

No. 641,298.

Patented Jan. 16, 1900.

L. K. JOHNSON & A. A. LOW.

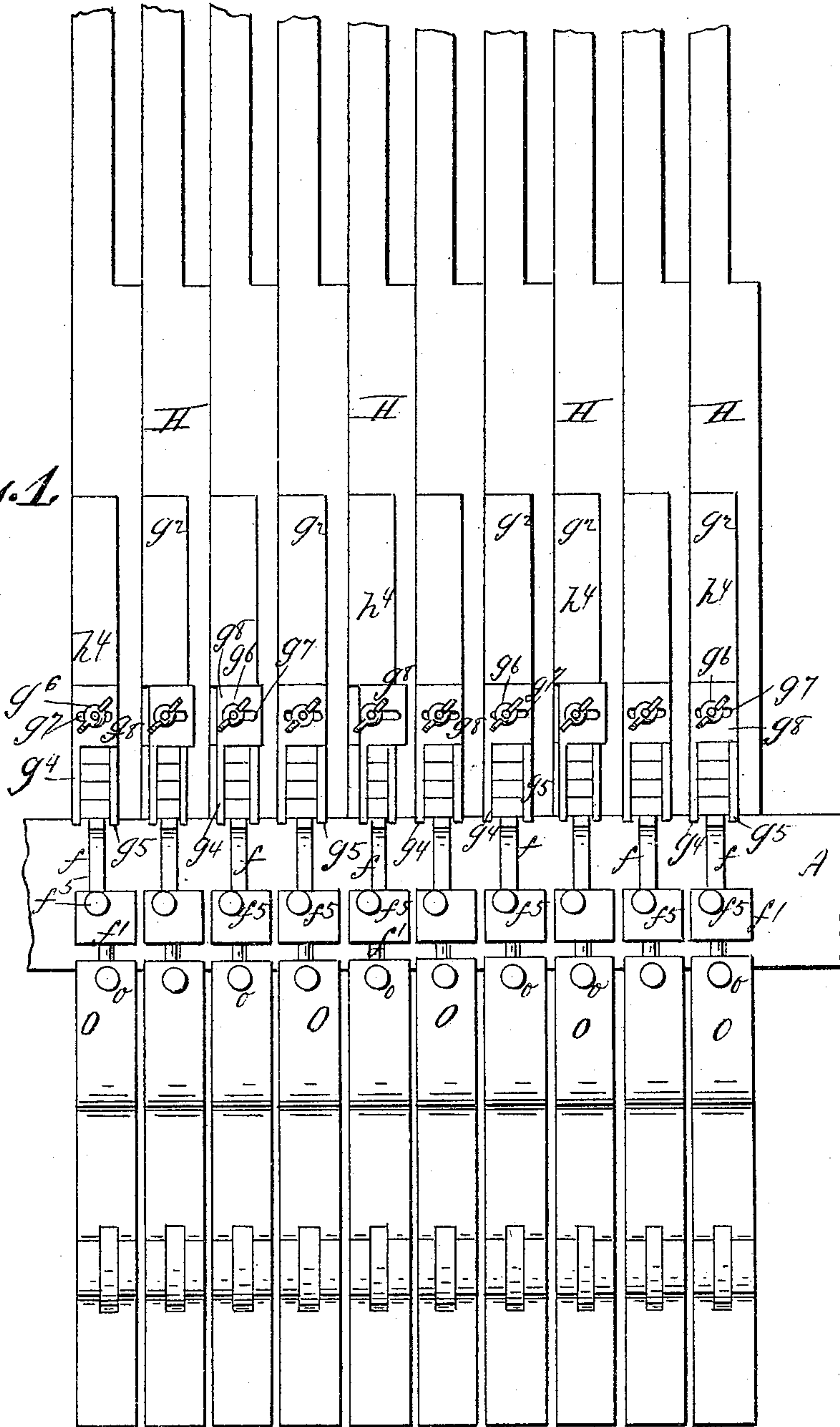
TYPE SETTING MECHANISM.

(Application filed May 10, 1897.)

(No Model.)

