

(No Model.)

2 Sheets—Sheet 1.

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

No. 579,541.

Patented Mar. 23, 1897.

Fig. 1.

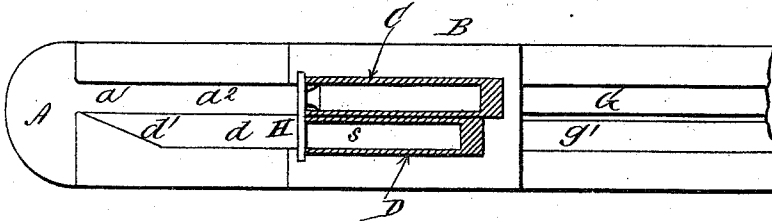


Fig. 2.

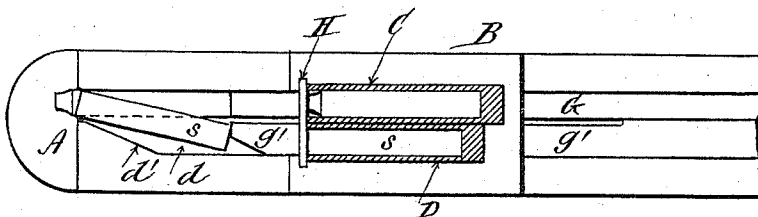


Fig. 3.

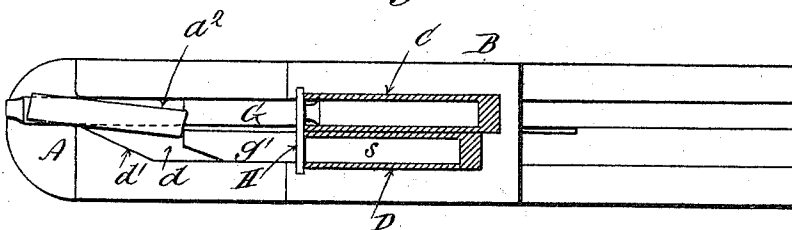
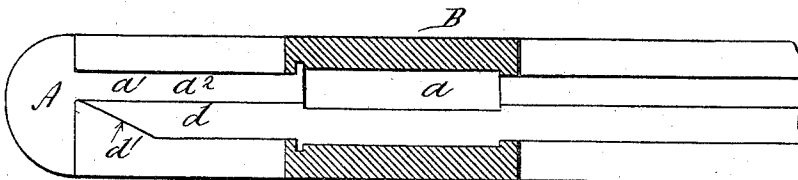


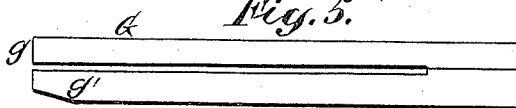
Fig. 4.



Witnesses:

W. Gardner.
Louis S. Rowley

Fig. 5.



Inventors:

