No. 691,226. Patented Jan. 14, 1902.

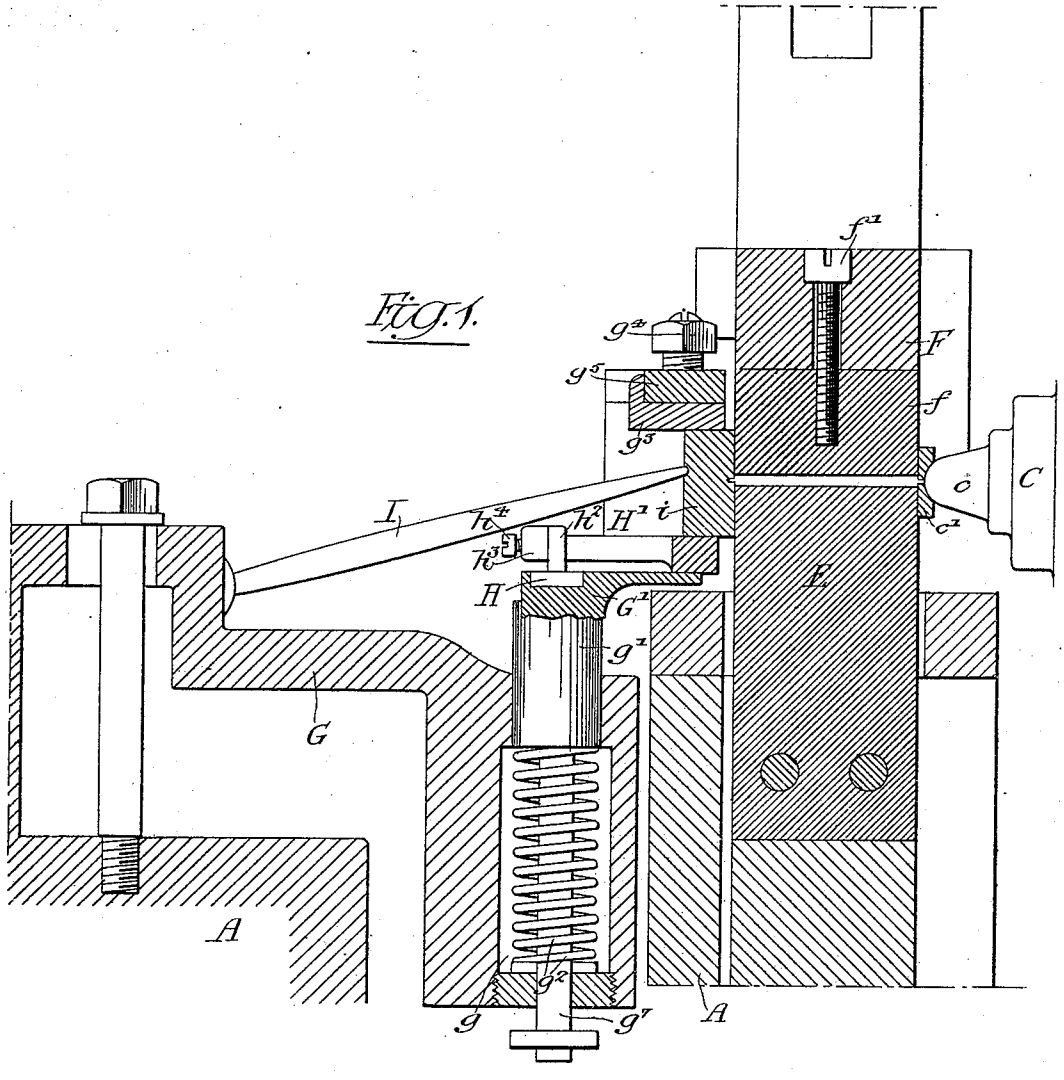
G. H. ZIEGLER.

MATRIX CARRIER FOR TYPE CASTING MACHINES.

(Application filed June 7, 1901.)

(No Model.) 3 Sheets—Sheet 1.

FIG. 1.



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(No Model.) 3 Sheets—Sheet 2.

Fig. 2.

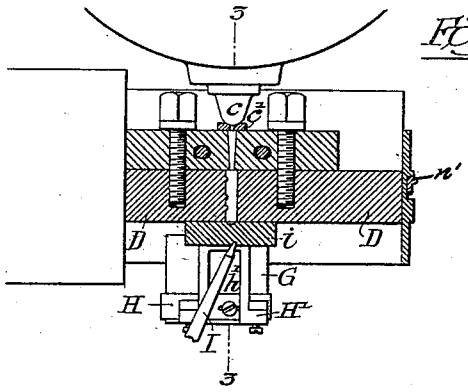


Fig. 3.