4 Sheets—Sheet 1.

Fig. 1



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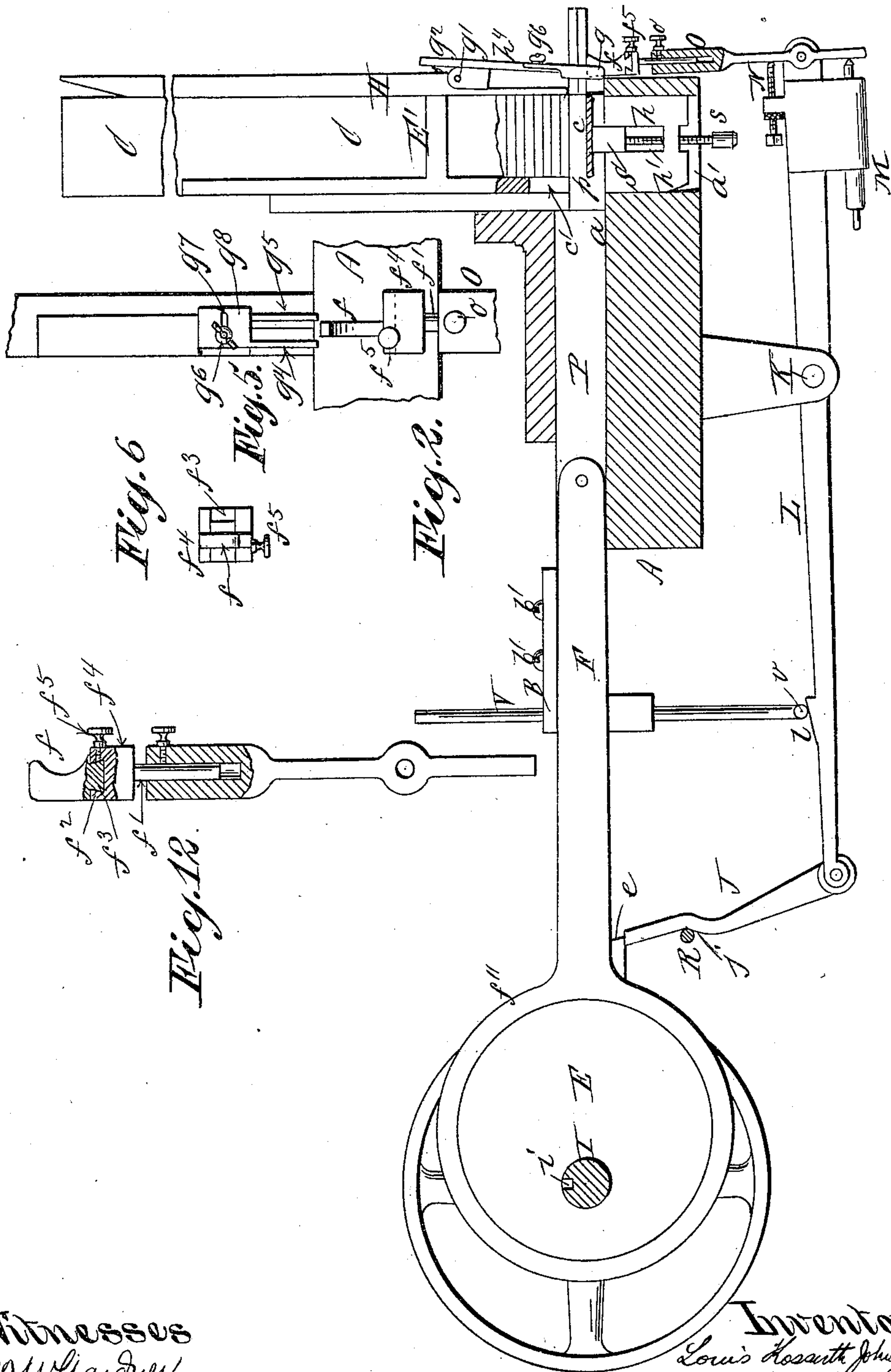
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(No Model.)

