

(No Model.)

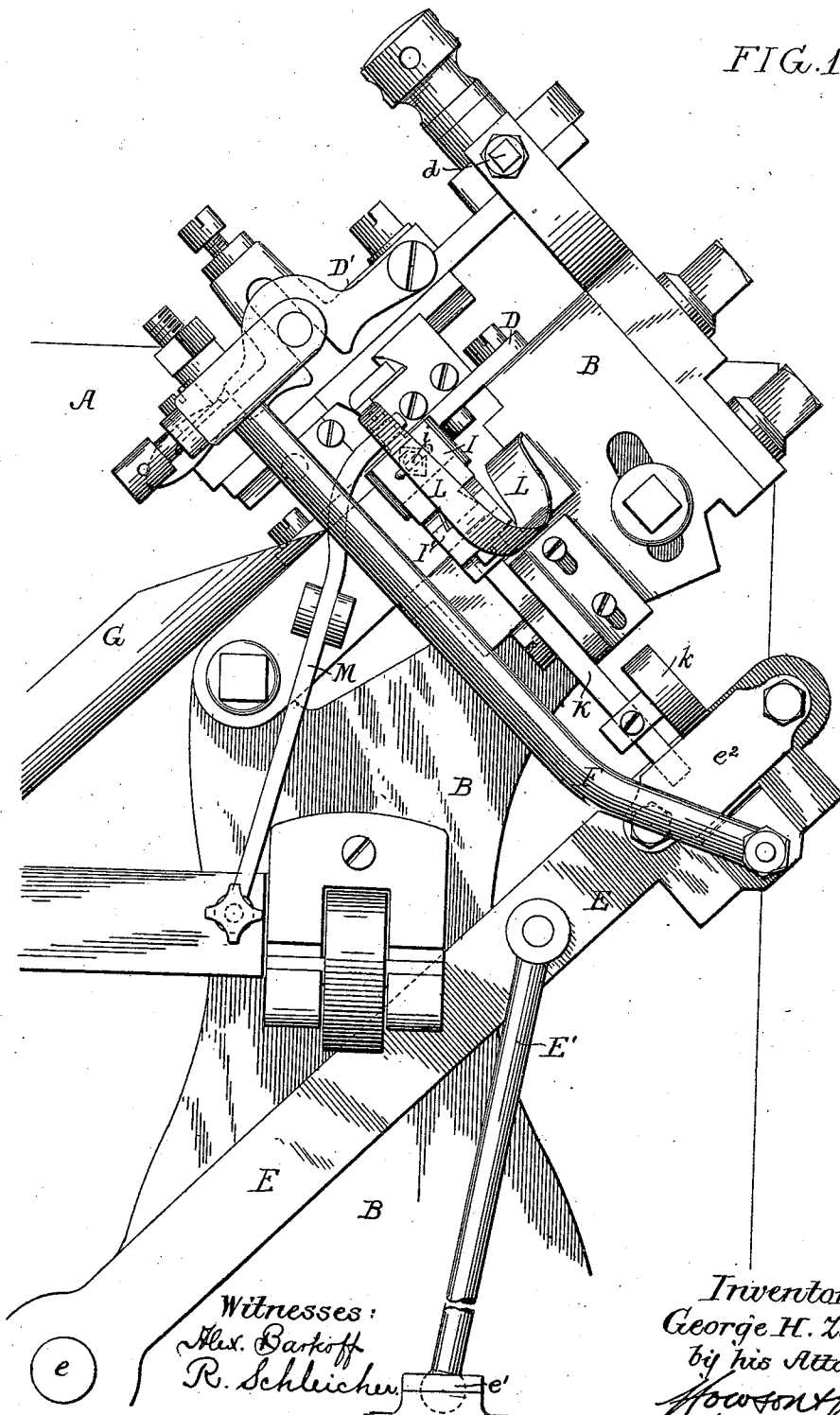
2 Sheets—Sheet 1.

G. H. ZIEGLER.  
TYPE CASTING MACHINE.

No. 553,575.

Patented Jan. 28, 1896.

FIG. 1.



Witnesses:

Max. Barkoff

R. Schlicher

Inventor:  
George H. Ziegler  
by his Attorneys

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FIG. 3.

