

(No Model.)

3 Sheets—Sheet 1.

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

TYPE SETTING APPARATUS.

No. 523,742.

Patented July 31, 1894.

Fig. 2.

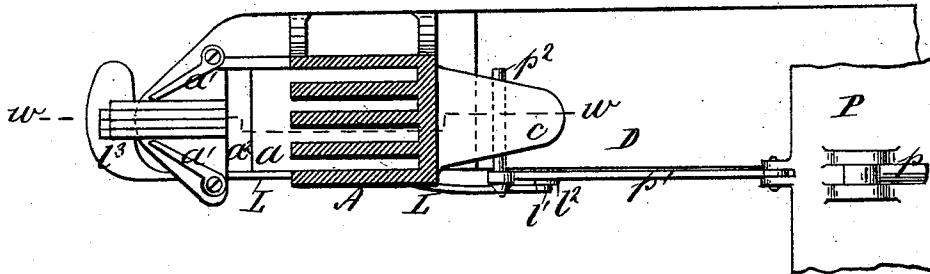


Fig. 1.

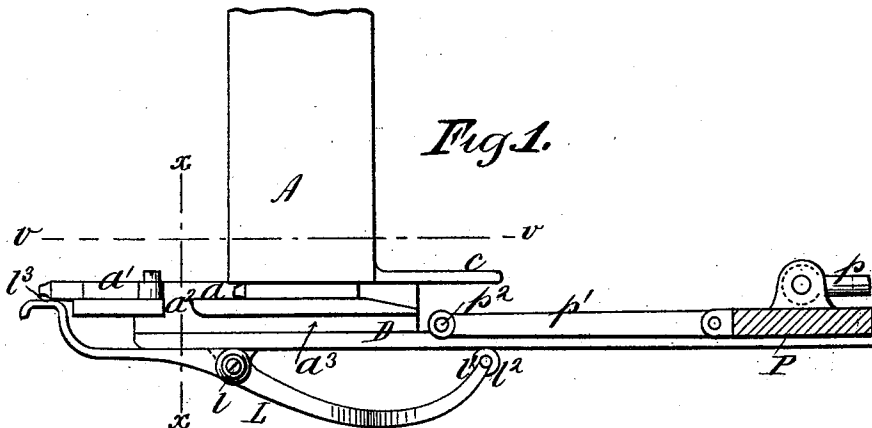
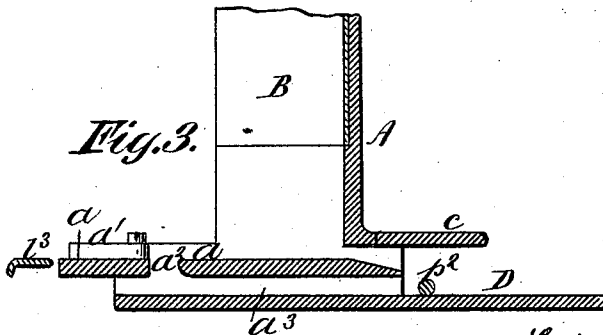


Fig. 3.



