

M. NELSON.
MOLD FOR STEREOTYPES.

No. 102,304.

Patented Apr. 26, 1870.

Fig. 1.

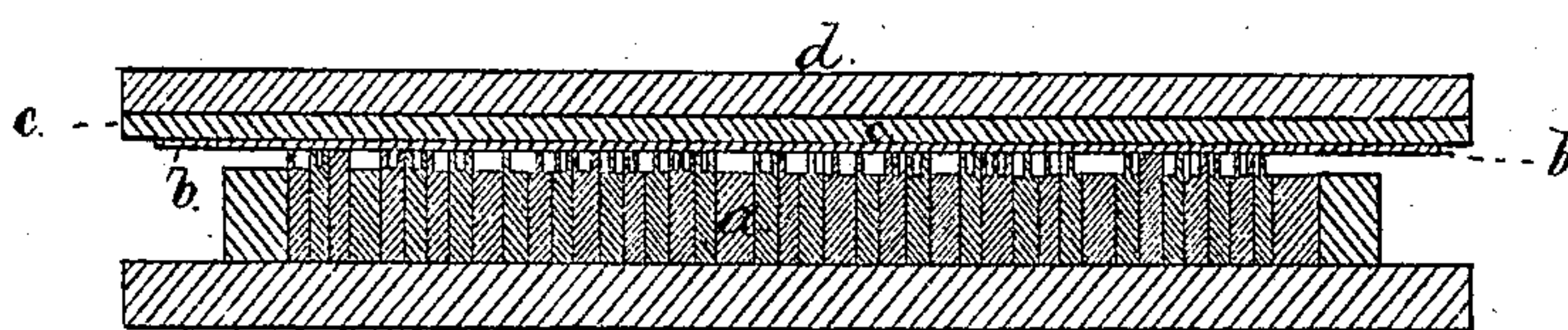


Fig. 3.