Louis Kossuth Johnson
Abbot Augustus Low
By their Attorney
George William Webb

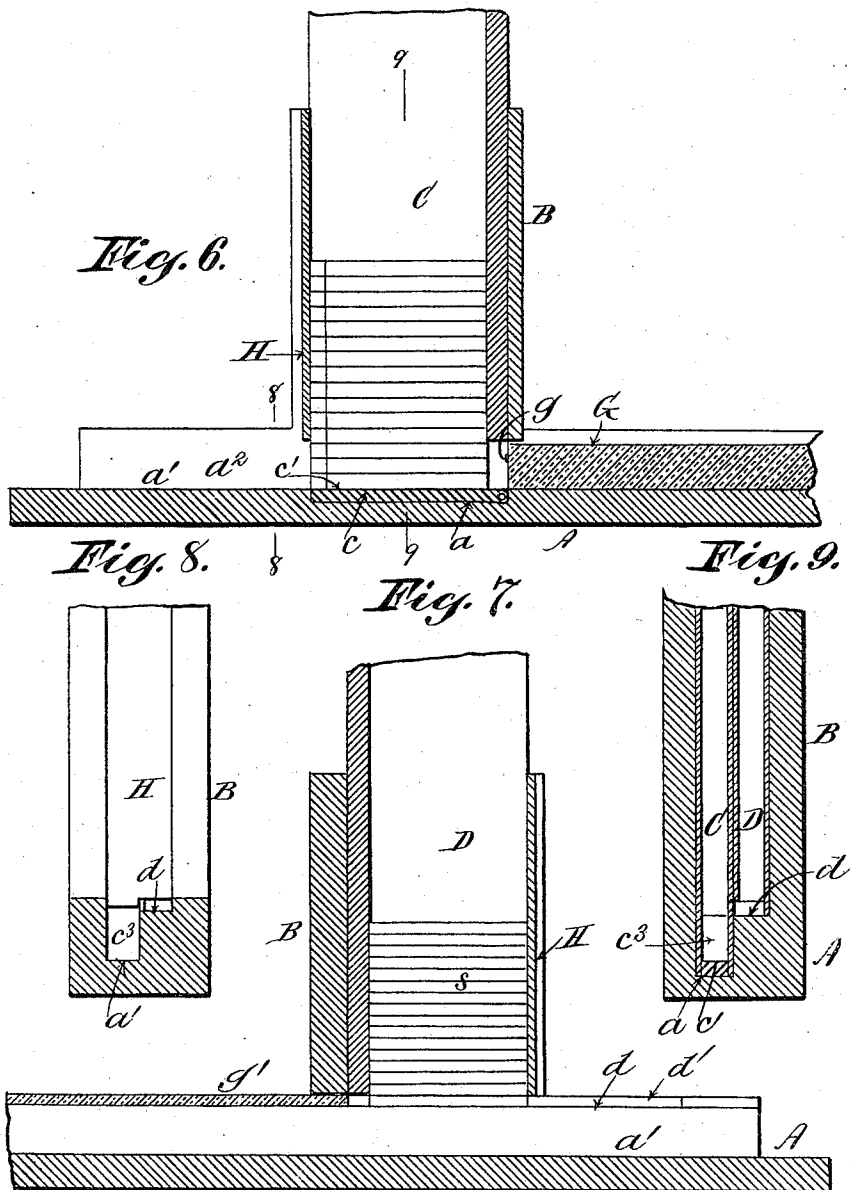
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

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NEW YORK, ASSIGNORS TO THE ALDEN TYPE MACHINE COMPANY, OF
NEW YORK, N. Y.

TYPE-SETTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 579,541, dated March 23, 1897.

Application filed December 26, 1895. Serial No. 573,260. (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 setting of types from cases in which the types are grouped in words or other combinations to be removed by hand to the compositor's stick. Heretofore we have arranged a plurality of types forming a word or combination on their edges side by side in a single channel, so that the word or combination was forwarded on the type-platform in a horizontal line or position. We have also heretofore arranged a plurality of channels containing types representing collectively a word or combination in such relation to each other that the forward stroke of the pusher assembled the types one upon the other upon their flat sides, presenting a vertical line of types to the fingers of the compositor.

In our present construction we arrange the several types forming a word or combination in a single channel of a width equal to that of a single type, the latter resting upon each other upon the "flat" and consisting of a series of words or combinations extending vertically one over the other. This arrangement of the words or combinations of types vertically in a single narrow channel is accomplished in an automatic distributing apparatus by the use of types formed with our combination word-nicks set forth in our concurrent application, Serial No. 570,335, filed November 29, 1895, the lowest word or combination being forwarded by a pusher of corresponding height from the lower end of the channel along a straight vertical groove, the sides of which support the types positively and snugly in position during transit and insure their proper alinement and presentation at the front of the type-platform.