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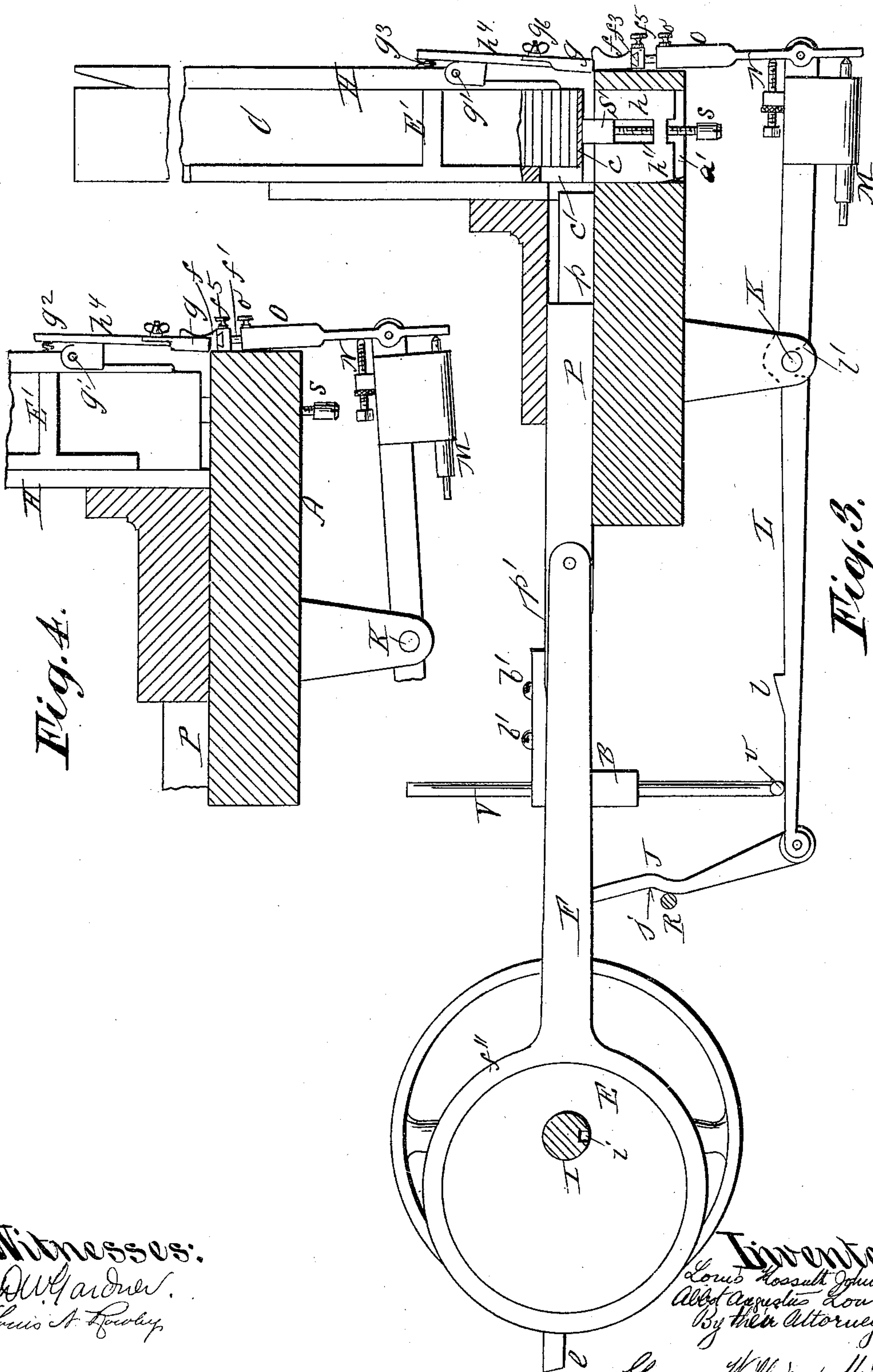


Fig. 4.

Fig. 3.