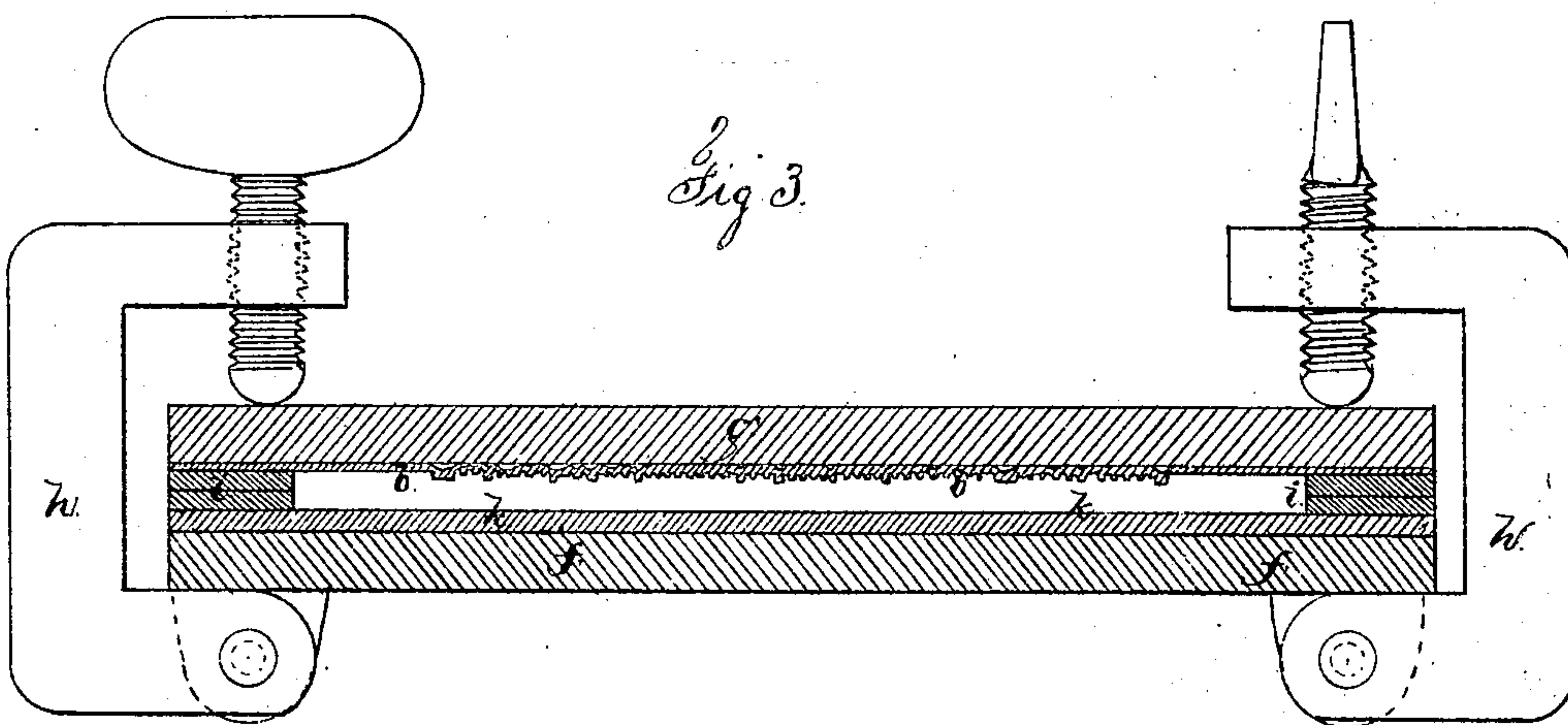
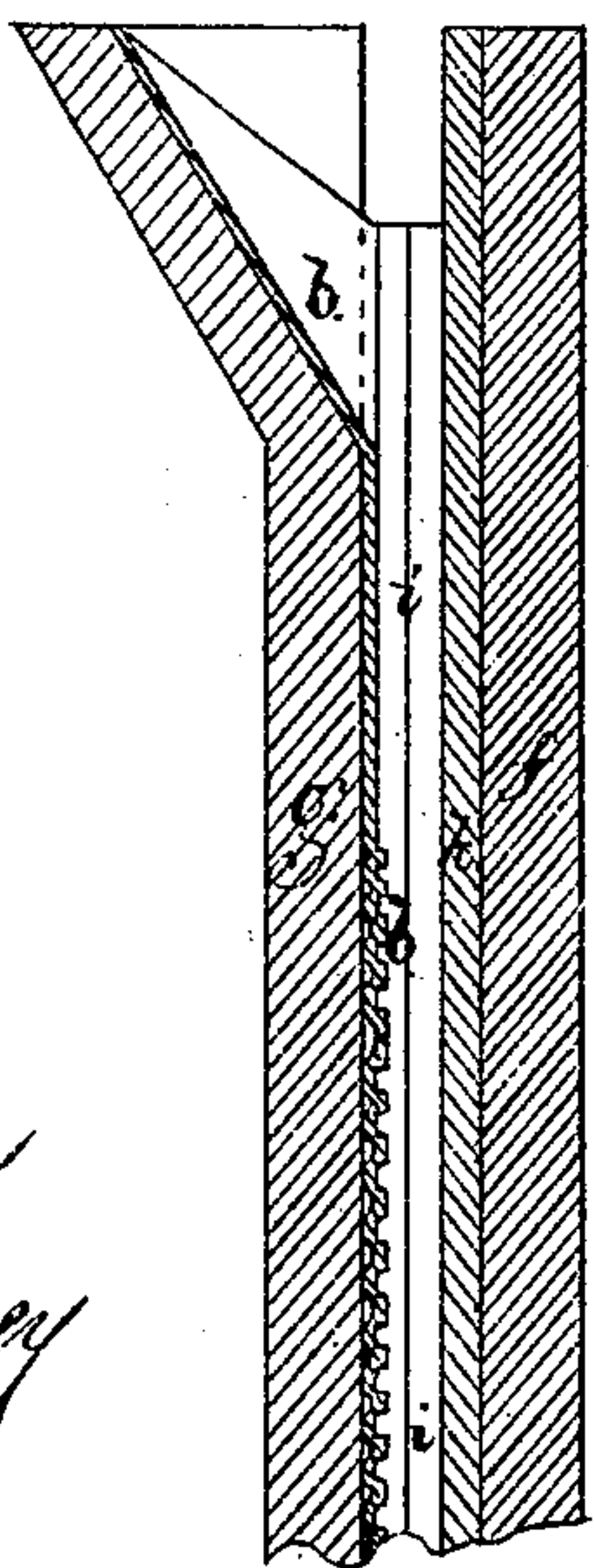


Fig. 2.



Witnesses,

Geo. D. Waer
Geo. T. Pinckney

M. Nelson

United States Patent Office.

MORTIMER NELSON, OF NEW YORK, N. Y.