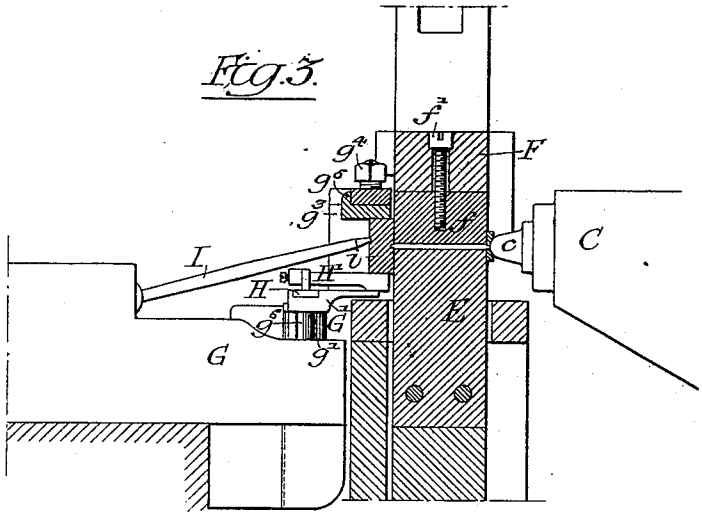
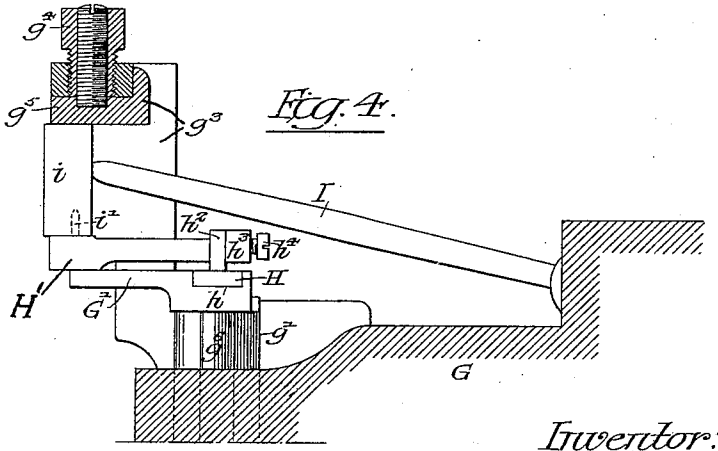


Fig. 4.



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(No Model.) 3 Sheets—Sheet 3.

Fig. 5.

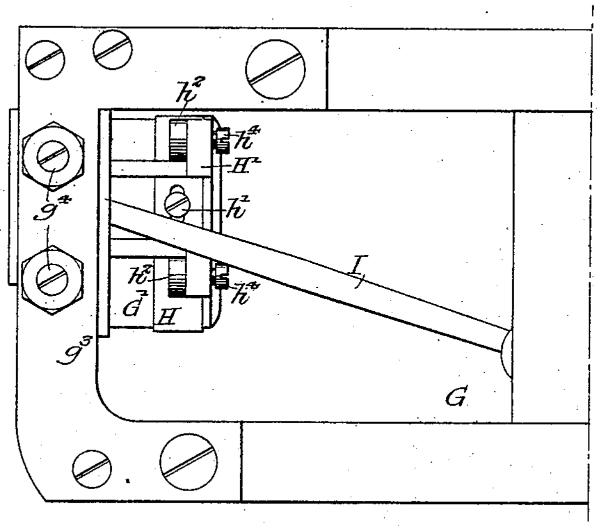


Fig. 8.

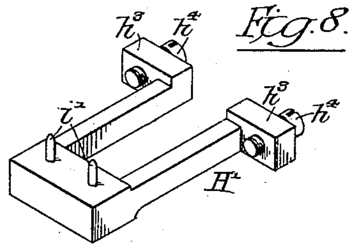


Fig. 7.

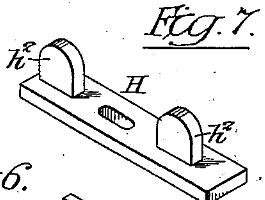
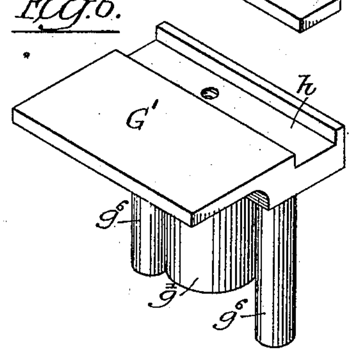


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE HENRY ZIEGLER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE AMERICAN TYPE FOUNDERS' COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

MATRIX-CARRIER FOR TYPE-CASTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 691,226, dated January 14, 1902.

Application filed June 7, 1901. Serial No. 63,588. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HENRY ZIEGLER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Matrix-Carriers for Type-Casting Machines, of which the following is a specification.

My invention relates to certain improvements in type-casting machines, and more particularly to improvements in that part of a type-casting machine known as the "matrix-carrier."

