

(No Model.)

4 Sheets—Sheet 1.

L. K. JOHNSON & A. A. LOW.
TYPE SETTING APPARATUS.

No. 551,384.

Patented Dec. 17, 1895.

Fig. 2.

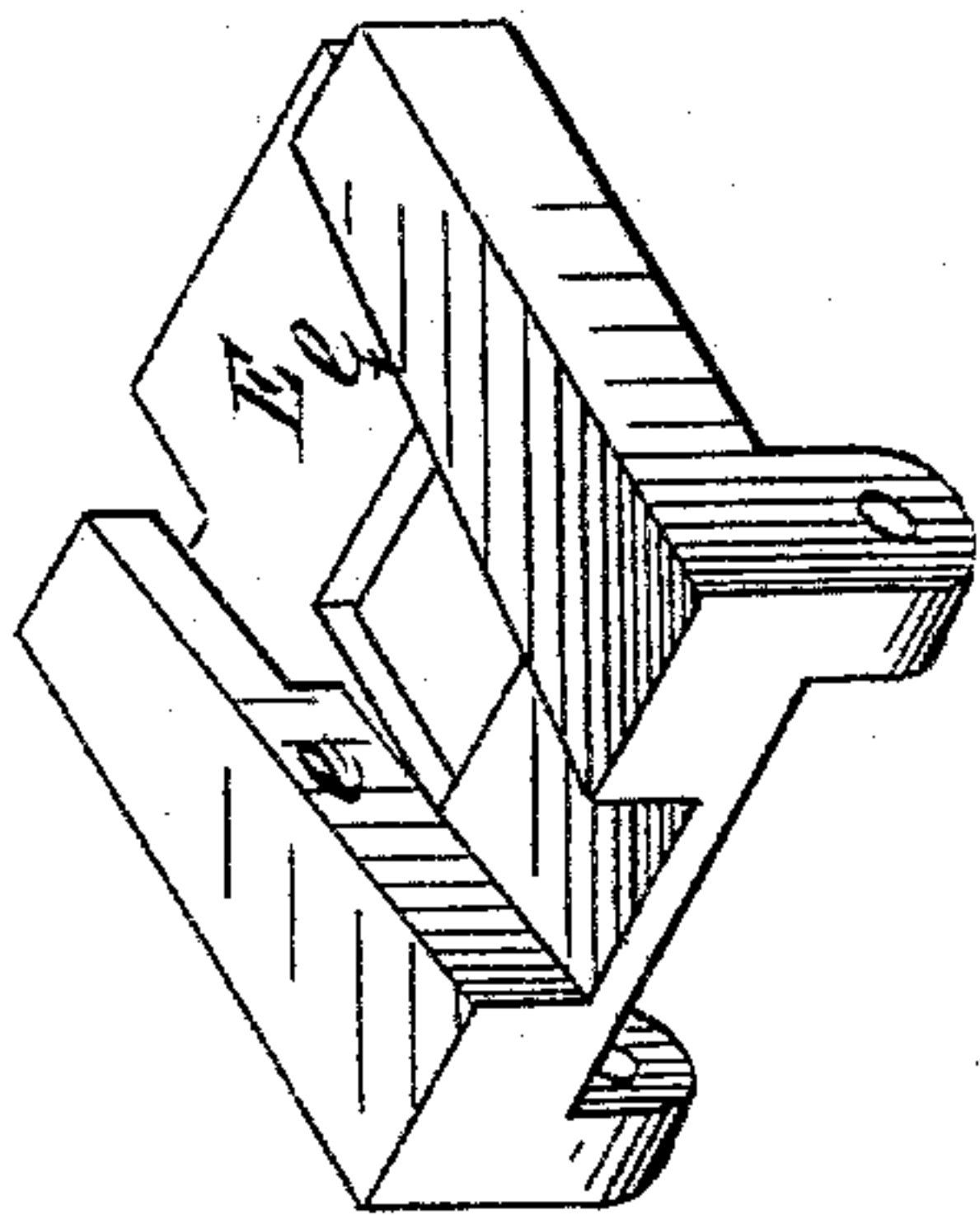
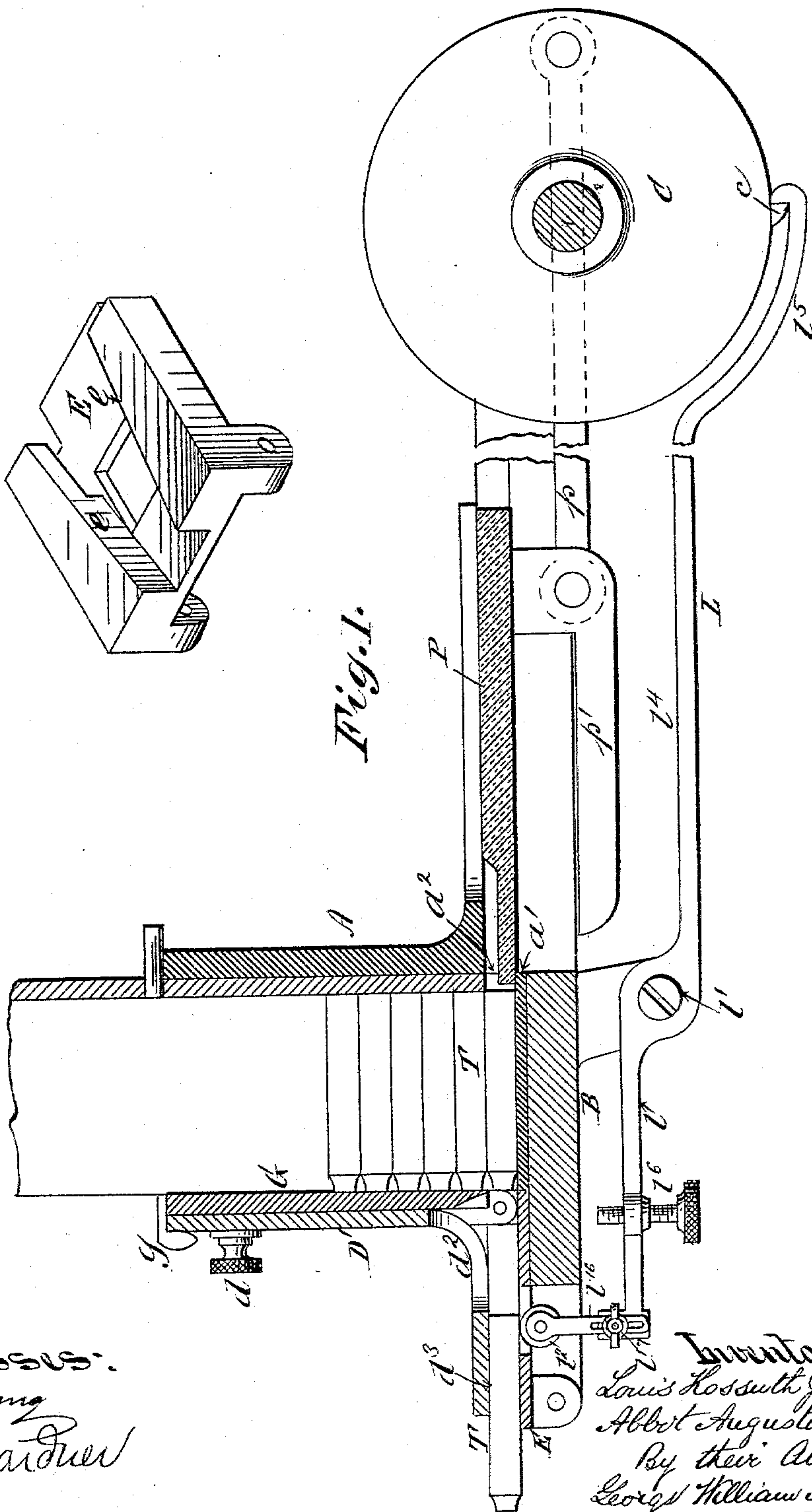


