

(No Model.)

3 Sheets—Sheet 1.

L. K. JOHNSON.
TYPE DISTRIBUTING MACHINE.

No. 541,758.

Patented June 25, 1895.

Fig. 1.

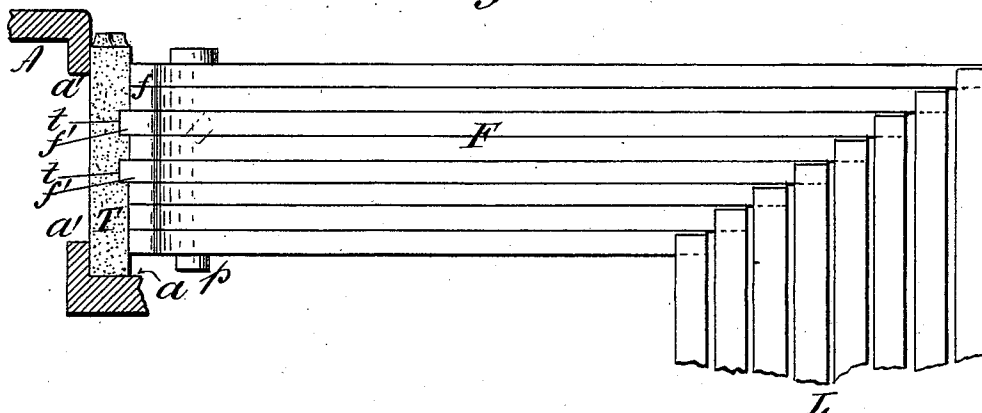


Fig. 2.

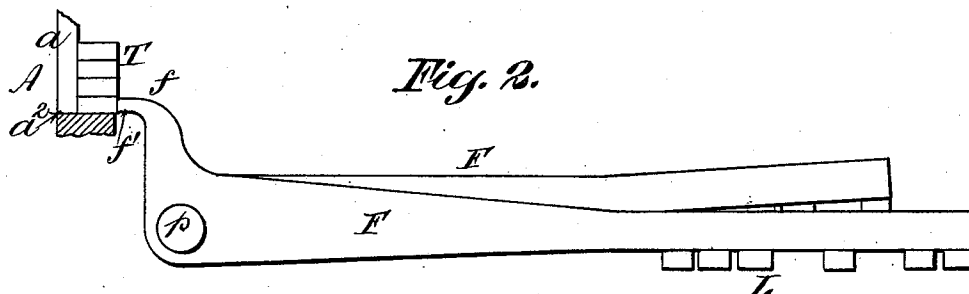
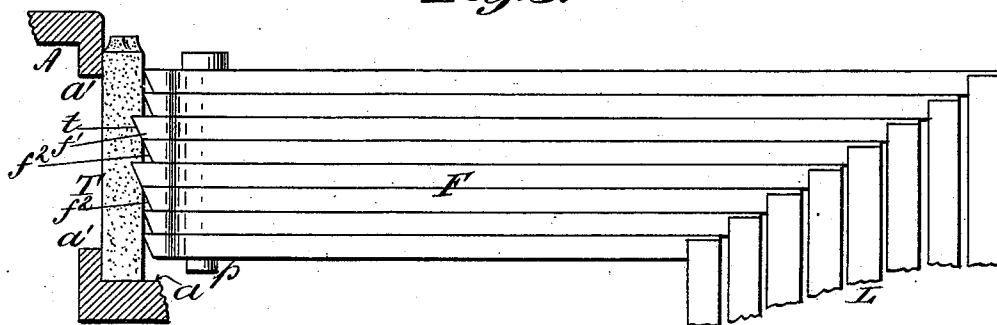


Fig. 3.



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Fig. 4.

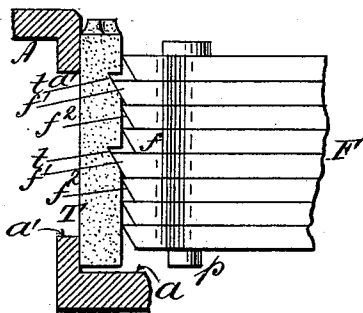


Fig. 5.