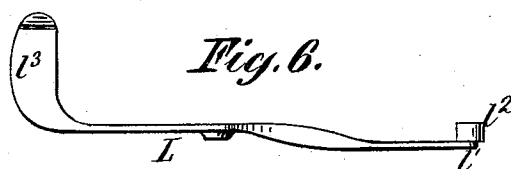
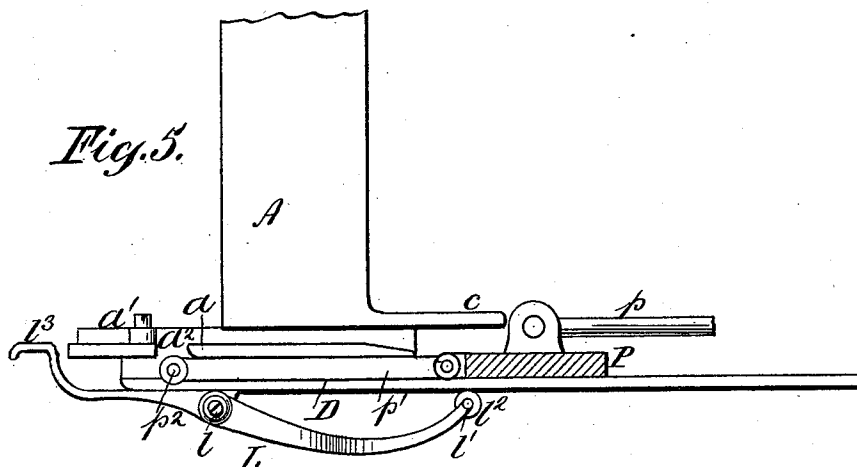
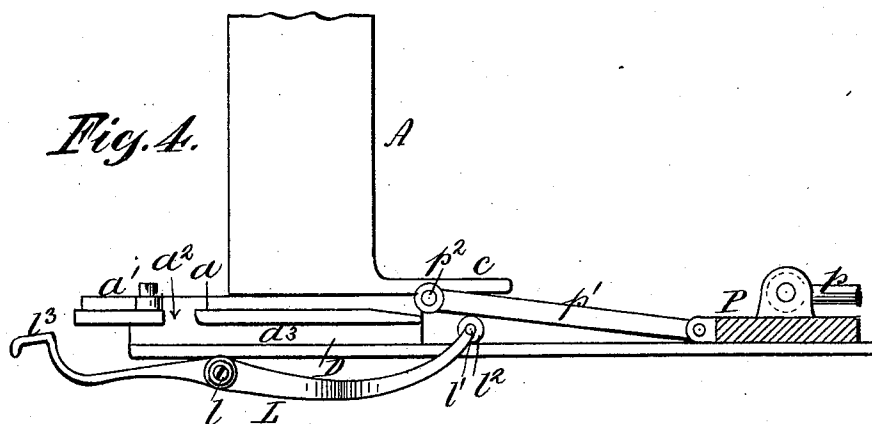
Witnesses:
D. W. Gardner
J. C. Gardner