Fig. 1.



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George William Miall

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4 Sheets—Sheet 2.

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Fig. 4.

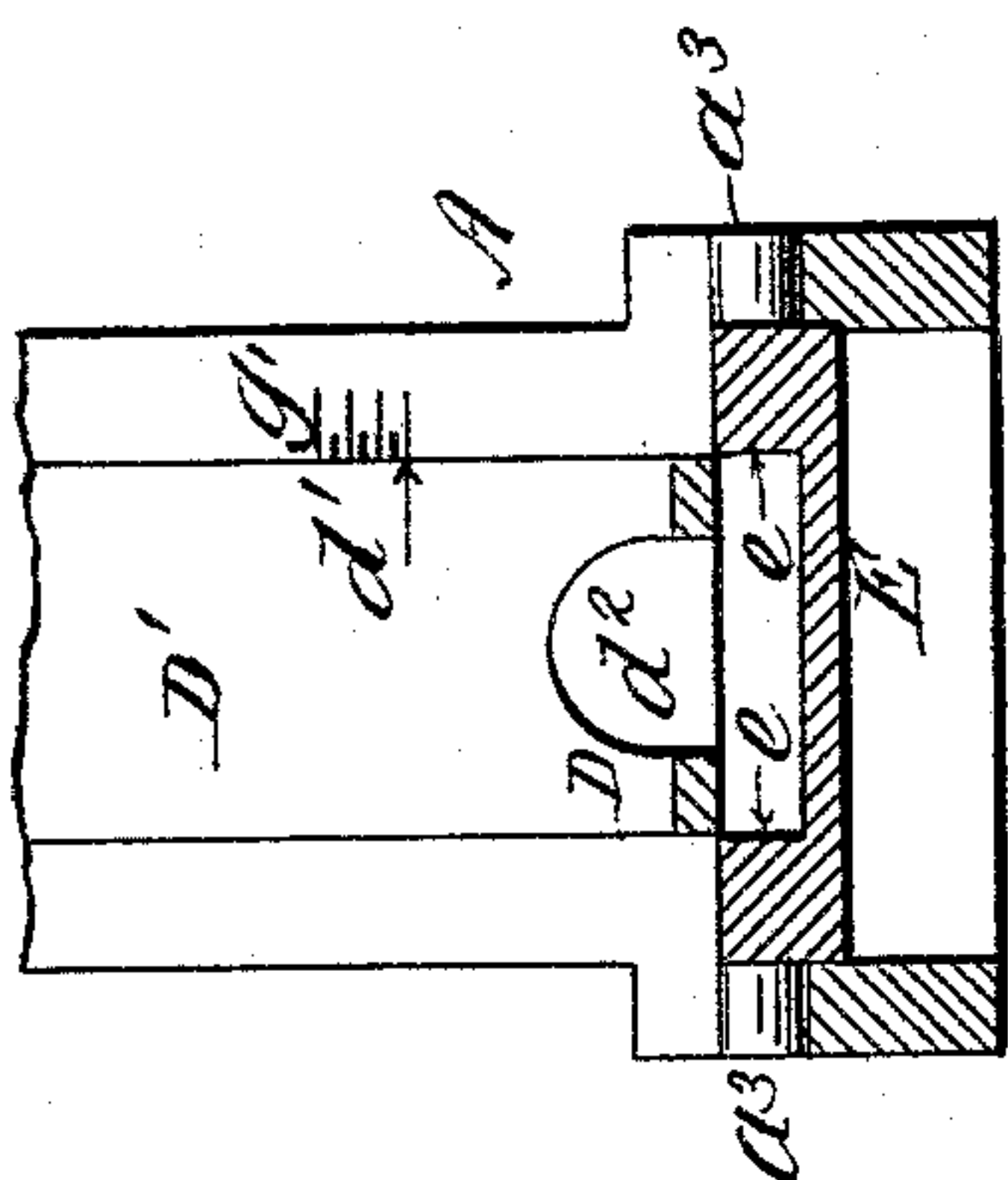
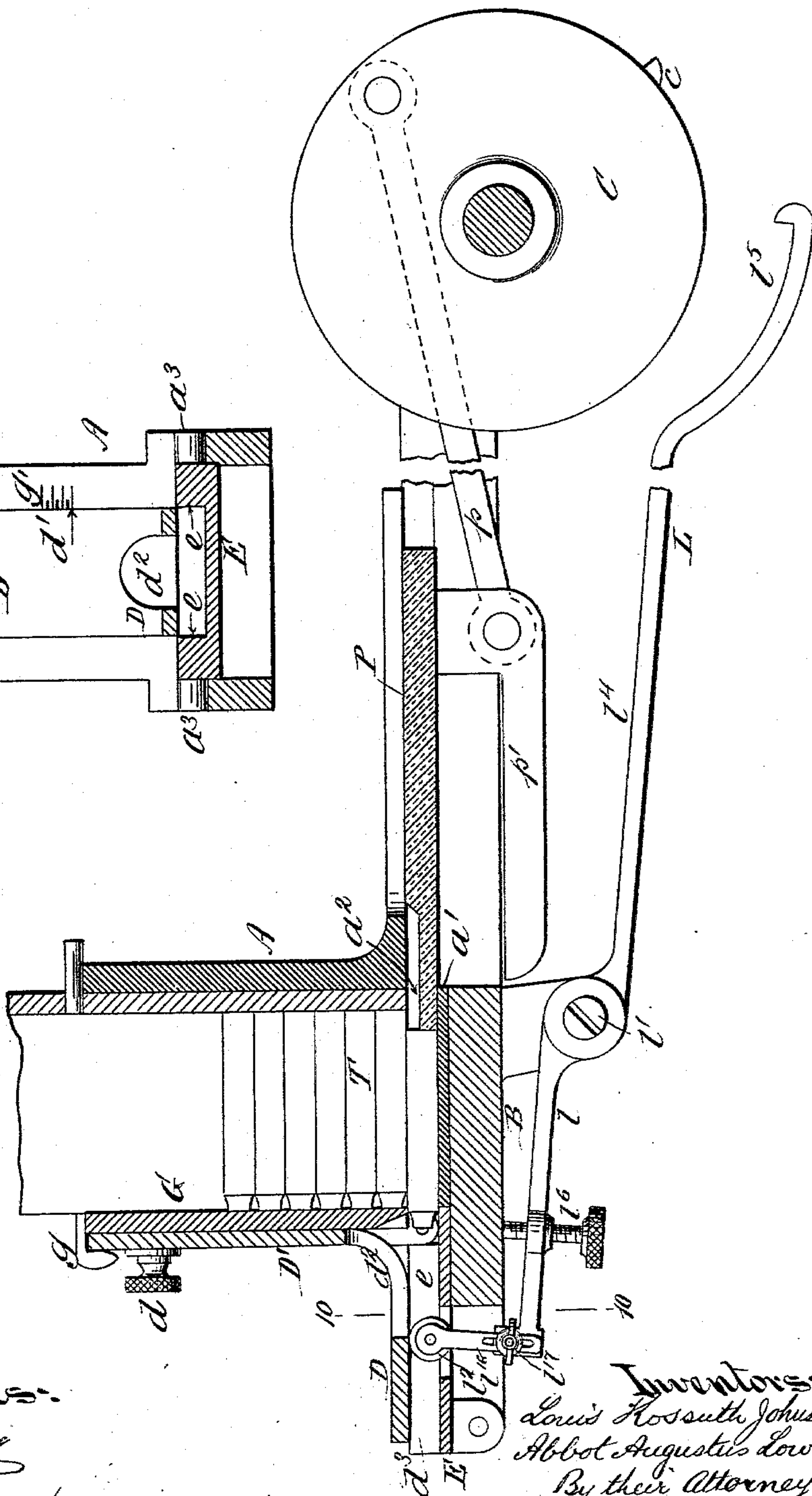


Fig. 3.



