

UNITED STATES PATENT OFFICE.

LEWIS FRANCIS AND F. W. LETMATE, OF NEW YORK, N. Y.

IMPROVED COMPOSITION FOR MAKING PRINTERS' INKING-ROLLERS.

Specification forming part of Letters Patent No. 35,149, dated May 6, 1862.

To all whom it may concern:

Be it known that we, LEWIS FRANCIS and FREDERICK W. LETMATE, of the city, county, and State of New York, have invented, made, and applied to use a new and useful Composition for the Manufacture of Printers' Inking-Rollers; and we do hereby declare the following to be a full, clear, and correct description of our said invention.

The nature of our invention consists in the use or employment of glue properly combined with glycerine and castor-oil or any of the fixed oils to form a composition from which printers' inking-rollers of a superior character may be made.

It is well known to every printer how difficult a matter it is to keep inking-rollers in a proper condition for use for a longer period than three months. The composition at present in use in the manufacture of printers' rollers being merely glue and molasses, the rollers soon dry up, shrink, and become hard, thereby losing their suction, which renders them unfit for use.

To produce a composition from which a printer's roller can be made, which roller will not be affected by the changes in the atmosphere or by long use, and be at all times in a proper condition for use, is the object of our invention.

In making our improved composition we combine the glue, glycerine, and castor-oil or any of the fixed oils employed in about the following proportions, namely: glue, two (2) pounds; glycerine, four (4) pounds; castor-oil or any of the fixed oils used, one (1) pound.

The glue employed is soaked in water for about five minutes, in order that it, (the glue,) when added to the glycerine, may be thoroughly incorporated with the same, which otherwise would not result, as glycerine will not dissolve glue.

The glycerine is placed in a steam-kettle and heated to a temperature of about 200° Fahrenheit, and the glue is added gradually to the glycerine, the latter being kept well stirred until all the glue has been added and thoroughly incorporated with the glycerine.

The castor-oil or any of the fixed oils employed is now added, and when it has been

well mixed with the glue and glycerine the composition may be cast into thin sheets or cakes of any desired form.

The sheets or cakes are exposed to the air several days, in order that any moisture remaining in the composition may be thoroughly evaporated. By the last process all liability of the composition to shrink after being cast into rollers from the presence of water or moisture is obviated. The composition is then ready for sale or for remelting and casting into rollers in the usual way.

The glue, glycerine, and castor-oil or any of the fixed oils, when thus combined, form a composition which will not shrink and which possesses a very great degree of suction—that is, capacity to receive and hold printing-ink, and still impart it readily to the types or form from which an impression is to be taken.

The peculiar advantages we would claim for our composition may be thus enumerated, namely: first, that rollers made from it never lose their suction or become hard or dry; second, that rollers made from it will not shrink; third, that rollers made from it last very much longer than the common glue and molasses roller, and when desired can be remelted and recast, thus enabling the printer to use our composition over and over again in the making of rollers, which is not the case with the composition at present made, which latter is of no use whatever after the roller made from it has become defective.

We do not wish to be understood as intending to confine ourselves to the use of the ingredients employed in the proportions herein set forth, as we are aware that in some cases it may be necessary to vary these proportions.

What we claim as our own invention, and desire to secure by Letters Patent, is—

The use or employment of glue, properly combined with glycerine and castor-oil or any of the fixed oils, to form a composition for the manufacture of printers' inking-rollers.

LEWIS FRANCIS.
FREDK. W. LETMATE.

In presence of—

A. TURNER,
A. SIDNEY DOANE.