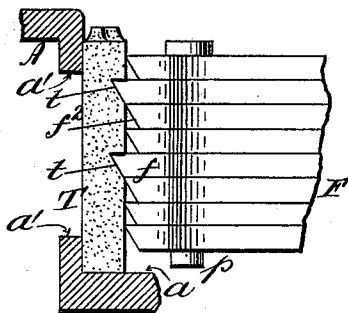


Fig. 6.

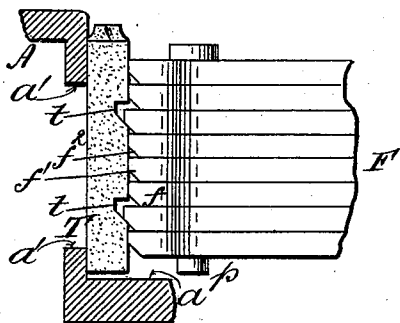


Fig. 7.

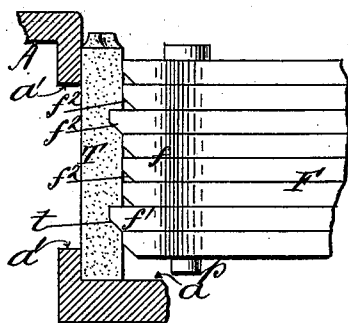


Fig. 8.

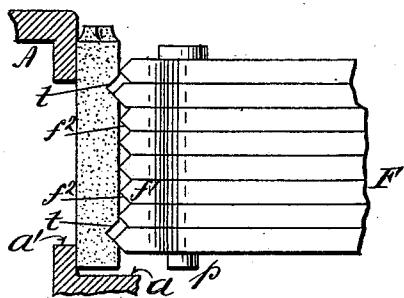
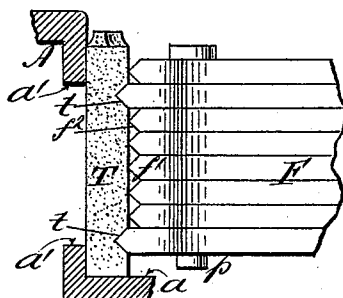


Fig. 9.



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Fig. 10.

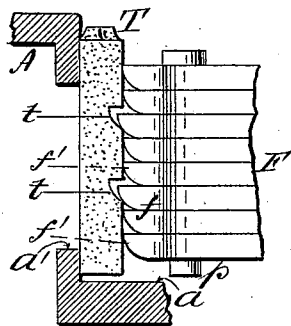


Fig. 11.

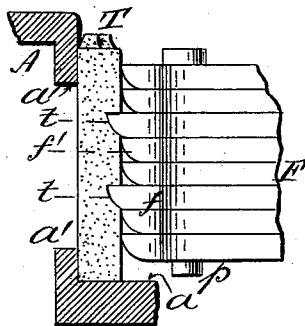


Fig. 12.

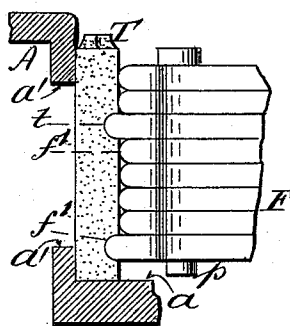


Fig. 13.

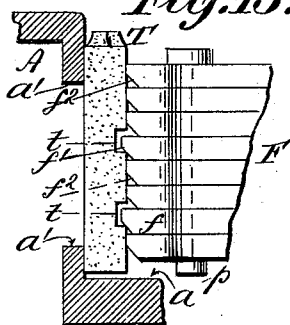


Fig. 14.