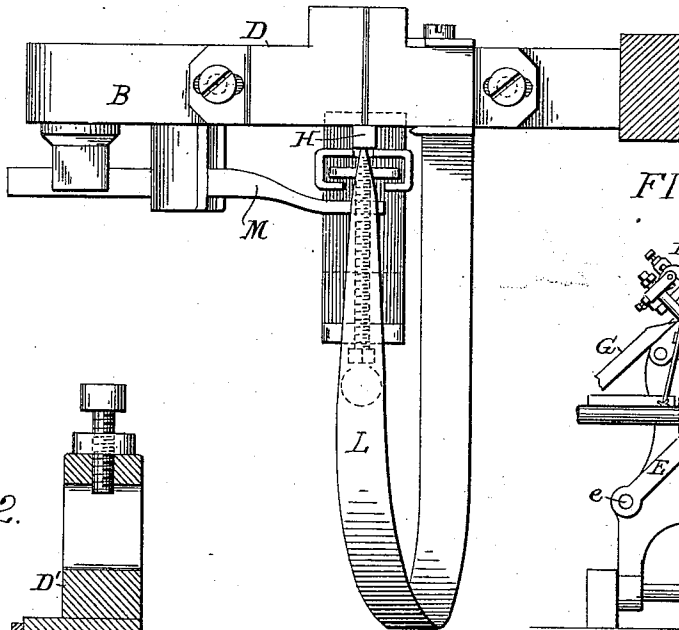


FIG. 6.

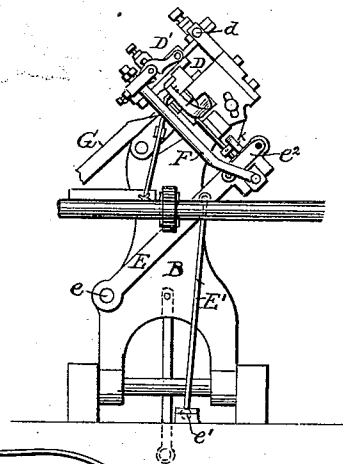


FIG. 2.

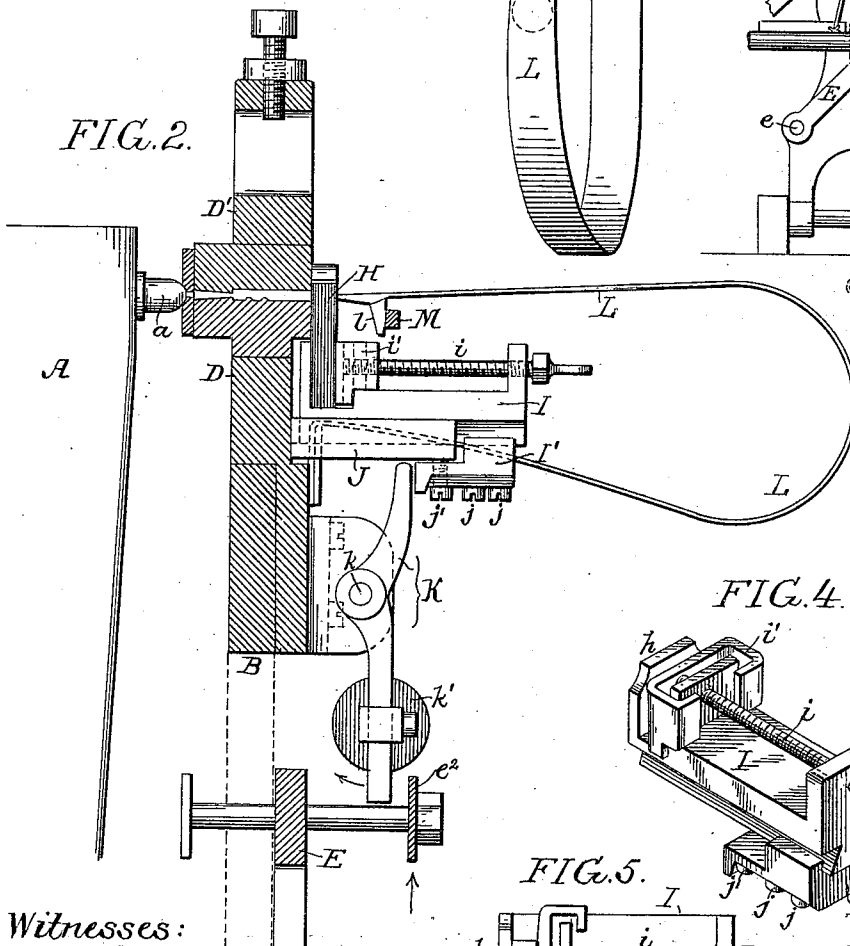


FIG. 4.

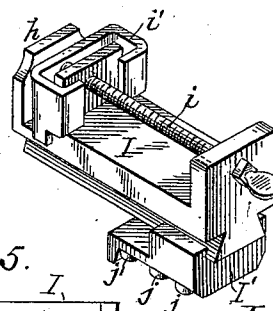
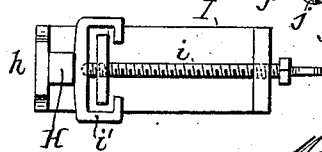


FIG. 5.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

GEORGE H. ZIEGLER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
THE MACKELLAR, SMITHS & JORDAN COMPANY, OF SAME PLACE.