Inventors:
Louis K. Johnson,
Abbot A. Low
By their Attorney
George William Smith

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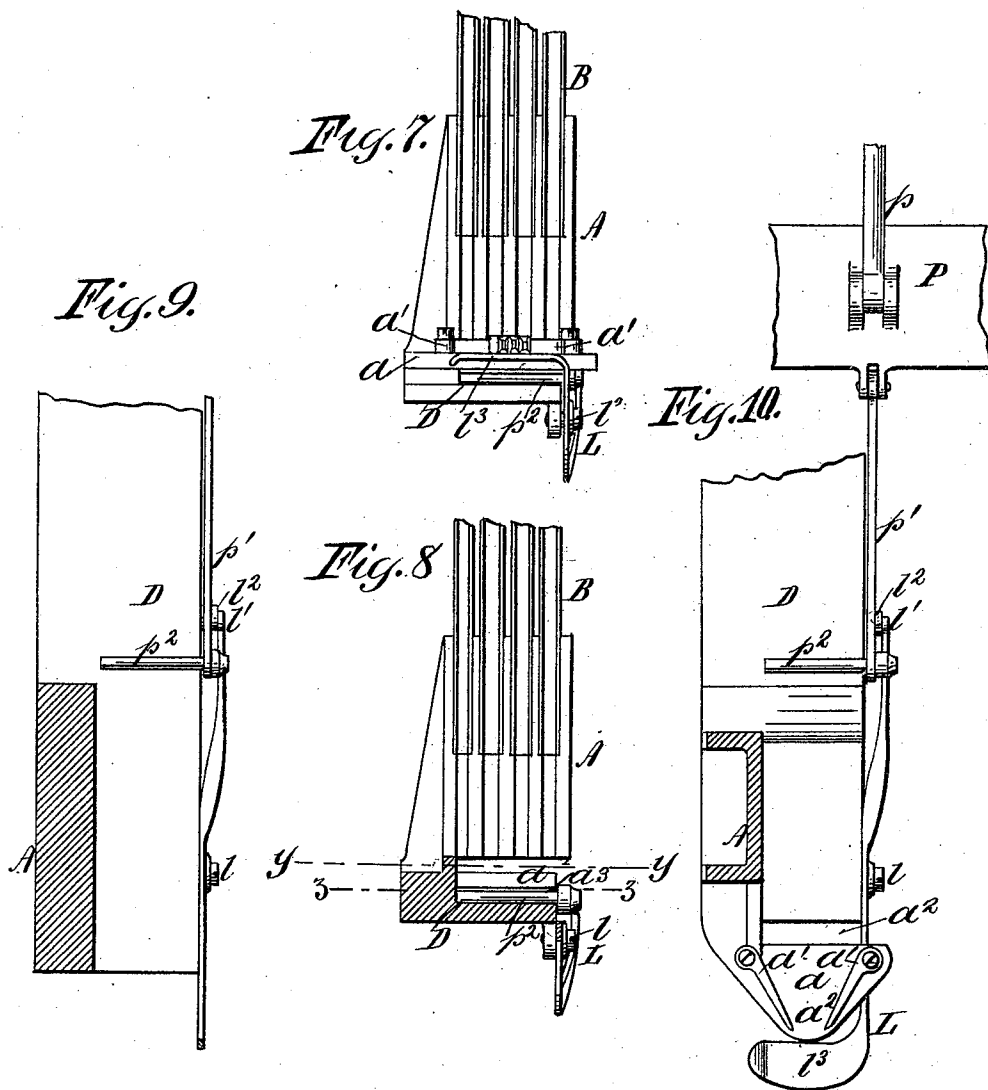
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3 Sheets—Sheet 3.

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TYPE SETTING APPARATUS.

No. 523,742.

Patented July 31, 1894.



Witnesses:
O. W. Gardner
J. C. Gardner

Inventors:
Louis K. Johnson
Abbot A. Low
By their attorney
George William Malt

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. 523,742, dated July 31, 1894.

Application filed January 10, 1894. Serial No. 496,396. (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 invention relates to the form of type setting apparatus set forth in our application, Serial No. 492,664, filed December 5, 1893, in which a plurality of types are forwarded simultaneously and made to converge together as they advance into position to be grasped collectively between the thumb and finger of the compositor.

The type forwarder in the application above referred to is operated by hand. Our present invention is designed to relieve the hand of the compositor of the labor of forwarding the types, and at the same time to insure the forwarding and presentation of new types as fast as those preceding are removed from the case.

The invention consists essentially in combining and arranging with the plurality of type containing channels and with the means for converging the types upon a common support, a constantly reciprocating pusher which acts only upon the types when thrown into action by a lever the outer end of which is depressed by the finger of the compositor while in the act of grasping the last forwarded types for removal. Thus the hand of the operator is relieved of the strain involved in severing the lowest types in the column from those above, the depression of the switch lever not even requiring a special movement or arrangement of the fingers, but being effected practically without exertion.

In the accompanying drawings Figure 1, is a side elevation of our improved arrangement; Fig. 2, a top view of the same, showing the channel holder in horizontal section on plane of line *v, v*, Fig. 1. Fig. 3, is a vertical section upon plane of line *w, w*, Fig. 2. Fig. 4, is an elevation similar to Fig. 1, showing the switch lever depressed; Fig. 5, a like view

showing the type forwarder just after the completion of its forward stroke. Fig. 6, is a detail of the switch lever. Fig. 7, is a front elevation of the device; Fig. 8, a vertical section upon plane of line *x, x*, Fig. 1. Fig. 9, is a horizontal section upon plane of line *y, y*, Fig. 8; Fig. 10, a horizontal section upon plane of line *z, z*, Fig. 8.