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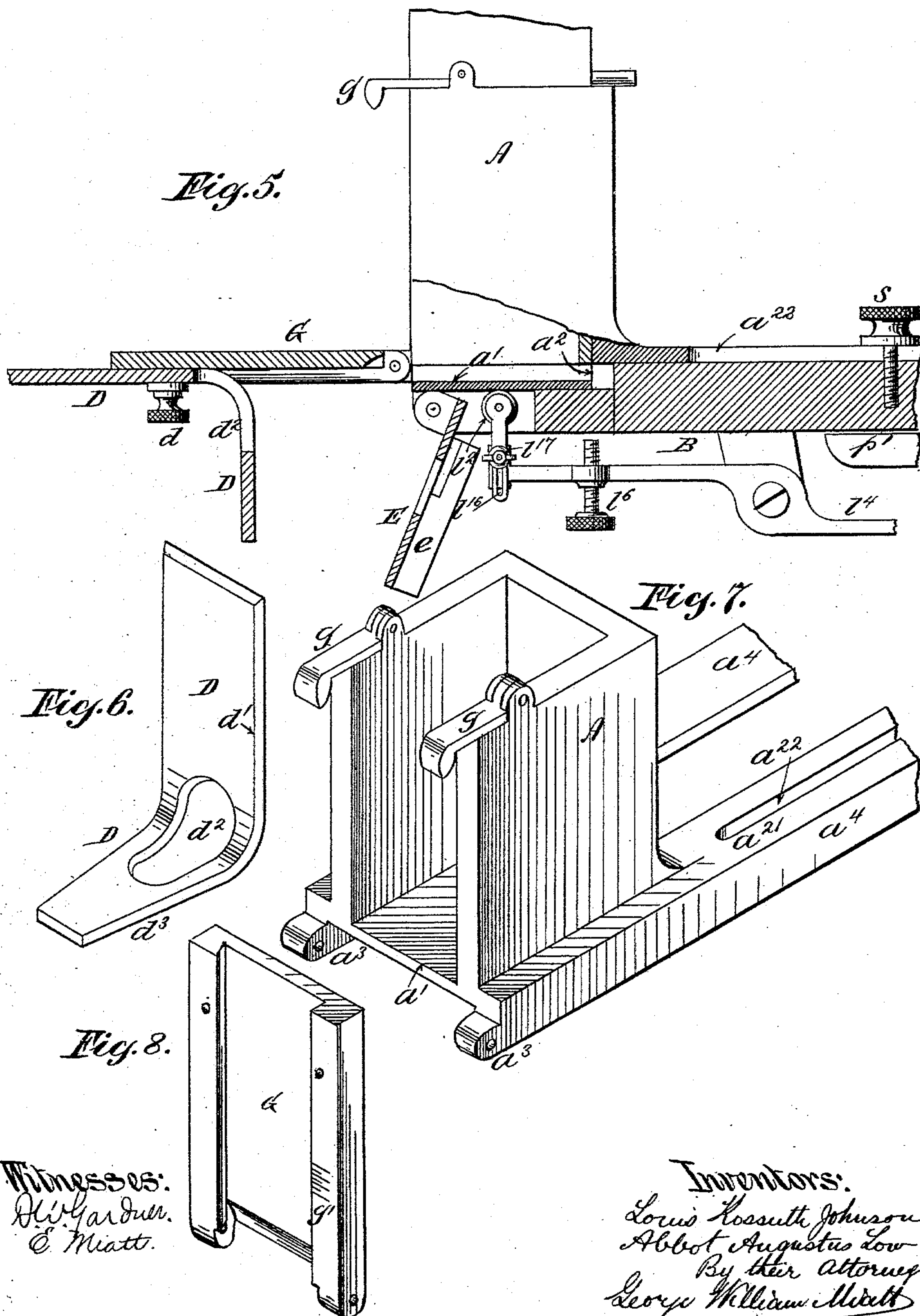
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4 Sheets—Sheet 3.

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(No Model.)

4 Sheets—Sheet 4.

L. K. JOHNSON & A. A. LOW.
TYPE SETTING APPARATUS.

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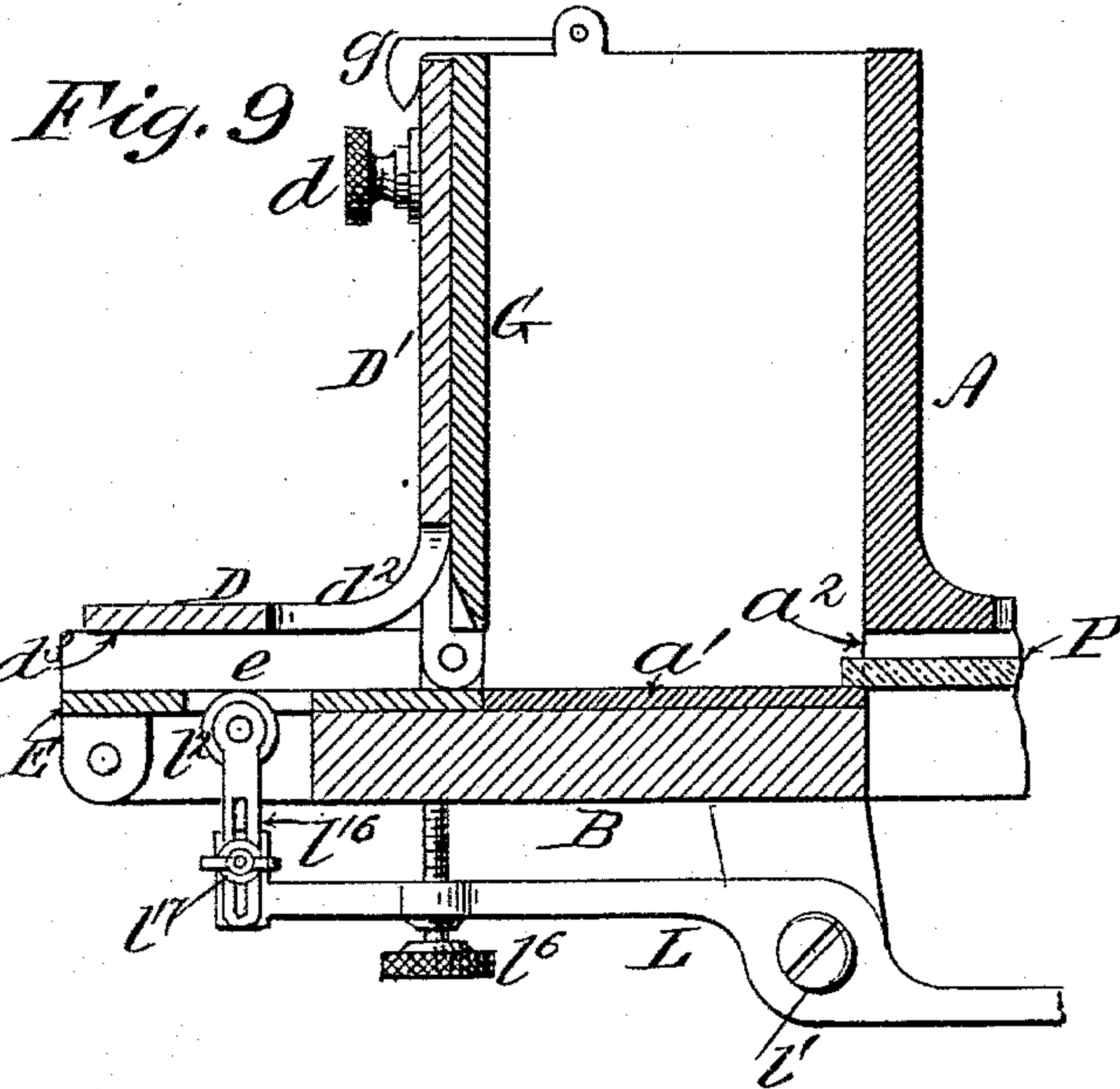


