

B. F. BELLOWS.
TYPE MOLD.

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1,002,959.

Patented Sept. 12, 1911.

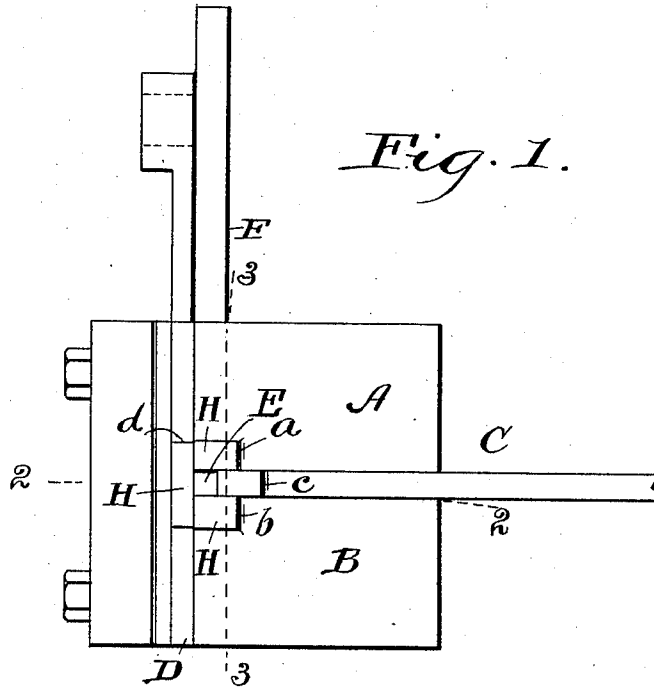


Fig. 1.

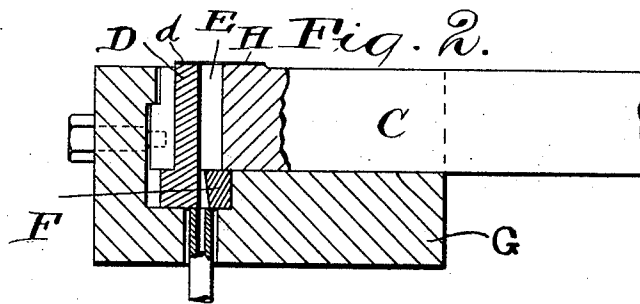


Fig. 2.

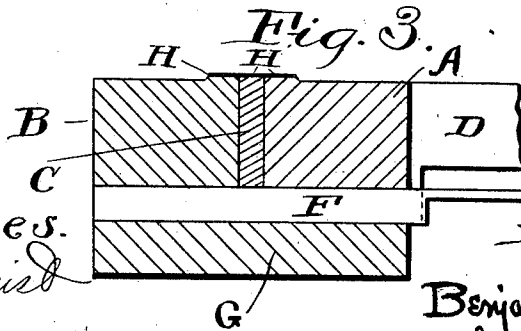


Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

BENJAMIN F. BELLOWS, OF CLEVELAND, OHIO, ASSIGNOR TO ELECTRIC COMPOSITOR COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-MOLD.

1,002,959.

Specification of Letters Patent. Patented Sept. 12, 1911.

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To all whom it may concern:

Be it known that I, BENJAMIN F. BELLOWS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Type-Molds, of which the following is a full, clear, and exact description.

One of the commonest forms of type molds consists of two side blocks, a mold tongue movably fitted between said side blocks, and a plate, usually movable, which engages with the ends of said side blocks, spanning the space between them, whereby there is inclosed by these four parts a rectangular mold cell. The bottom of this cell is formed in various ways as by a movable jet slide, or by the metal injecting nozzle, or by a plate with which the nozzle engages. The top of this cell is closed by a matrix—that is to say, a block having an intaglio representation of the character to be cast upon the top body. It is essential that the type cast in the cell shall be exactly type high. Possibly a variation of one or two ten thousandths of an inch from the correct height would not be a serious matter, but a greater variation would, for the finest kind of “book work” even so great a variation would seriously affect the value of the type. The repeated engagement and disengagement of the matrix with the surfaces of the mold parts surrounding the mold cell, after a not very long time, causes a wearing away of the engaging surfaces. When the top surfaces of the specified parts of the mold have become worn more than, say, two ten thousandths of an inch, the mold becomes useless. It has been proposed to prolong the life of the mold by forming the tops of these mold parts, adjacent to the mold cell, by inserting plates capable of being taken out and others substituted. This practice has not proven altogether satisfactory, primarily because molds so constructed are so expensive that the advantage of the construction does not warrant the expense.

The object of the present invention is to provide a mold whose parts may be originally made of the proper height, or may be restored to proper height, when worn, very easily and for a very small expense.

The invention consists in the mold hereinafter described and in the described process of completing the same.

The essential novel characteristics of the mold are that the mold parts shall be metal plated on their top surfaces adjacent to the mold cell, the metal used for so plating them being preferably nickel.

In the drawing, Figure 1 is a plan view of a mold which is of common form. Figs. 2 and 3 are respectively vertical sections of said mold in the plane indicated by lines 2 and 3 on Fig. 1.

Referring to the parts by letters, A and B represent the two blocks constituting the mold sides. These two blocks should be so fixed in position, as to a base plate G, that their proximate vertical faces are exactly parallel and at such distance apart that the mold tongue C fits nicely between them and is permitted the necessary sliding movement.

D represents a plate which is to be held against the end faces of the mold blocks A and B, and may or may not be movable in contact with said faces, as desired. These four parts arranged as described form the vertical walls of a rectangular mold cell of variable size. The bottom of this cell may be formed by the jet slide F.

The above mentioned parts may be of conventional form. It is necessary, however, that the top surfaces of the two blocks A and B, the mold tongue C and the plate D around the mold cell be in the same horizontal plane, which plane must be a definite distance measured to thousandths of an inch from the foot of said mold cell, however the latter may be formed. It will be noted that in the drawing these top surfaces adjacent to the mold cell are slightly elevated above the rest of the top surfaces of the parts. This is not necessary, but is desirable because thereby in the practice of the process, now to be described, for bringing these surfaces into the desired plane, only relatively small areas must be plated. Upon these surfaces, which are indicated by *a*, *b*, *c* and *d*, a thin layer H of a suitable metal, preferably nickel, is electro-deposited. This metal may be plated upon these surfaces when the mold is first made, or only after said surfaces have become worn by use. When used at the latter time the deposit metal plated thereon will elevate said surfaces as much as required. It may be that a skilful electro-plater can deposit just enough of the metal upon these surfaces to

restore them to the required plane, but, generally speaking, this is not to be expected, and need not be seriously tried, because after the metal has been deposited, these surfaces
5 can be ground or lapped down to the required amount.

Having described my invention, I claim:
A type mold which includes two side blocks, a tongue movably fitted between
10 them, and an end plate engaging the ends of said mold blocks, thereby inclosing a vertical rectangular type cell of variable size, said four parts having their top surfaces

immediately adjacent to and surrounding said type cell elevated above the major parts
15 of the top surfaces of said elements, and said elevated portions having electro-plated top surfaces, said electro-plated surfaces being all in the same plane.

In testimony whereof, I hereunto affix my
20 signature in the presence of two witnesses.

BENJAMIN F. BELLOWS.

Witnesses:

H. R. SULLIVAN,
E. B. GILCHRIST.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."