

No. 618,463.

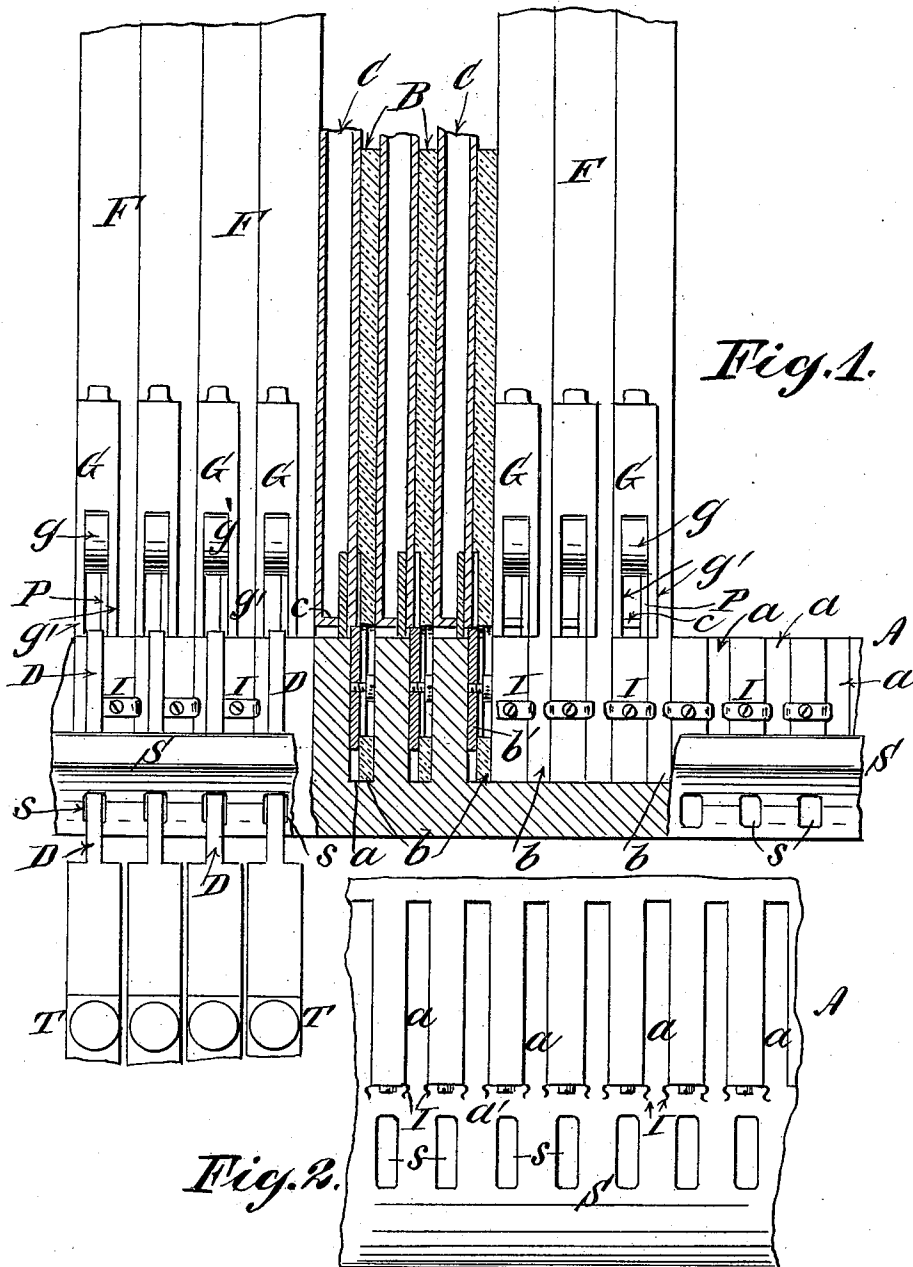
**Patented Jan. 31, 1899.**

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

(Application filed Dec. 11, 1897.)

(No Model.)

**2 Sheets—Sheet 1.**



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2 Sheets—Sheet 2.

Fig. 3.