## TYPE-CASTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 553,575, dated January 28, 1896.

Application filed May 14, 1891. Serial No. 392,761. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. ZIEGLER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Type-Casting Machines, of which the following is a specification.

The object of my invention is to construct a machine for casting type in which the matrix is moved toward and from the mold in a straight line, and which is carried by a slide independent of the presser-spring.

My invention is especially applicable to machines termed "vibrating" machines, which have a reciprocating motion toward and from the melting-pot.

In the accompanying drawings, Figure 1 is a side view of sufficient of a type-casting machine to illustrate my improvements. Fig. 2 is a sectional view with parts removed in order to avoid confusion. Fig. 3 is an oblique face view, the upper part of the type-mold being removed. Fig. 4 is a perspective view of the slide. Fig. 5 is a plan view of the matrix-holder, and Fig. 6 is a diagram view illustrating a vibrating type-casting machine.

A is the melting-pot for the type-metal. *a* is the nipple through which the metal is forced into the mold by the usual pump common in type-casting machines.

B is a pivoted frame carrying the mold and matrix, and is situated in front of the melting-pot, and has a vibrating movement toward and from the nipple.

D is the lower half of the type-mold carried by the pivoted frame and is fixed thereto.

D' is the upper or movable half of the type-mold, and is pivoted to the lower mold at *d*.

E is a pivoted lever connected to the frame B at *e*. To this lever is attached a rod E', which is swiveled in a bearing *e'* on the base of the machine, as shown in Fig. 6.

The lever E is connected to the upper half of the mold D' by a rod F, so that as the frame B is withdrawn from the nipple the upper half D' of the mold is raised by the lever E. This mechanism is common in all machines of this class.

G is the chute to receive the type as it comes from the mold.

H is the matrix, which is supported by and fixed to a slide I, it being clamped therein by

the set-screw *i*, the slide having an extension *h*, against which the matrix is pressed by the set-screw.

Between the end of the screw and the matrix is an adjusting-plate *i'*, which has a slightly-rounded face, and into a socket in the back of the plate fits the ball end of the screw *i*, so that it will accommodate a matrix which is not absolutely true at the back.

The slide I is adapted to ways in a bracket J projecting from the frame B, as clearly shown in Fig. 2. Adjustably secured by set-screws *j* to the under side of the slide I is a block I' having an adjustable screw *j'* which rests against the bracket J. The object of this screw is to raise one end of the block I' and adjust the matrix to the mold. The block I' is in the line of one arm of a lever K, Fig. 2. This lever is pivoted at *k* and extends into the path of the lever E, which in the present instance has a plate *e'* which strikes a roller *k'* on the lever, forcing the lever K in the direction of its arrow and moving the matrix-slide and matrix away from the mold after the type is formed therein, so as to provide a free discharge for the type.

L is the usual matrix-spring secured to the frame B and having a point which enters a cavity in the back of the matrix. The matrix is pressed toward the mold by the spring so as to make sure register between the mold and the matrix.

Pivoted to the frame is a lever M. One arm of the lever passes back of a lug *l* on the spring L. The other arm of the lever comes in contact with the fixed portion of the machine so as to press the matrix hard against the mold during the casting of the type.

The main feature of my invention is to carry the matrix in this class of machines in a carriage or slide which holds the matrix at all times, preventing it from falling or becoming out of line without depending on the spring for this purpose, and another feature is to draw the matrix from the mold in a straight line. My invention enables the ready application of matrices of different sizes to the machine without unnecessary adjustment.

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

1. The combination in a vibrating type cast-

ing machine, of the vibrating frame, the lower  
half of the mold fixed thereto, the pivoted  
upper half of the mold, a bracket J extending  
from the frame below the mold, a slide I on said  
5 bracket, a block I', a set screw  $j'$  in said block  
adapted to rest against the under side of the  
bracket, a matrix, a clamp screw  $i$  therefor,  
and mechanism for withdrawing the matrix  
and the upper half of the mold when the type  
10 is cast, substantially as set forth.

2. The combination in a type casting machine, of the mold, the bracket J, a slide I, thereon, and mechanism for moving said slide

toward and from the mold, a matrix, an extension  $h$  on the slide, a set screw adapted to 15 the slide, and an adjusting plate  $i'$  having a rounded face between which and the extension  $h$  the matrix is clamped by the set screw, substantially as described.

In testimony whereof I have signed my 20 name to this specification in the presence of two subscribing witnesses.

GEO. H. ZIEGLER.

Witnesses:

HENRY HOWSON,  
JNO. E. PARKER.