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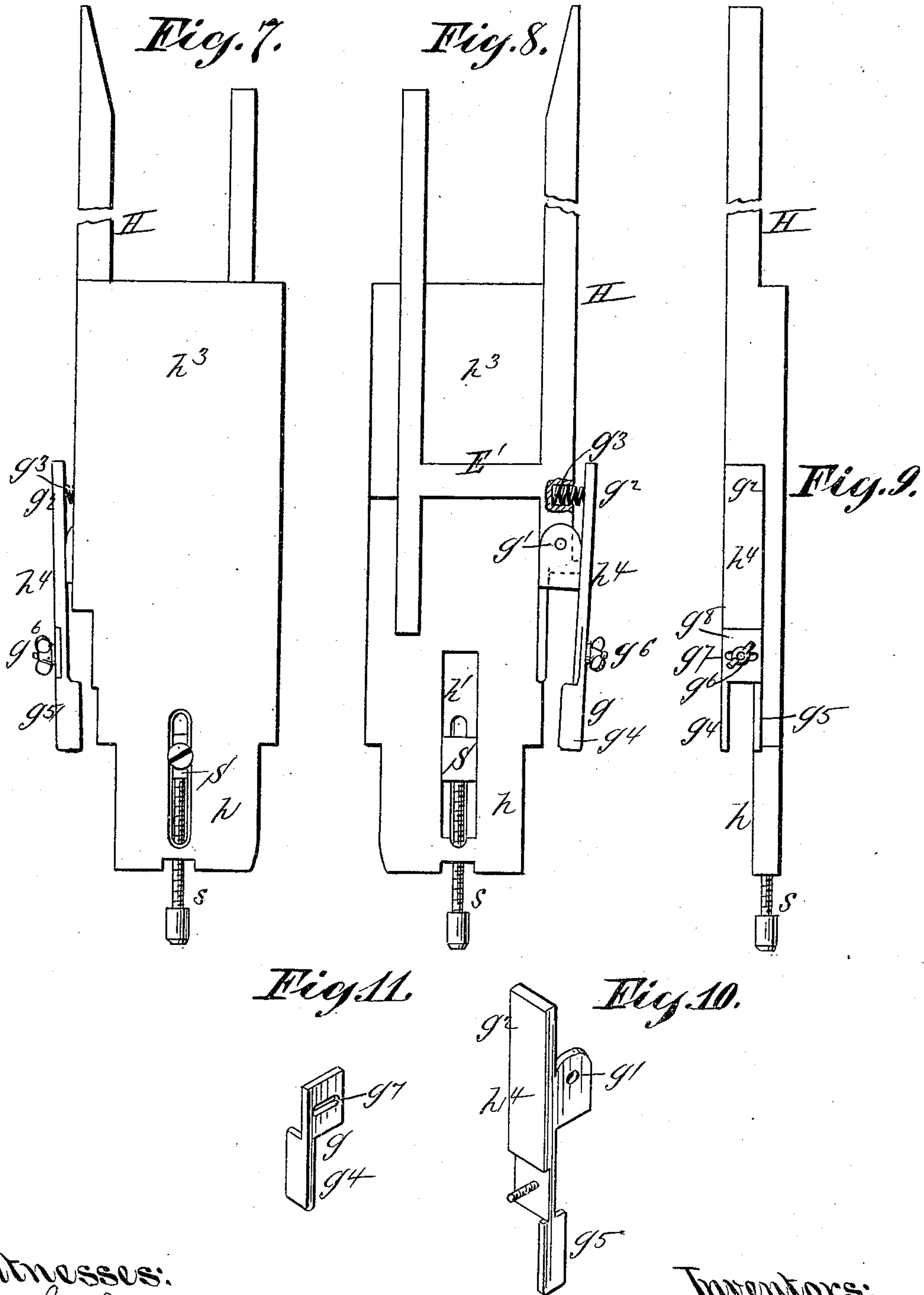
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TYPE SETTING MECHANISM.

(Application filed May 10, 1897.)

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4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

LOUIS KOSSUTH JOHNSON AND ABBOT AUGUSTUS LOW, OF NEW YORK,
N. Y., ASSIGNORS TO THE ALDEN TYPE MACHINE COMPANY, OF SAME
PLACE.