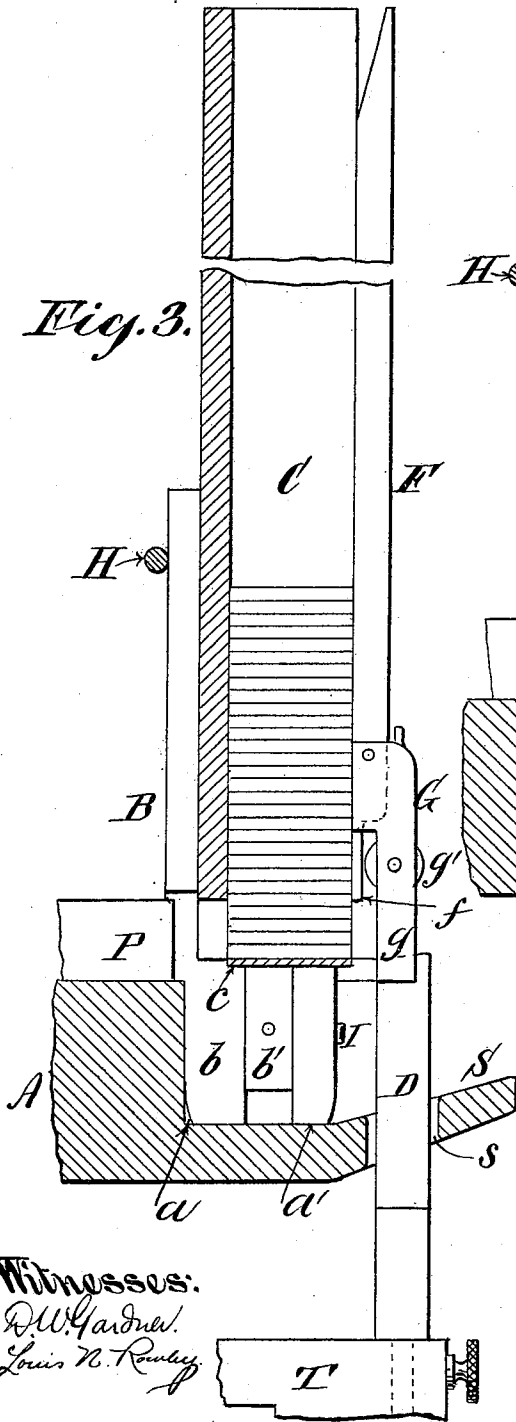
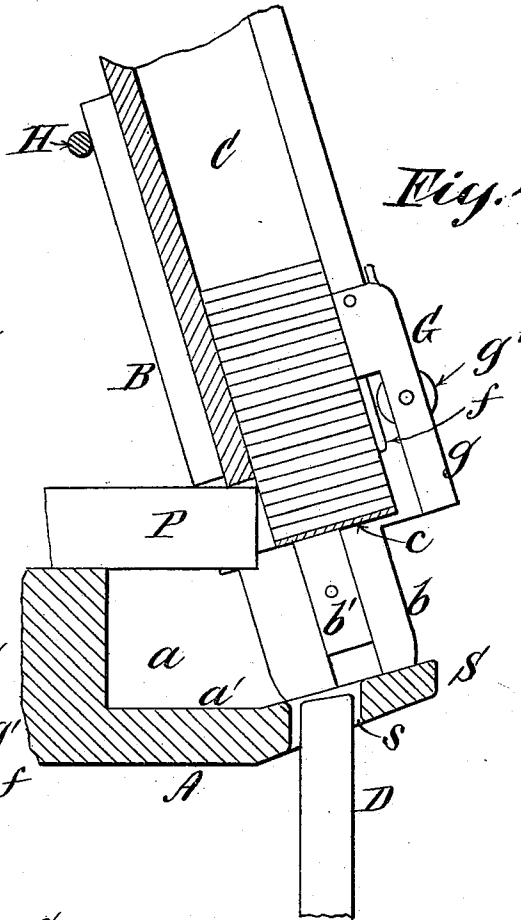


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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PLACE.

## TYPE-SETTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 618,463, dated January 31, 1899.

Application filed December 11, 1897. Serial No. 661,558. (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 class of type-setter cases in which a prescribed number of types are forwarded automatically into position to be removed by hand, the withdrawal of the forwarded types releasing the type-forwarding mechanism, as set forth in our Patent No. 569,337. In this class of mechanism a positive pusher is used, so that if by accident or otherwise the wrong channel is inserted in the holder there is danger of derangement or breakage. In other words, each holder is set to receive and accommodate a channel in which a prescribed word or combination of types is accommodated. Since the types vary in thickness, it is obvious that if a channel containing another word or combination is inserted in the holder there is likely to be a variation in the total height in the word or combination, the upper member of which will overlap more or less the lower end of the front guard. Under these conditions the forward movement of the pusher will press the face of said type forcibly against the front guard, either stopping the operation of the mechanism or deranging the parts. We overcome this difficulty by and our present invention consists in so arranging and supporting the channel-holder that in the event of the pusher encountering a type not free to move out of the channel-holder the holder itself, with the type-channel, will yield before the pusher, substantially as hereinafter set forth. It is obvious that this result may be accomplished by resort to various expedients, the novelty in the present case consisting in making the socket in which the lower end of the holder is supported open in front and in providing a shelf or support for the holder in front of the

socket for the reception of the lower end of the holder in case it is forwarded by the pusher, as hereinbefore stated.

Incidentally our invention also includes the idea of making this front shelf or support for the channel-holder inclined upward with relation to the floor of the socket, so that the upper end of the holder and channel will be tilted backward and supported between said front shelf and a rear cross-bar or other fixed part of the apparatus.