Fig. 10.

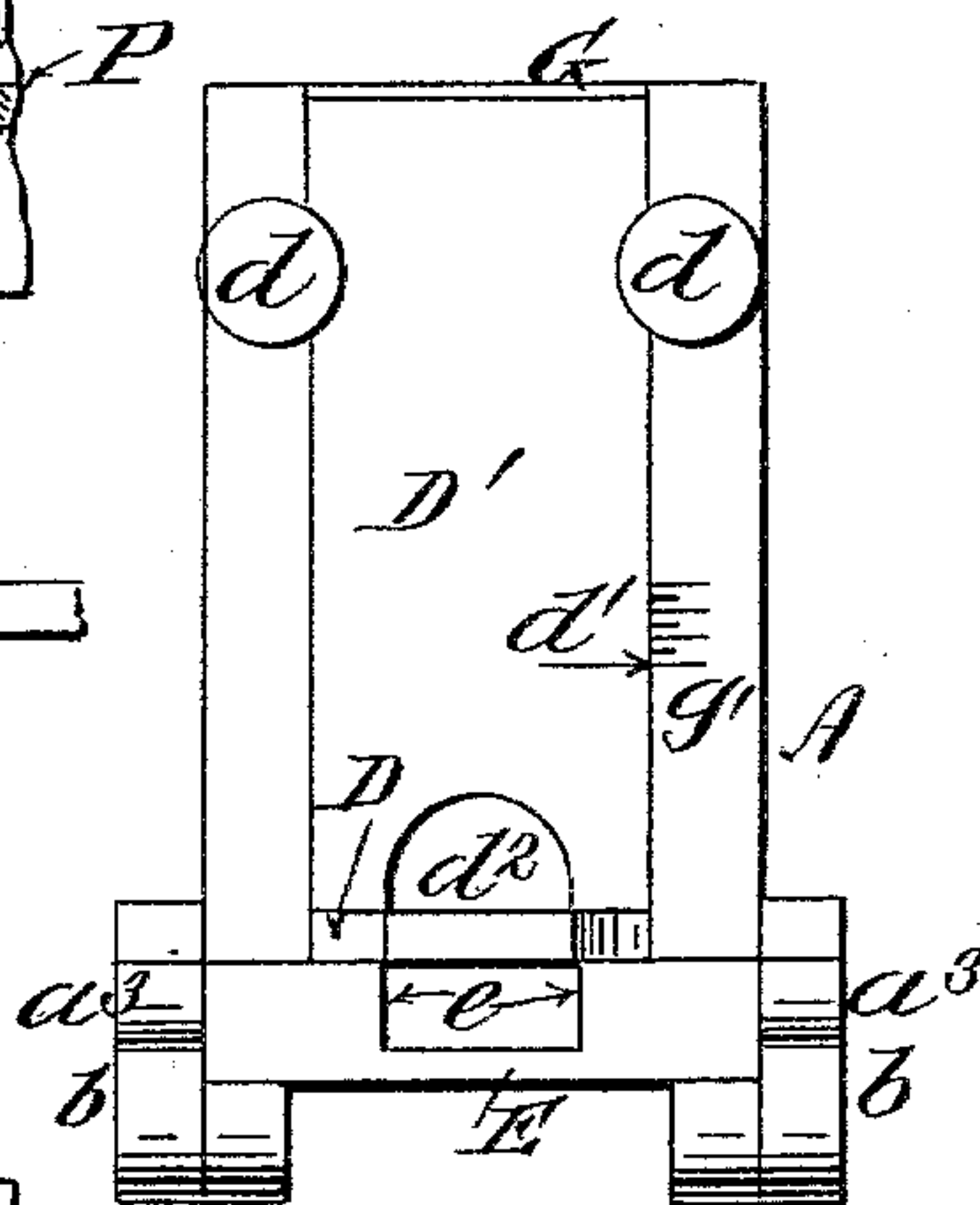


Fig. 11.

