

UNITED STATES PATENT OFFICE.

LEWIS FRANCIS, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
CYRUS H. LOUTREL, OF SAME PLACE.

IMPROVED COMPOSITION OF MATTER.

Specification forming part of Letters Patent No. **55,951**, dated June 26, 1866.

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 useful composition of matter for various purposes where elasticity is required—for the lining of vessels, for forming printers' inking-rollers, for the formation of images, molds, and for casting into plates from which impressions may be taken, of which the following is a specification.

The nature of my invention consists in combining glue, glycerine, and silicates, either with or without saccharine matter, to form a new and useful composition of matter for the above purposes.

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

In making my improved composition the ingredients are employed in about the following proportions: glue, four (4) pounds; glycerine, four (4) pounds; silicates, four (4) pounds; saccharine matter, (when used,) four (4) pounds. The glue is first soaked in water about five (5) or ten (10) minutes. The water is then decanted and the glue is left to stand about four (4) hours to soften. The glue is then placed in a steam or glue kettle and heated, when the glycerine is added. Next add the silicates employed and (when used) the saccharine matter. The whole is then left to boil at about 200° Fahrenheit for forty (40) minutes. It may then be cast into sheets or cakes of any desired form. These sheets or cakes are exposed to the air several days, in order that any water remaining in the composition may be thoroughly evaporated, or a vacuum-pan may be employed for the purpose. By this last process all liability of the composition to shrink from the presence of water is obviated. The composition is then ready for sale or for remelting and casting into any de-

sired form, and can be recast from time to time.

I do not intend to confine myself to the use of glue in the manufacture of the composition, as other gelatines, gums, resinous and bituminous substances may be employed, in whole or in part, for the glue. Neither do I intend to confine myself to any particular species of silicates, as they are various, and many of them may be advantageously employed, as kaolin, steatite, liquid quartz, water-glass, fuller's earth, &c., or any of the compounds of silica or alumina, as alum, &c.

If the silicates to be used have not been treated by their proper solvents to make them in the form of liquid quartz, care must be taken to have them properly pulverized or obtained by precipitation in the form of kaolin, &c.

The proportions in which the ingredients are employed may be greatly varied, as, if a composition harder than that first described be required, the ingredients may be employed in these proportions, namely: glue, four (4) pounds; glycerine, two (2) pounds; silicates, four (4) pounds; saccharine matter, (when used,) four (4) pounds. Or when the composition is required softer the ingredients may be incorporated thus: glue, four (4) pounds; glycerine, eight (8) pounds; silicates, four (4) pounds; saccharine matter, (when used,) two (2) pounds.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

Combining glue, glycerine, and silicates, with or without saccharine matter, to form a new and useful composition of matter for various purposes.

LEWIS FRANCIS.

In presence of—

A. SIDNEY DOANE,
W. D. EVERIT.