, further, to unite with these qualities that degree of tackiness while inking the plate or form so essential in the mechanical process of printing.

Many efforts have been made heretofore, but with very unsatisfactory results, to produce the first-mentioned quality of drying in a soluble form by using the various soluble gums as substitutes for the several oils and varnishes of the commercial inks. Such inks have, however, been found to be defective in their working qualities, owing to their want of tackiness or strength, and a tendency to dry and clog up the plates or types in the process of rolling the ink over the plate or form, while, on the other hand, in the attempt to use glycerine, honey, or other saccharine or hygroscopic substances, to prevent such premature drying

and intractability, an ink is produced which leaves the print itself in such a gummy or semi-fluid condition as to be readily smeared, blurred, or defaced by ordinary handling or by the temperature and moisture of the atmosphere.

To correct these evils, I have, by continued experiments, discovered that by combining the glycerine with the "patent drier" of commerce in connection with boiled molasses, to give the compound a tacky nature, I obtain a vehicle in which the ingredients mutually correct the defects of each other, the boiled molasses giving great strength and tenacity to the composition, the drier overcoming the disposition of the glycerine to remain gummy and sticky after printing, and the glycerine preventing the drier from rendering the impression from becoming so fixed and permanent as to be insoluble and impervious to the action of certain fluids, acids, and chemicals, such as are used for removing the inks used for cancellation from stamps and other papers of value. This soluble quality insures the disfiguring and destroying of the design or ground-work tint, when such fraudulent attempts are made, thus effectually preventing the alteration of bonds and checks and the washing off of cancellation marks from internal revenue and postage stamps, that the same may not be used and re-used, to the detriment of both public and private interest, without leaving unmistakable traces of the fraud upon the face of the stamp or paper so tampered with.

Claim.

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

The combination of "patent drier" with glycerine and boiled molasses, or their equivalents, to produce a vehicle for making soluble or fugitive printing-ink, substantially as set forth and described.

GEO. W. CASILEAR.

Witnesses:

FRANCIS TOUMEX,
DAVID M. COOPER.