TYPE-SETTING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 641,298, dated January 16, 1900.

Application filed May 10, 1897. Serial No. 635,781. (No model.)

To all whom it may concern:

Be it known that we, LOUIS KOSSUTH JOHNSON and ABBOT AUGUSTUS LOW, citizens of the United States, residing in the city of New York, (Brooklyn,) in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Setting Apparatus, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

Our improvements relate to the form of type-setter case set forth in our concurrent application for patent, Serial No. 634,400.

The distinguishing feature of our present invention consists in the special construction of the upper type-bearing or hinged heel-piece, whereby it is returned automatically to its normal position by spring-pressure after it has been drawn forward by the withdrawal of the types, whereby it affords lateral support to the types on both sides thereof, and whereby such lateral supports may be adjusted and adapted to the requirements of different widths of types. The type-bearing surface upon the type-finger below is also made adjustable laterally with relation to the position of the pusher-blade and to conform to the adjustment of the lateral guards upon the type heel-piece above.

We gain by our present invention greater delicacy and accuracy in operation of the parts and by controlling the types laterally on both sides counteract effectually the tendency imparted to them under the action of the pusher-blade to deviate from perfect alignment during their advance into position for removal by hand.

In the accompanying drawings, Figure 1 is a front elevation of a series of channels, holders, &c., constructed according to our invention. Fig. 2 is a sectional elevation showing the parts at rest. Fig. 3 is a similar view showing the pusher, &c., retracted. Fig. 4 is a sectional elevation showing the channel-holder and adjoining parts without the type-containing channel. Fig. 5 is an elevation in detail illustrating the adjustment of the type-finger and lateral type-support. Fig. 6 is a top view of the adjustable type-finger. Figs. 7 and 8 are respectively elevations of the opposite sides of the channel-holder. Fig. 9 is a front view of the channel-holder. Fig. 10 is

an isometrical view of the main part of the pivoted heel-plate; Fig. 11, an isometrical view of the adjustable lateral type-support for said heel-plate. Fig. 12 is a sectional elevation of the type-finger and adjoining parts upon an enlarged scale.

In the drawings, A represents the stationary frame of the apparatus, of which the table *a* is a part. This table *a* is formed with sockets *a'* for the reception of the tenons *h* of the channel-holders H, as heretofore.

The type-containing channel C is formed at its lower end with the horizontal type-supporting shoulder *c* on one side of the vertical slot *c'*, made in the path of the pusher-blade *p*, which path extends between said horizontal type-shoulder *c* and the opposed wall of the channel C.

The type-channel C is supported by and upon the slide S. This slide S fits in a vertical groove *h'*, formed in the side of the holder H, and is made adjustable vertically by suitable means, as by the vertical set-screw *s*, engaging with female screw-thread formed in the lower part of the holder, as shown in the drawings, which construction is preferable in that the sides of the holder are left free and unobstructed, while the adjustment of the slide can be readily effected when the holder H is removed from the table *a*. The channel is held in a vertical position by the wall *h³* of the holder upon one side and by the lateral arm *E'* on the other.

The front guard *h⁴* of the holder H is formed at its lower end with the pivoted upper heel *g*, which acts in conjunction with the finger-piece *f* below automatically in the manner set forth in our prior application referred to. In the present case the heel-piece or bearing *g* extends above its pivot *g'*, and a spring *g³* is interposed between the front guard *h⁴* and this extension *g²* of the heel-piece, said spring tending constantly to return and hold the heel-piece in its normal position.

P is the reciprocating pusher-slide, to which the pusher-blade *p* is attached. A rear extension *p'* of this pusher-slide P carries the vertical rod V, the lateral arm *v* of which rests against and controls the inclination of the actuating-lever L. The rod V is held in a bracket B on the rear extension *p'* by a screw which admits of the vertical adjustment of said rod V, while the bracket B

is itself adjustable horizontally upon the rear extension p' by the screws $b' b'$, so that the position of the lateral arm v may be varied and regulated with relation to the plane of the actuating-lever, and especially with relation to the cam-surface l on said lever.