Letters Patent No. 102,304, dated April 26 1870: antedated April 18, 1870.

IMPROVEMENT IN MOLDS FOR STEREOTYPES.

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, MORTIMER NELSON, of the city and State of New York, have invented and made a new and useful Improvement in Molds for Stereotypes; and I do hereby declare the following to be a full, clear, and exact description of the nature of the said invention, reference being had to the annexed drawing making part of this specification, wherein—

Figure 1 is a section showing the form of types and the manner of taking the impression or mold.

Figure 2 is a partial vertical section, and

Figure 3, a sectional plan of the mold employed by me, into which the type-metal is to be cast.

The same parts are denoted by like letters.

The object of this invention is to lessen the time occupied in taking a stereotype-mold and making the cast, at the same time lessening the cost, preventing injury to the types, and insuring a more perfect stereotype, and rendering the shaving of the back of the stereotype unnecessary.

I accomplish these objects by the use of a woven or knitted fabric coated with a composition impressed upon the types to produce the matrix, and then insert the same in a mold provided with non-conducting material, so that the metal does not chill, but perfectly fills the interstices of the matrix.

I make use of a fabric such as Canton-flannel, and coat the same with a composition, either by a brush or by dipping, the former preferred. The composition enters into the surface, and the projecting fibers become the means for holding all particles of the composition, so that the matrix will separate from the types and none of the pieces of the composition remain upon upon the surface of the types.

The composition I employ is made of Paris white, well boiled flour paste mixed to the consistency of cream, and the white of an egg, introduced into about five pounds of such composition; the same is thoroughly mixed and applied as aforesaid, and allowed to dry, or nearly so.

When the matrix is to be made the sheet should be damp; this may be effected by the use of a sponge, and water applied to the back of the fabric. I also prefer to rub plumbago upon the surface of the fabric prepared as aforesaid.

The matrix is made by laying a piece of said fabric upon the face of the types, then a sheet of India rubber or other elastic material, and subjecting the same to pressure in a suitable press, which indents the fabric between the types and takes a perfect impression of the faces of the types, in the composition upon the surface of said fabric.

In fig. 1—

a shows the types;

b, the sheet of prepared fabric;

c, the sheet of India rubber; and

d, the press-follower, or platen.

After the fabric has been pressed upon the types, the matrix is to be dried by a heated plate or sad-iron passed over the back surface; the matrix may then be removed and it will be found to separate freely and perfectly from the faces of the types.

I remark that the faces of the types should be oiled, as usual, previous to pressing the sheet of prepared fabric upon them.

In places where there are blank spaces between the lines or sections of types, I prefer to introduce a cord or a strip of thick paper, or a piece of such thick paper, to prevent the pressure of the melted metal forcing the fabric back near the middle of these large blank spaces.

The mold in which the stereotype is cast is formed of the plates *f* and *g*; the plate *f* is fitted with hinged clamps *h*, that can be swung around to clamp the plate *g*, and the plate *g* is beveled, as seen in fig. 2, to form a mouth for receiving the melted metal.

The plates *f* and *g*, but especially the plate *g*, should be kept heated, and upon this the stereotype-matrix *b* is laid, and upon the edges of it a frame of pasteboard, *i*, is placed, of a size to surround three sides of the page or column-matrix, and of a thickness corresponding to the thickness of the stereotype-plate.

The plate *f* is lined with a sheet of pasteboard or similar non-conductor *k*, in order that the type-metal, when poured in between the matrix *b* and sheet *k*, may remain in a fluid state and not quickly become chilled or set; thereby a perfect cast will be obtained.

The edges of the stereotype-plate will require to be sawed off, as usual.

Stereotypes made in this manner are very perfect, and require little or no picking or chiseling.

The types are not injured, as frequently happens in the ordinary way of forming the matrix; very little time is required, and the matrix can be laid aside for future use or reference if necessary.

I am aware that sheets of paper have been employed in forming the matrix, the same being pasted together before or during the process of forming the matrix.

I claim as my invention—

A sheet of woven material, such as Canton-flannel, prepared by a coating upon its surface, for use in making stereotype-molds by pressure, the said coating forming the surface of the matrix, and that is prevented from separating by the fibers of the woven fabric running throughout the composition, as set forth.

In witness whereof, I have hereunto set my signature this 29th day of July, A. D. 1869.

M. NELSON.

Witnesses:

GEO. DENNETT WALKER,

GEO. T. PINCKNEY.