The object of this invention is to perfect the details of the machine illustrated and described in patents issued to me, No. 376,765, of January 24, 1888, and No. 660,237, of October 23, 1900. This object I attain as hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse sectional view of part of a type-casting machine showing my improved matrix-carrier as applied thereto. Fig. 2 is a sectional plan view of the mold portion of the machine. Fig. 3 is a vertical sectional view on the line 3 3, Fig. 2. Fig. 4 is an enlarged sectional view showing the matrix-holder in detail. Fig. 5 is a plan view of the matrix-holder illustrated in Fig. 4, and Figs. 6, 7, and 8 are detail views of the matrix-holder parts.

In the above drawings, A is a part of the frame of a type-casting machine forming the support of a mold for the type, which is shown as formed by two side plates D D, a body-piece E, and a plunger F. The body-piece is constructed to fit the space between the said two plates and acts as the bottom of the mold, while the sliding plunger F acts as the top of the mold and carries the type from the mold to a type-channel, in which it is subjected to a finishing treatment. This channel is in the body or frame A of the machine, there being a projection n' extending into said channel which fits in the nick in the side of the type and insures its proper position while in the channel. Inserted in the bottom of the plunger is a block f, held by a screw f', the said block resting directly over the mold during the casting of the type, as clearly shown in Figs. 1 and 3. The nipple c of a melting-pot C fits against a perforated plate c', so that there is a tight joint between the mold and the melting-pot.

G is the matrix-carrier, constructed to slide upon a projection from the frame of the machine, and is provided with a pocket g at its forward end, in which rests a depending portion g' of the table G', on which the matrix i is clamped. Extending from the depending portion g' is a rod g^7, around which is a spring g^2, tending to force upwardly the table G'.

g^3 is a yoke-piece secured to the matrix-carrier G and provided with double set-screws g^4, which carry the upper clamp-plate g^5.

On each side of the depending portion g' of the table G' are guide-bars g^6, which enter holes in the matrix-carrier, so as to hold the table G' in position. In the upper surface of this table is a groove h, and adapted to the said groove is a plate H, confined to the table by a screw h'. The screw passes through a slot in said plate H, which is also provided with two lugs h^2, as shown in Fig. 7.

H' is a U-shaped plate having two projections h^3 resting back of the lugs h^2 of the plate H and provided with adjusting-screws h^4, which bear against the rear of the lugs. Projecting from the plate H' are two pins i', which enter holes in the bottom of the matrix i, so that when in position the latter is held from turning.

The matrix-carrier G is provided with the usual needle I, which rests against the rear of the matrix and is adapted to a socket in the projection of the matrix-carrier, so that it can adapt itself to different matrices.

It will be understood that the present case is restricted to the matrix-carrier and its related parts, the remainder of the mechanism constituting the complete type-casting machine being described and claimed in an application for United States Letters Patent filed by me February 17, 1900, Serial No. 5,587, and allowed May 13, 1901.

I claim as my invention—

1. In a type-casting machine, the combination of a matrix-carrier, a table yieldingly supported thereon, a yoke, a U-shaped plate

on the table having means for adjusting its position in a horizontal plane upon said table, a matrix mounted on said plate and confined between it and the yoke, with means on the plate for preventing the matrix from turning, substantially as described.

2. In a type-casting machine the combination of a matrix-carrier having in it a recess, a table having a depending portion constructed to fit the recess in the carrier, a spring yieldingly supporting the table, a yoke, a U-shaped plate mounted on the table, pins projecting therefrom, and a matrix mounted on said U-shaped plate, the said matrix being engaged by the pins and confined between the said plate and the yoke, substantially as described.

3. The combination in a type-casting machine of a matrix-carrier, a table carrying projecting lugs mounted thereon, a spring yieldingly supporting the table, a U-shaped plate resting on the table and having projections extending back of the lugs, set-screws placed to adjust the position of the U-shaped plate, a yoke-frame, a matrix and a clamp-plate carried by said frame between which and the said U-shaped plate the matrix is held, substantially as described.

4. The combination in a type-casting machine, of a matrix-carrier, having in it recesses, a table having a depending portion and guide-bars constructed to fit said recesses in the carrier, the same also having a spring whereby it is yieldingly supported, a plate secured to the table having projecting lugs, a U-shaped plate mounted on the table, the same being provided with projections, set-screws through the projections placed to bear against the lugs on said plate, a matrix, and pins carried by the U-shaped plate engaging with said matrix, substantially as described.

5. The combination in a type-casting machine having a mold for type, of a matrix-carrier, a plate mounted thereon having projecting pins, and a matrix having holes to receive said pins in one of its faces at right angles to that against the mold, and means for retaining the matrix in position on the matrix-carrier, said means engaging a face of the matrix opposite to that against the mold, substantially as described.

6. The combination in a type-casting machine of a type-mold, a matrix-carrier, a plate mounted thereon having projecting pins, and a matrix forming one end of said mold and having holes to receive said pins and means for adjusting the distance of the pin-carrying plate from the type-mold, substantially as described.

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

GEORGE HENRY ZIEGLER.

Witnesses:

WILL. A. BARR,

JOS. H. KLEIN.