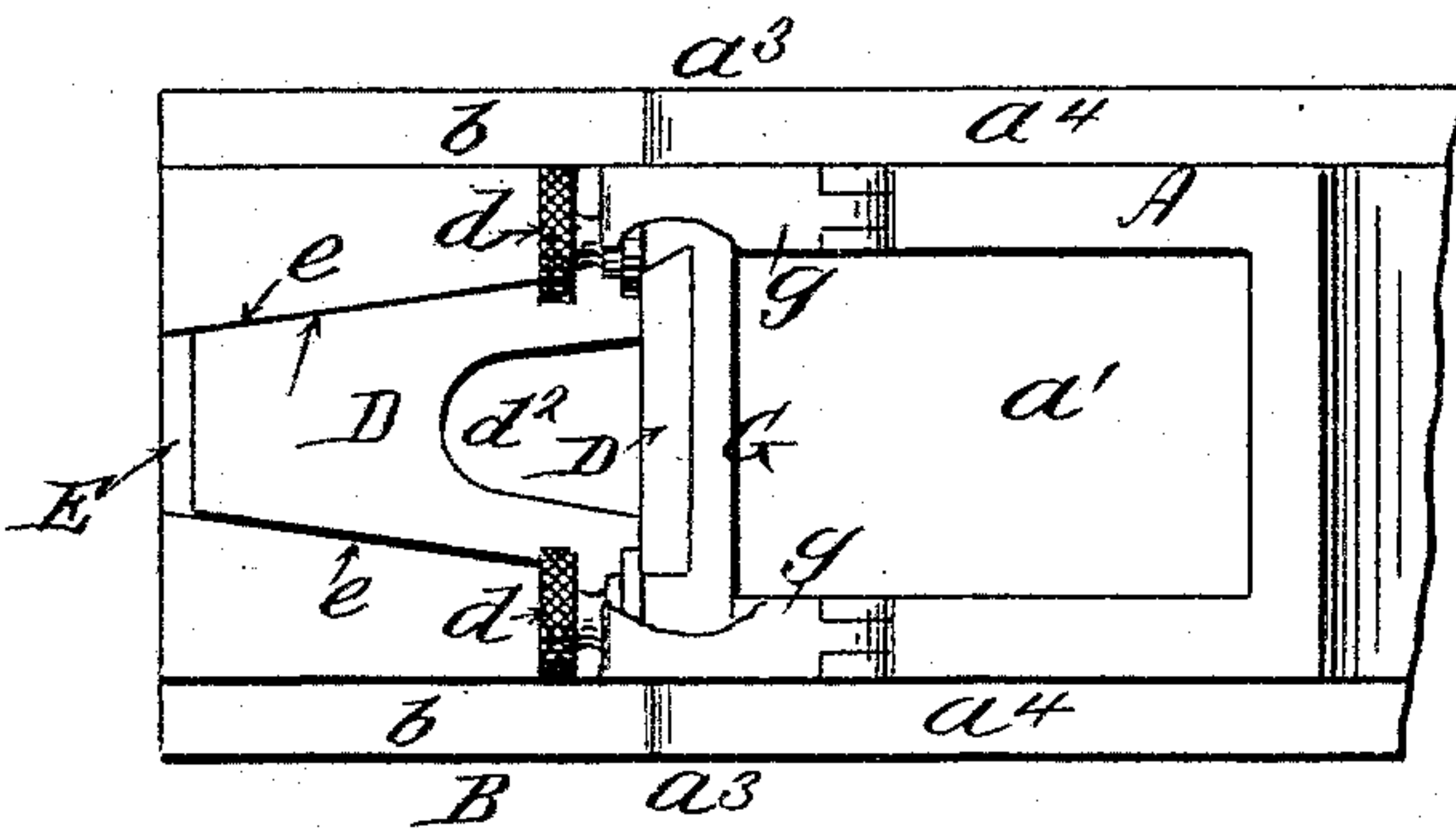
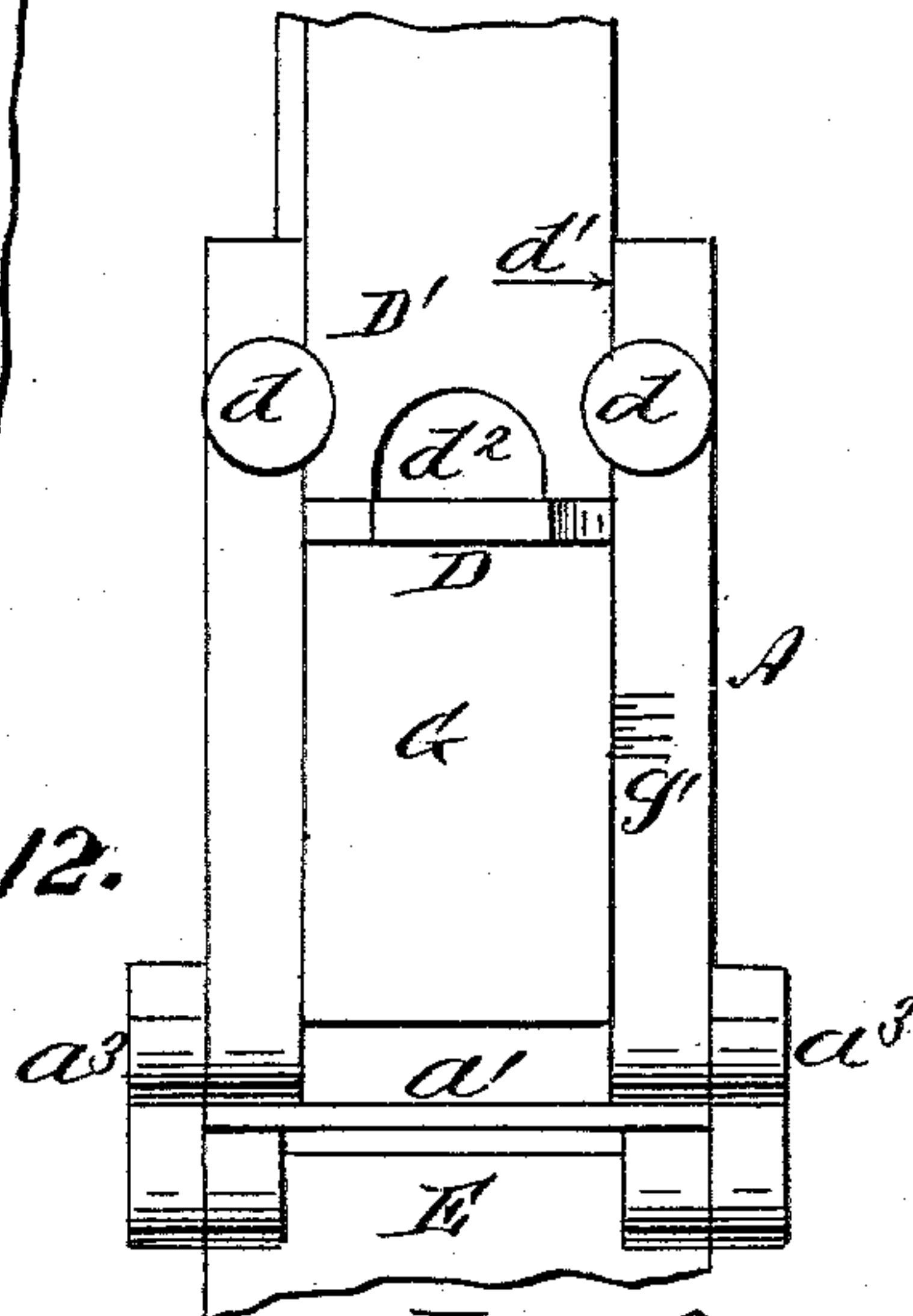