The socket piece or support A, for the type containing channels B, may be of any convenient or desired construction, that shown being substantially the same as in our last application hereinbefore referred to. The type supporting platform *a*, extends out beyond the front of the socket piece A, and is provided with the converging side walls *a'*, *a'*, ending in the port *a²*, through which the forward ends of the types are made to project by the forward stroke of the type pusher P, when the latter is brought into action.

The type platform *a*, is slotted transversely at *a²*, just behind the position which the heels of the types occupy when forwarded. This slot *a²*, opens into a passage way *a³*, the bottom of which is formed by the top of the main platform D, upon which the pusher P rests, in the arrangement shown in the drawings, although the pusher may be supported in any convenient or well known manner, the essential feature being the employment of a constantly reciprocating device actuated by suitable mechanism. The pusher bar P, is shown as reciprocated through the medium of a connecting rod *p*. To its front edge is pivotally connected one end of an arm *p'*, having the lateral pusher finger *p²*, projecting from its other extremity. This pusher finger rests normally upon the top of the table D, traveling back and forth under the type platform *a*, as the pusher bar P is reciprocated. The type platform *a* extends back slightly beyond the type channels, and the retracted position of the pusher finger *p²*, is beyond the rear end of the said type platform as shown in Figs. 1 and 3.

The pusher finger *p²*, is raised so as to travel forward upon the type platform *a*, by a finger lever L, fulcrumed at *l*, to a stationary part of the structure. The rear end *l'*, of this finger lever L, rests under the arm *p'*, of the pusher, or has a projection or roller *l²*,

which does so. The forward end l^3 , of the lever L, projects upward in front of the type platform a , immediately underneath the position of the forward ends of the types as they project through the port a^2 . In this position the end l^3 , of the lever is depressed by the finger and thumb of the compositor as he lowers them over the front ends of the types preparatory to grasping and removing the latter. As a result the rear end l' , of the lever L, raises the forward end of the pusher arm p' , until the pusher finger is elevated sufficiently to travel over the type platform a . This upward movement is limited by a stop c , projecting above and beyond the rear of the type platform a . The type finger having thus been raised into position for action advances over the type platform a , during the forward stroke of the pusher bar P, encountering the heels of the types resting immediately upon the said type platform, and advancing them into the position just vacated by the preceding types withdrawn by the compositor. Having accomplished this, the type finger p^2 , drops through the slot a^2 , onto the table D, where it continues to travel back and forth without effect until again raised through the medium of the lever L.

The rear arm l' , of the lever L, is made heavier than the front arm, so that the lever L, returns automatically to its normal position when released from the pressure of the fingers.

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

1. In type setting apparatus the combination of a plurality of type containing channels, a type platform, common to all the types, formed with a transverse slot, and a reciprocating type forwarder arranged to advance over said type platform and to drop through said transverse slot at the completion of its

forward stroke, substantially in the manner and for the purpose described.

2. In type setting apparatus, the combination of a plurality of type containing channels, a type platform, common to all the types, formed with a transverse slot, a reciprocating forwarder arranged to advance over the said type platform and to drop through the transverse slot at the completion of its forward stroke, and a lever for raising the type forwarder into position to advance upon the type platform substantially in the manner and for the purpose described.

3. In type setting apparatus, the combination of a plurality of type containing channels, a type platform common to all the types, formed with a transverse slot, converging side walls upon the type platform in front of the type containing channels, and a reciprocating type forwarder arranged to advance over said type platform, and to drop through said transverse slot at the completion of its forward stroke substantially in the manner and for the purpose described.

4. In type setting apparatus the combination of a plurality of type containing channels, a type platform, common to all the types, formed with a transverse slot, a type forwarder arranged to advance over said type platform and to drop through said transverse slot at the completion of its forward stroke, a lever for raising the type forwarder into position to advance upon the type platform, and mechanism for reciprocating the type forwarder continuously substantially in the manner and for the purpose described.

LOUIS KOSSUTH JOHNSON.
ABBOT AUGUSTUS LOW.

Witnesses:

D. W. GARDNER,
GEORGE WILLIAM MIATT.