The pusher-slide P is connected to the eccentric E by the pitman F and eccentric-strap f'' . The eccentric E is loose upon the power-shaft I , except when coupled thereto by the pawl e , which engages with the shoulder i on said shaft when not held out of engagement therewith by the upper end of the gravity-latch J on the actuating-lever L . The shaft I is in constant rotation, so that directly the pawl e is released it encounters and engages with one of the shoulders i , and thereby carries the eccentric E around with the shaft until the pawl e is again released, which is at the end of a single rotation, provided a type has been forwarded between the upper heel-guard g and the type-finger f , in which position the type holds the actuating-lever L in such relation to the stationary bar R that the gravity-latch J tilts backward, with its upper end in the path of the outer end of the pawl.

The protruding and retracting of the upper end of the end of the gravity-latch J is effected by reason of the contact of its cam-surface j with the stationary bar R or equivalent, the lower end of said latch J being pivoted to the actuating-lever L in such position that said cam-surface is held by gravity in constant engagement with said stationary bar R .

The actuating-lever L is formed with a slot l' on its under side, so as to straddle the fulcrum K , this construction admitting of the convenient withdrawal of the lever or insertion in position without disturbing adjoining parts of the apparatus.

The type-finger f is mounted upon the upper end of a stud f' , which is held adjustably in the pivoted post O by a set-screw o . A set-screw N on top of the lever is used in conjunction with the spring-bolt M , mounted upon the lower side of said lever, the set-screw N limiting the thrust of the spring-bolt M , so as to relieve the type-finger f of undue frictional contact with the front of the table a . The type-finger f is adjustable laterally with relation to the path of the pusher-blade p , as will be understood by reference to Fig. 5. To accomplish this, the upper part or finger f is formed with a dovetailed base f^2 , fitting in the dovetail groove f^3 , formed in the head f^4 on the upper end of the stem f' , and is held in any desired position by a set-screw f^5 . As will be seen by reference to Fig. 5 and as is common to type-cases of this class as recently formed by us, the path of the pusher-blade p is at one side of the path of the types in the type-containing channel, so that the pusher-finger f may be said to be adjustable with relation to the path of the pusher, thus corresponding in function to the adjustable side

guard g^4 , which is also adjustable laterally with relation to the path of the pusher-blade p and to the stationary lateral guard g^5 . This adjustment of the lateral guard g^4 may be effected by any suitable means, as by the set-screw g^6 , passing through the slot g^7 , formed in the front plate g^8 of said adjustable guard g^4 . It will thus be seen that the parts are adapted for adjustment so as to hold, support, and control accurately different widths of type, so that the alinement of the types may be insured for narrow as well as for wider types or fonts thereof.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a compositor's type-case, substantially such as designated, the combination of a channel-holder, forwarding-blade having a prescribed path of reciprocation, a bearing for the heel of the type pivoted to the holder and provided with a spring for holding it in its normal position and a type-finger for supporting the types below said type-finger being mounted upon the trigger-lever which controls the type-forwarding mechanism, substantially in the manner and for the purpose described.

2. In a compositor's type-case of the character designated the combination of a pivoted support for the heels of the type, a spring for holding the said heel-bearing in its normal position, and means for supporting and forwarding the types substantially in the manner and for the purpose described.

3. In a compositor's type-case of the character designated the combination of a pivoted bearing for the heels of the type, said bearing being formed with side extensions for supporting the type laterally, and means for supporting and forwarding the type substantially in the manner and for the purpose described.

4. In a compositor's type-case of the character designated, the combination of a pivoted bearing for the heels of the type said bearing being formed with lateral bearings for the type, means for adjusting one lateral bearing with relation to the other, and means for supporting and forwarding the type substantially in the manner and for the purpose described.

5. In a compositor's type-case of the character designated, the combination of a pivoted bearing for the heels of the type said bearing being formed with extensions which support the type laterally and which are adjustable with relation to each other, means for adjusting said finger-piece laterally, and means for supporting and forwarding the type, substantially in the manner and for the purpose described.

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