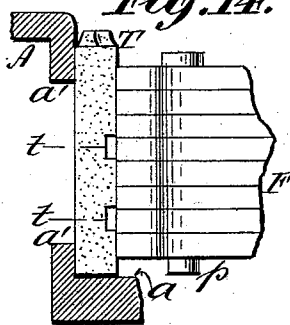
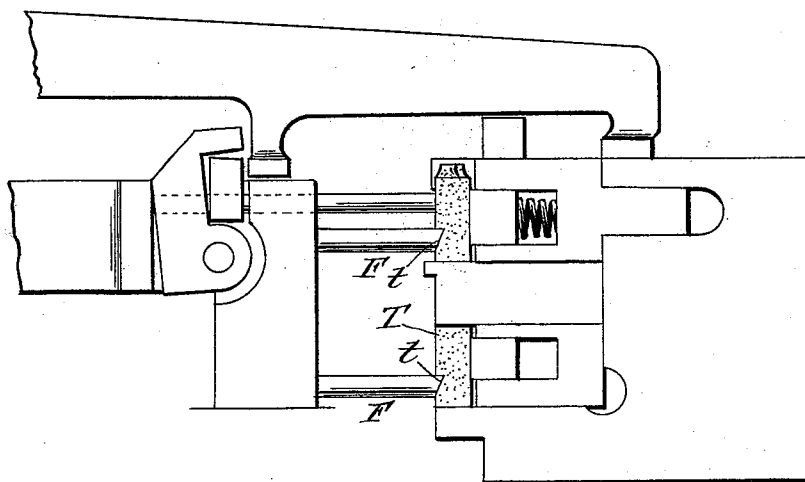


Fig. 15.



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UNITED STATES PATENT OFFICE.

LOUIS KOSSUTH JOHNSON, OF BROOKLYN, ASSIGNOR TO THE ALDEN TYPE MACHINE COMPANY, OF NEW YORK, N. Y.

TYPE-DISTRIBUTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 541,758, dated June 25, 1895.

Application filed November 2, 1894. Serial No. 527,707. (No model.)

To all whom it may concern:

Be it known that I, LOUIS KOSSUTH JOHNSON, a citizen 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-Distributing 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.

My improvements relate to automatic type distributing apparatus in which types with combination nicks are presented to a series of feelers, certain of which enter the nicks and are thereby caused to actuate mechanism by which the types are successively deposited in their appropriate channels.

Owing to the presence of printers' wax, ink, and other foreign substances, many of the types are not presented to the feelers with sufficient accuracy to admit the appropriate feelers into the square shouldered, shallow combination nicks with which the types have heretofore been formed, and are consequently passed through the distributing apparatus to finally form "pi" in the last receiving channel. A very slight variation in the position longitudinally is sufficient to effect this result, which is also contributed to somewhat by the vibration of the apparatus. In my concurrent application, filed October 29, 1894, Serial No. 527,235, I overcome this difficulty by forming the types with register or combination nicks having an inclined surface which is presented to the feelers at such an angle that if the types are slightly out of position longitudinally the contact of the feelers with the inclined sides of the nicks will tend to force the types into proper alignment so that the proper feelers can enter the nicks to the full depth of the latter and thereby insure the removal of the type at the proper time and place. In my said concurrent application I show and describe the use of types having register nicks formed with inclined sides, in combination with feelers the faces of which are also inclined, but this is not indispensable since the old form of square or flat faced feeler may be used in connection with the inclined sides of the nicks in the type with satisfactory results. Neither are the in-

clined sides of the nicks in the types indispensable where the faces of the feelers are formed with inclined surfaces, since it will be seen herein that the inclined surfaces of the feelers may be used in connection with the old form of rectangular register nick in the type with satisfactory results. Hence, while in my said concurrent application I claim only the types formed with register nicks having inclined surfaces, my present invention consists in forming the faces of type feelers with inclined surfaces which act upon the edges or walls of the register nicks in the type, whether rectangular or inclined, to force the types into proper relation to the feelers so that the latter may enter the nicks to the full depth thereof, and thereby insure the proper disposition of the types.

In the accompanying drawings I show my improvement mainly as applied to what is known as the "Alden" distributor, although it is also shown as adapted to the "Burr" distributor, and is available in all machines in which register nicks in the types are used in conjunction with detective feelers in the apparatus which actuate mechanism by which the types are individually deposited in their appropriate channels.

The scale of the drawings is double that of the size of the original parts.

