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MATRIX.

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978,824.

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Fig. 1.

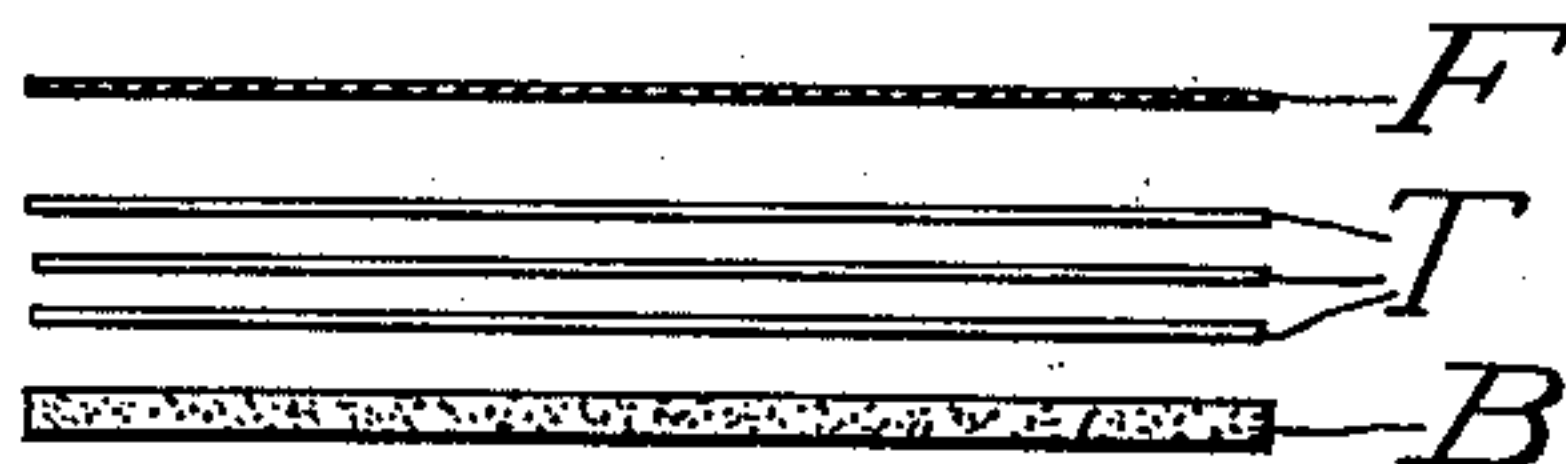


Fig. 2.



Witnesses

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To all whom it may concern:

Be it known that I, MICHAEL A. DROITCOUR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Matrices, of which the following is a specification.

The ordinary paste used by stereotypists in the building up of papier mâché matrices is not well adapted to give to the matrices the necessary firmness which will insure its compacting in the line of the pressure which it receives when impressed upon the form without any flowing or spreading outward from such line.

One object I have had in view in this invention has been to devise a paste which would cause the matrix material to have the necessary or desirable firmness so that the outward spreading can be avoided.

The ordinary stereotypers' paste is also not adapted to use in attaching metal foil such as tin foil as a facing to the impressed surface of the papier mâché or the tissue layers with which the papier mâché is customarily covered. Nor is the ordinary paste adapted to give the matrices the firmness or rigidity which they should have to enable them to stand up under the high pressure to which they are subjected in giving impressions to the printing plates I form from them.

Another object I have had in view in this invention has been to devise a paste which would also render the matrix strong and rigid.

My invention consists in the use of the paste which I describe herein in the building up or preparation of the matrices.

In the manufacture of the matrix in accordance with my invention I secure the thicknesses of the papier mâché or backing together with ordinary stereotypers' paste, and then I apply to this backing a plurality of sheets of tissue-paper, using my improved paste for securing the sheets of the latter together. The ordinary stereotype paste is commonly composed of flour, dextrin, water, white starch, and oxalic acid, or other preservative, boiled to a suitable consistency and then cooled. My improved paste consists of ordinary stereotype paste with an admixture of silicate of soda. Good results are obtained by uniting these ingredients in the proportion of three and one-half ounces

of the stereotypers' paste and one and one-half ounces of silicate of soda. The silicate of soda should be added cold to the ordinary stereotypers' paste and thoroughly mixed therewith by stirring. Of course, the paste may be used for the backing as well as the facing, but I do not wish to be limited to the proportions stated. I also use my novel paste in attaching the tin foil.

The tissue facing is applied to the backing preferably one sheet at a time; the face of the backing is covered with the silicate of soda paste and a sheet of tissue laid thereon and smoothed out; then this sheet of tissue is covered with paste and another sheet of tissue laid thereon; and in this way several sheets are put on to form the proper facing. Then the back of a sheet of tin-foil is covered with the silicate of soda paste and laid on the tissue facing and smoothed. I preferably use a metal roller to iron the facing sheets smoothly as they are applied and to force out any air which might be trapped under the sheets, and thus insure close contact at all points between the sheets of the facing.

By the use of my paste, I not only render the matrix sufficiently firm so that when it is impressed on the form, the type of the latter force the material inward in the direction of the pressure, instead of forcing it to seek escape by flowing laterally. It also acts to render the tin foil secure and prevent its becoming detached when the impression is made, and the rigidity of the matrix is increased so that it does not yield under the pressure exerted upon it when printing plates are shaped upon it.

In the accompanying drawings Figure 1 illustrates the several parts of the matrix blank before they are united; and Fig. 2 represents the complete matrix blank.

In said figures B represents the backing of blotting paper or any other suitable material; T the sheets of tissue paper, any desired number of which are pasted to each other and to the backing B with silicate of soda paste as above described; and F a tin-foil facing united to the tissue sheets by silicate of soda as above described.

I claim:—

1. A papier mâché matrix blank, comprising a backing of suitable material and a facing composed of a plurality of sheets of tissue paper attached to each other and to

the backing by a paste containing silicate of soda whereby the facing is adapted to retain and preserve fine lines and points in the intaglio impression in said facing made by the type surface, and rupture of the facing is prevented.

2. A matrix for producing printing surfaces consisting of a backing of suitable material and a facing of tin foil secured to said backing by a paste containing silicate of soda.

3. A matrix for producing printing surfaces consisting of a backing formed of

layers of suitable material united by paste, and a facing of tin foil secured to said backing by a paste containing silicate of soda.

4. A matrix for use in making printing surfaces, formed of layers of sheets united by paste containing silicate of soda, and a tin-foil facing united to said layers by paste containing silicate of soda.

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