In the accompanying drawings, Figure 1 is an elevation, partly in section, upon different planes, of a portion of front of the case, constructed according to our invention. Fig. 2 is a plan of a portion of the bed-plate, the channels and holders being removed. Fig. 3 is a sectional elevation through a channel and holder and adjoining parts of the apparatus. Fig. 4 is a similar view showing the channel-holder pushed forward under the action of the pusher-blade owing to an irregularity of the types in the channel.

In general construction and operation our apparatus is essentially the same as that heretofore described and claimed by us, and it is unnecessary here to describe specifically the construction and operation of the parts in general, sufficient only of the apparatus being shown to illustrate clearly the function of our improved construction of the supporting-table, &c.

A is the ordinary bed or support, formed, as heretofore, with the sockets *a* for the reception of the tenons *b* of the holders B, the only distinction in this case being that said sockets *a* are open in front, their floors *a'* forming a continuation of an extension or shelf S, extending across the front of the case.

C is the type-containing channel, formed with the lateral type-shoulder *c* at the bottom, projecting from one side wall of the channel and leaving a space for the passage of the type-pusher blade P between it and the opposed walls of the type-channel, as heretofore described by us.

*b'* is the adjustable channel-support.

D is the type finger-piece, attached to the trigger-lever T, F the front guard, having the heel-bearing *f*, and G the type-guard, formed

with the cheek-pieces *g g* and type-bearing roller *g'*.

The shelf *S* is slotted, as at *s*, to admit of the passage of the fingers *D* and is preferably inclined on its upper surface, rising from the floors *a'* of the sockets *a* at a pitch sufficient to guard against any danger of the displacement of a channel-holder under the action of the pusher, as will be understood by reference to Fig. 4. A horizontal bar *H* or any other stationary support may be used at the back of the channel-holder to limit the rear movement of the upper end of the said channel-holder and channel.

In Figs. 3 and 4 of the drawings the channel is shown as containing a combination of five types, which exceed in the aggregate height the distance to which the type-shoulder *c* is set with relation to the pusher *P* and heel-guard *f*, the adjustment being for a word or combination of smaller types or of fewer types. As a result of this misplacement of the channel it will be seen that the fifth type above the type-shoulder *c* overlaps or breaks joints with the line of the lower edge of the heel-guard *f* and the upper edge of the pusher *P*. Consequently when the pusher-blade *P* is started forward to project the types into position for removal by hand the said pusher-blade will force the fifth type above the shoulder *c* against the rigid end of the heel-guard *f*, and since the front guard *F* is part of the holder *B* will push the latter into the position shown in Fig. 4, thus giving notice that a mistake has been made in placing the channel without injury to any of the parts.

In order to counteract the effects of jar and retain the holders in place under ordinary conditions, springs *I* may be arranged between the recesses *a*, overlapping very slightly the front edges of said recesses, but of sufficient elasticity to yield readily under the forward pressure of the pusher under the conditions heretofore stated.

By our improvements we guard effectually against carelessness or indifference or lack of skill in the adjustment of the parts and type-containing channels. At the same time prompt notice is automatically given of any mistake, so that the latter may be quickly and conveniently corrected.

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

1. In a compositor's type-case substantially

such as described, the combination with the type-forwarding mechanism, type-channel, channel-holder and front guard, of a supporting-bed formed with mortises for the reception of the tenons of the channel-holders, said mortises being open in front for the purpose and substantially in the manner described.

2. In a compositor's type-case substantially such as described, the type-forwarding mechanism, type-channels, channel-holder and front guard, and a supporting-bed formed with mortises for the reception of the tenons of the channel-holders, said mortises being open in front, and said supporting-bed being formed with a shelf or extension, the upper surface of which forms a continuation of the floors of the said mortises, substantially in the manner and for the purpose described.

3. In a common type-case, substantially such as described, the combination of the type-forwarding mechanism, type-channel, channel-holder and front guard, and a supporting-bed formed with mortises for the reception of the tenons of the channel-holders, said mortises being open in front, and said supporting-bed being formed with a shelf the upper surface of which forms a continuation of, and inclines upward from, the floors of the mortises substantially in the manner and for the purpose described.

4. In a compositor's type-case, substantially such as described, the combination of the type-forwarding mechanism, type-channel, channel-holder and front guard, a supporting-bed formed with mortises for the reception of the tenons of the channel-holders, said mortises being open in front, and a back-rest for the upper rear side of the channel-holder, arranged and operating substantially in the manner and for the purpose described.

5. In a compositor's type-case, substantially such as described, the combination of the type-forwarding mechanism, type-channel, channel-holder and front guard, supporting-bed formed with mortises for the reception of the tenons of the channel-holders, said mortises being open in front, and springs overlapping the open front edges of said mortises, substantially in the manner and for the purpose described.

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