

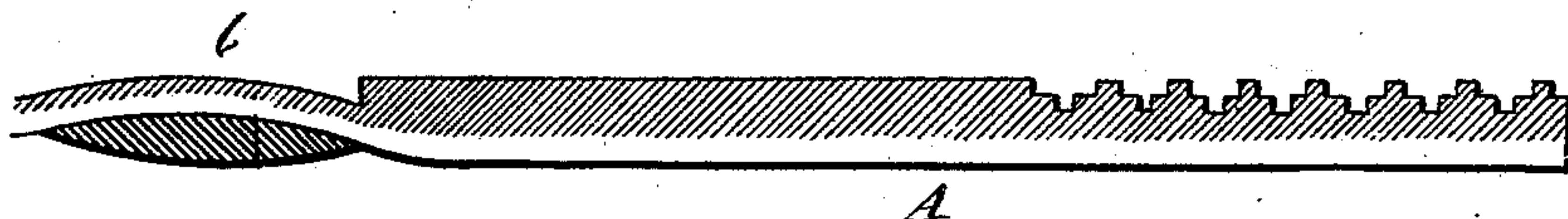
(No Model.)

F. SCHREINER & A. SCHOTT.

MATRIX FOR STEREOTYPING.

No. 376,348.

Patented Jan. 10, 1888.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRIEDRICH SCHREINER AND ARNOLD SCHOTT, OF PHILADELPHIA,
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MATRIX FOR STEREOTYPING.

SPECIFICATION forming part of Letters Patent No. 376,348, dated January 10, 1888.

Application filed September 9, 1886. Serial No. 213,064. (No model.)

To all whom it may concern:

Be it known that we, FRIEDRICH SCHREINER and ARNOLD SCHOTT, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Matrices for Stereotyping, of which the following is a specification.

In stereotyping it has been customary heretofore to soak sheets of paper in water, then to press the type into the soaked sheets, and to dry and harden said sheets, whereby considerable time is lost. It has also been customary to make a mortar or plastic composition and to press the type into the same and dry and harden said mortar by heat, which also requires considerable time and considerable skill.

The object of our invention is to provide a new and improved plastic matrix from which an impression can be made at any time in a dry state, no drying or hardening being required.

In the accompanying drawing a cross-sectional view of our improved dry matrix is shown.

The matrix is prepared in the following manner: A sheet, A, of cotton-batting, canton-flannel, lint, or any other similar fabric or material, is spread upon a level surface, and its upper surface is impregnated with a solution which renders said upper surface plastic and pliable and capable of receiving and retaining impressions. To prepare said plastic pliable surface, we mix about three-quarters of an ounce of thick fluid glue, one ounce of sirup, three-quarters of an ounce of glycerine, and three-quarters of an ounce of alum, all of which is thoroughly dissolved and mixed with boiling water, and then cooled. We then mix about seven ounces of ordinary flour—for instance, rye-flour—three ounces of finely-pulverized chalk, one ounce of finely-pulverized asbestos-powder, and then mix with water to form a stiff paste, which is then mixed with the above mixture of glue, sirup, glycerine, and alum, and stirred until it has about the consistency of thick cream. This mixture is then worked through a fine sieve for the purpose of removing lumps, &c. The mixture thus obtained is spread on the above-mentioned sheet of cotton-batting, canton-flannel, or lint by means of a brush as long as the said

fabric will absorb said mixture, whereby a smooth plastic surface is formed. After this the sheet has to be exposed to the air in order to dry.

By applying the mixture in the manner described the greater part of the cotton-batting becomes thoroughly impregnated with the mixture. The matrix thus formed has in its dry state a pliable and plastic upper surface, and can be stored up for use in its dry condition at any future time. The type is placed on a suitable bed, and our improved matrix placed upon it in such a manner that the plastic surface of the matrix rests upon the types. By means of a heavy roller or any other suitable pressing device the improved matrix is pressed upon the types, the characters of which are forced into the plastic surface of the matrix, thereby producing a perfect impression of the types.

As it may happen that hollows are formed in the matrix—for instance, in such places where there are large blanks between the types—the back of the matrix may be stiffened by filling said hollows with plaster-of-paris, water-glass, &c., as shown at b.

It is evident that the above-described mixtures for preparing the plastic surface of the matrix may be changed more or less, according to circumstances. The sirup and glycerine keep the plastic surface pliable and plastic, and may be replaced by other viscous substances. The alum and pulverized asbestos prevent destruction of the matrix by the molten metal.

The advantages of our improved matrix are as follows: From six to ten minutes of time are saved for each stereotype-plate, as the time usually consumed in drying the matrices is not required, as the matrices are not subject to heat for the purpose of drying and hardening, and there is no danger of distortion of the matrix on account of the contraction or expansion. The types themselves will last for a considerably longer time than formerly, as they are not subjected to the expansion and subsequent contraction by the exposure to heat for the purpose of drying the matrix. The types cannot, therefore, become brittle, as they do now by the old process of stereotyping.

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

As an improved article of manufacture and commerce, a semi-dry plastic and pliable
5 matrix for stereotyping, consisting of a sheet of fabric, one face of which is coated with a semi-dry plastic mass composed of glue, sirup, glycerine, and a powder, which mixture also
10 ric, substantially as shown and described.

In testimony that we claim the foregoing as our invention we have signed our names in presence of two subscribing witnesses.

FRIEDRICH SCHREINER.
ARNOLD SCHOTT.

Witnesses:

CHAS. F. EHRENFORT,
JOHN J. TURNER.