In our concurrent application last referred

to the nicking of the space to correspond with the word or combination, so as to insure their deposit upon the word or combination in the channel, is set forth; but while this is practicable in certain classes of composition, in others the removal and substitution of spaces in "justification" would interfere with the subsequent automatic distribution of the types, since any variation in the arrangement or thickness of the spaces, or their omission, would disarrange all the types and word combinations in a channel with relation to the pusher, reducing the whole to little better than "pi." We overcome this difficulty in our present application by the use of a supplemental channel for the spaces adjoining the word-channel, the parts being so arranged that a space is detached for each word and slid over on top thereof into position to be grasped therewith by the fingers of the compositor when the types have been fully forwarded. By thus separating the spaces from the type combinations in the word-channel we avoid all possibility of confusion or derangement by reason of the substitution of spaces of a different size after composition, so that the pusher will always encounter and forward a perfect word or combination, to which the necessary space is added outside of the channel.

The arrangement of types in words or combinations upon the flat and vertically one over the other in a single narrow channel enables us to greatly simplify and cheapen the structure of the case, as well as to effect an economy in space laterally, which is of great practical importance in extending the scope and possibilities of the case within a prescribed area as compared with the arrangement of types in separate channels or upon their edges in horizontal line in a common channel. The finger-pieces or platforms for a greater number of types and combinations may thus be brought within convenient distance for the arm and hand of the compositor.

In the accompanying drawings, Figure 1 is a plan of a single type-channel holder, &c., embodying our improvement, the channels being shown in section; Fig. 2, a similar view showing the types and space partly advanced;

Fig. 3, a similar view showing the types and space still farther advanced; Fig. 4, a section through the side walls of the channel-holder, showing a plan of the type-platform. Fig. 5 is a plan of the forward end of the pusher. Fig. 6 is a vertical section through the word-channel; Fig. 7, a vertical section through the space-channel; Fig. 8, a transverse section upon plane of line 8 8, Fig. 6; Fig. 9, a transverse section upon plane of line 9 9, Fig. 6.

The type-platform A is formed with the channel-holder B, which receives and supports the word-channel C and the supplementary space-channel D. The type-floor is countersunk or formed with a depression a , into which the lower end c of the word-channel fits, so as to bring the upper surface of the hinged floor c' into line with the floor a' of the vertical type-groove a^2 . The spine of the channel is formed with the elongated vertical recess c^3 above the floor c' to admit the vertical end g of the pusher G, which is also formed with an auxiliary flat pusher or bayonet-blade g' for the spaces s .

The vertical type-groove a^2 is of a depth equal to the combined thickness of the types constituting the word or combination to be accommodated and of a width but little greater than that of the width of the type, so as to sustain the latter snugly and firmly in position, the side walls of the groove coinciding with and forming continuations of the inner side walls of the channel C.

The supplementary space-channel D is seated on the space platform or shelf d at one side of the channel C and vertical word-groove a^2 , its lower spine being cut away to admit the bayonet-blade g' of the pusher G.

The forward end of the space-platform d is formed with the converging side wall d' ,

and the forward end of the bayonet-blade g' is correspondingly beveled for a part of its width to allow the pusher to advance the space fully.

The upper surface of the space-platform d coinciding accurately with the upper side of the upper type in the vertical word-groove a^2 , it is obvious that the "space" will be free to slide on top of said upper type during the advance of the pusher.

H is the usual front plate for retaining all but the lowest types in the channels.

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

1. In a type-setter case the combination of a word-channel in which the types forming the words or combinations are arranged upon their flat sides, one above the other, in vertical line in a single channel, and a supplementary space-channel, together with a type-forwarder arranged to forward a word and a space simultaneously from said two channels, and with means for converging the space onto the word, substantially in the manner and for the purpose described.

2. The combination of the type-platform formed with the channel-holder B, and vertical type-groove a^2 , and elevated space-platform d , having the converging side wall d' , the word-channel C, and supplementary space-channel D, the type-forwarder G, g , formed with the auxiliary space-forwarding blade g' , the whole arranged and operating substantially in the manner and for the purpose described.

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Witnesses:

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