Fig. 12.



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UNITED STATES PATENT OFFICE.

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

TYPE-SETTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 551,384, dated December 17, 1895.

Application filed March 12, 1895. Serial No. 541,400. (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 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 special form of type-case heretofore described by us, as in Patent No. 529,447, dated November 20, 1894, and in which a plurality of type-containing channels are supported in a common holder, the types resting upon a common type-platform, and being forwarded simultaneously by the type-pusher into position to be grasped and removed by the fingers of the compositor.

Heretofore we have devised means through the instrumentality of which the withdrawal of the types last forwarded is made to release the type-forwarding mechanism so as to insure the forwarding of another series of types from the lower ends of the containing-channels. This has been accomplished by a weighted feeler resting upon the types when forwarded and in position for removal by the fingers of the compositor, said weighted feeler on the withdrawal of the types from beneath it depressing the end of a controlling-lever by which the type-forwarding mechanism is held normally until thus released. In our present application we effect a similar result by means of a feeler from below which presses the types, when in position for removal upward against a guard, the withdrawal of the types causing the rear end of the feeler-lever to release the type-forwarding mechanism to forward fresh types to take the place of those just withdrawn. By this construction we are enabled to place the tripping and forwarding mechanism below the level of the type-platform, where it will not obstruct access to the type-channel holder or channels. This is of special importance in connection with another feature of our present invention, which consists in mounting the type-channel holder in such manner that it may be drawn forward

over the type-supporting platform to facilitate the insertion or removal of channels.

Heretofore difficulty has been experienced in inserting the channels filled with type, the latter being disturbed in alignment or otherwise deranged by the jar incident to the operation of lowering the columns onto the type-platform. This we obviate in the present case by forming a type-supporting floor in the channel-holder, said primary type-support forming a part of and being movable with the channel-holder. Hence, by drawing the holder forward over the type-platform until the front of the holder projects beyond the front edge of said type-platform, the channels may be conveniently removed and others inserted, the columns of type being gently lowered to the primary type-support without jar.

An incidental feature of our invention consists in making the upper guard, against which the types are held by the feeler from below, adjustable vertically upon the face-plate, for the purpose of adapting it for use in connection with types of different sizes. A scale upon the face-plate in conjunction with a pointer on the foot-plate or upper guard is provided to facilitate the adjustment of said foot plate or guard to the requirements of different fonts of type.

Still another feature of our present invention consists in hinging the front plate to the holder in such manner that the face-plate may be swung down out of the way when the holder is advanced for the purpose of substituting type-channels, &c. We also hinge the converging side walls which assemble the types during their advance into position over the type-platform, so that said converging walls may be swung downward to admit of the advancement of the channel-holder.

Our invention also includes certain minor features of construction and arrangement hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal sectional elevation showing the position of the parts when at rest; Fig. 2, an isometrical view of the movable section of the type-platform carrying the converging side walls. Fig. 3 is a sectional elevation

showing the action of the controlling-lever in releasing the forwarding mechanism when the types previously forwarded are withdrawn from the type-platform. Fig. 4 is a sectional elevation upon plane of line 10 10, Fig. 9, the controlling-lever, &c., being omitted. Fig. 5 is a sectional elevation showing the movable floor-section and front plate turned down and the channel-holder advanced; Fig. 6, an isometrical perspective of the upper type-guard or foot-plate. Fig. 7 is an isometrical perspective of the channel-holder. Fig. 8 is an isometrical perspective of the front plate. Fig. 9 is a sectional elevation of the front of the device, the type-containing channels being omitted and the controlling-lever being locked in position. Fig. 10 is a front elevation of the type platform and holder. Fig. 11 is a plan of the front end of the device, the gravity-latches being partially broken away to show the parts underneath. Fig. 12 is a view similar to Fig. 10, the foot-plate having been elevated and the converging side walls turned down out of the way to allow of the advance of the channel-holder.

The lower portion of the holder A is formed with the primary type-floor a' , and its rear wall is formed with a slot a^3 above the primary type-floor to admit the type-pusher P. The under side of the type-forwarder P is connected by a pitman p with suitable clutch mechanism C, by which it is reciprocated when the latter is released by the controlling-lever L. The form and character of this clutch mechanism are of secondary importance and are herein represented symbolically only. The forward or short arm l of the controlling-lever L, pivotally supported on a stationary part of the frame at l' , is formed with a type-bearer l^2 , preferably consisting of a roller mounted between the bifurcations l^3 l^3 . The long arm l^4 of the lever tends constantly to drop downward and by its own gravity to release the shoulder c of the clutch mechanism C from the pawl l^5 . It is held against this tendency when the forward arm l is depressed either by the type T, resting between the bearing l^2 , and the under side of the foot-plate D, by the finger p' , attached to the pusher P, when the latter has advanced a certain distance, or by the screw l^6 , or other locking device temporarily employed when the channel-holder is to be advanced.