Figure 1 is an elevation showing diagrammatically the feeler levers used in the "Alden" and similar distributing machines in which the feeler levers actuate intermediate levers by which appropriate mechanism is actuated to grasp and remove the detected type, the old form of rectangular register nick and feeler facing being retained. Fig. 2 is a plan of the parts shown in Fig. 1. Fig. 3 is a view similar to Fig. 1, showing my improved construction of feeler. Figs. 4 and 5 illustrate the action of my improved feeler in forcing a high type into proper position; Figs. 6 and 7, similar views in which a modified form of feeler face is shown. Figs. 8 and 9 illustrate still another modification. Figs. 10 and 11 illustrate the action of feelers formed with curved faces, and Fig. 12, feelers the faces of which are rounded or semi-circular. Fig. 13 illustrates the action of my improved form of feeler when used in conjunction with types formed

with the old rectangular register nicks. Fig. 14 shows the old form of type nick and feeler but slightly out of register, and inoperative. Fig. 15 is a diagrammatic illustration of the application of my improvement to the "Burr" or other distributing apparatus in which the feelers reciprocate.

In the first fourteen figures of the drawings the type T, is shown as in the race way A, containing the line of type to be distributed, the heels of the type presumably resting upon the floor *a*, while the rear edge of the type rests against the vertical guide walls *a'*, *a'*, the type successively bringing up against the end abutment *a*², (Fig. 2) where they are subjected to the action of the feelers F, and then raised and transferred to their proper channels by mechanism which it is not necessary to show in this connection.

The feeler levers F, are pivoted at *p*, their short arms ending in the feelers *f*, while their long arms extend back to a series of corresponding intermediate levers L, by which the combination detected by the feelers is transmitted to suitable mechanism which sets the parts for the reception and delivery of the type, as is well known in the state of the art. The feelers *f*, are pressed against each type with an elastic pressure, transmitted through the levers L, which while it accommodates itself to the resistance afforded by the type, also forces forward the faces *f'*, of the feelers *f*, which coincide with the nicks *t*, in the type T, thereby allowing the outer ends, of the feeler levers F, to yield before the intermediate levers L, to set the combination. The faces *f'*, of the feelers *f*, are inclined more or less with relation to the longitudinal axes of the types when in position against the abutment *a*², so that, should a type be raised slightly out of perfect alignment the inclined surfaces *f'*², encountering the lower sides of the nicks, will tend to wedge the type down into position so that the feelers can enter the combination nicks to the full depth thereof, and thereby insure the setting of the type distributing mechanism. This result will be attained even where the old form of rectan-

gular nick in the type is used, as in Fig. 13, but types nicked to correspond with the faces are preferable, as in my concurrent application hereinbefore referred to. Thus in Figs. 3 to 5, inclusive, the ends of the feelers *f*, are simply beveled, and fit into corresponding nicks in the types; whereas in Figs. 6, 7 and 13, a truncated bevel is shown. In Figs. 8 and 9, the faces *f'*, of the feelers are formed with a double inclination or V shape, and enter corresponding nicks in the types T; while in Figs. 10, 11 and 12, the faces *f'*, of the feelers are curved. In all these cases it will be seen that an inclined or wedging surface is presented to the lower sides of the nicks by the appropriate feelers, so that any slight variation from perfect alignment will be corrected, even though the old rectangular nicks are in use; whereas in the old form of square or rectangular faced feelers, used in connection with the old rectangular nicks in the types, as in Fig. 14, the slightest deviation is sufficient to prevent the entrance of the faces of the feelers into the types and the latter consequently pass into "pi." The action is the same where the feelers consist of reciprocating fingers, as indicated in Fig. 15, and fully set forth in my concurrent application hereinbefore referred to.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In automatic type distributing mechanism, a type feeler formed with a feeling surface inclined with relation to the longitudinal axes of the type as presented to it, substantially in the manner and for the purpose described.

2. In automatic type distributing mechanism, a plurality of type feelers formed with feeling surfaces inclined with relation to the longitudinal axes of the type as presented to the said feelers substantially in the manner and for the purpose described.

LOUIS KOSSUTH JOHNSON.

Witnesses:

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D. W. GARDNER.