The converging side walls $e e$ are pivotally connected to the front of the platform B, being preferably united by the movable floor-section E, acting as a web between them.

The foot-plate or guard D is mounted adjustably upon the front plate G, which latter is hinged at its lower extremity to lugs a^3 , consisting of forward projections of the runner-flanges a^4 , attached to the holder A. Thus when the holder A is advanced until its front projects beyond the frame of the platform B, the front plate G and foot-plate D may be swung downward below the line of

the primary type-floor a' , thereby giving free access to the holder and permitting of the lowering of the columns of type directly onto the said primary type-floor a' without fall or jar.

Gravity-hooks $g g$, hinged to the upper side walls of the holder A, drop over the upper edge of the front plate G, when the latter is in position against the front edges of the said holder.

The support D' of the foot-plate D is held in position upon the front plate G by set-screws $d d$, or other means which will admit of the adjustment of the foot-plate D with relation to the type-floor below. A scale g' on the front of the front plate G, or on the front of the plate D' , in conjunction with a pointer or index d' upon the plate D' , or on the front plate G, as the case may be, affords a convenient means by which to gage and adjust the foot-plate D.

The foot-plate D is formed with an opening d^2 at the rear of the bearing d^3 , for the purpose of rendering the types visible during their advance, and to give access to them should necessity require.

The type bearing or roller l^2 is mounted adjustably upon the forward end of the controlling-lever L by any suitable means, as by the slotted shank l^{16} and thumb-screw l^{17} .

The operation is as follows: The types last forwarded being removed by the fingers of the compositor, the forward end of the controlling-lever rises until the roller l^2 encounters the under side of the type foot-plate D, the motion being sufficient to release the pawl l^5 from the projection c on the clutch C, by which the type-forwarding mechanism is controlled. As a result the pusher P starts forward the lowest types which are assembled centrally by the converging side walls and finally left in position for removal in turn. During the forward stroke of the pusher P, the finger p' encounters the forward arm l' of the controlling-lever L, allowing the roller l^2 to bear upward and press the heels of the types against the under side of the foot-plate D. The depression of the forward end of the controlling-lever L having raised the rear end into position to again engage with the clutch C, the further reciprocation of the pusher is prevented until the types just forwarded are in turn removed to give place to others.

When it is desired to renew or substitute the type-containing channels in the holder A, the thumb-screw l^{17} is loosened and the roller l^2 lowered slightly out of the way of the primary type-floor a' , when advanced, the lock-screw l^6 is tightened against the under side of the frame, the screws $d d$ loosened and the foot-plate D raised. The front floor E and converging side walls $e e$ may then be readily swung forward and downward, out of the way of the holder A, the side runners a^4 a^4 resting upon the parallel ways $b b$ on either side of the frame.

When the holder has been slid forward sufficiently the front plate G and foot-plate D are also swung downward out of the way after the gravity-hooks *g g* have been raised. This leaves the front of the holder free and open for the insertion or removal of the type-containing channels, &c.

In order to retain the holder A steadily in its forward position, a thumb-screw *s* is made to bind against one of the rear extensions a^{21} of the holder, a longitudinal slot a^{22} being formed to admit of the movement of the holder.

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

1. In a type case, the combination of a type platform, a sliding channel holder, and type forwarding mechanism, substantially in the manner and for the purpose described.

2. In a type case, the combination of a type platform, removable converging side walls, a sliding channel holder, suitable type forwarding mechanism, substantially in the manner and for the purpose described.

3. In a type case, the combination of a type platform, converging side walls pivotally connected thereto, a sliding channel holder and suitable type forwarding mechanism, substantially in the manner and for the purpose described.

4. In a type case, the combination with suitable type forwarding mechanism, of a type platform, a type guard over the same, and a lever for pressing the types upward against the said type guard, said lever controlling the type forwarding mechanism, substantially in the manner and for the purpose described.

5. In a type case, the combination of suitable type forwarding mechanism, a type platform, a type guard over the same, and a lever for controlling the type forwarding mechanism formed with a type bearing roller, substantially in the manner and for the purpose described.

6. In a type case, the combination of suitable type forwarding mechanism, a type platform, a type guard over the same, and a lever

for controlling the type forwarding mechanism formed with an adjustable type bearing surface, substantially in the manner and for the purpose described.

7. In a type case, the combination of suitable type forwarding mechanism, a type platform, a type guard over the same, a lever for controlling the type forwarding mechanism by means of the types, and a device for locking said controlling lever, substantially in the manner and for the purpose described.

8. In a type case, the combination of a channel holder, a type platform, a type guard above said platform and adjustable with relation thereto, suitable type forwarding mechanism, and a controlling lever operated by means of the types, substantially in the manner and for the purpose described.

9. In a type case, the combination of a channel holder, a face plate on said holder, a type guard on said face plate, a type platform, suitable type forwarding mechanism, and a controlling lever operated by means of the type, substantially in the manner and for the purpose described.

10. In a type case, the combination of a channel holder, a face plate on said holder, a type guard mounted adjustably upon said face plate, a type platform, suitable type forwarding mechanism, and a controlling lever operated by means of the types, substantially in the manner and for the purpose described.

11. In a type case, the combination of a channel holder, a face plate on said holder, a type guard mounted adjustably on said face plate, a scale for indicating the relative positions of said face plate and type guard, a type platform, suitable type forwarding mechanism, and a controlling lever operated by means of the types, substantially in the manner and for the purpose described.

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