

No. 828,564.

PATENTED AUG. 14, 1906.

C. MUEHLEISEN.  
TYPOGRAPHIC MACHINE.  
APPLICATION FILED JULY 29, 1904.

3 SHEETS—SHEET 1.

Fig. 2.

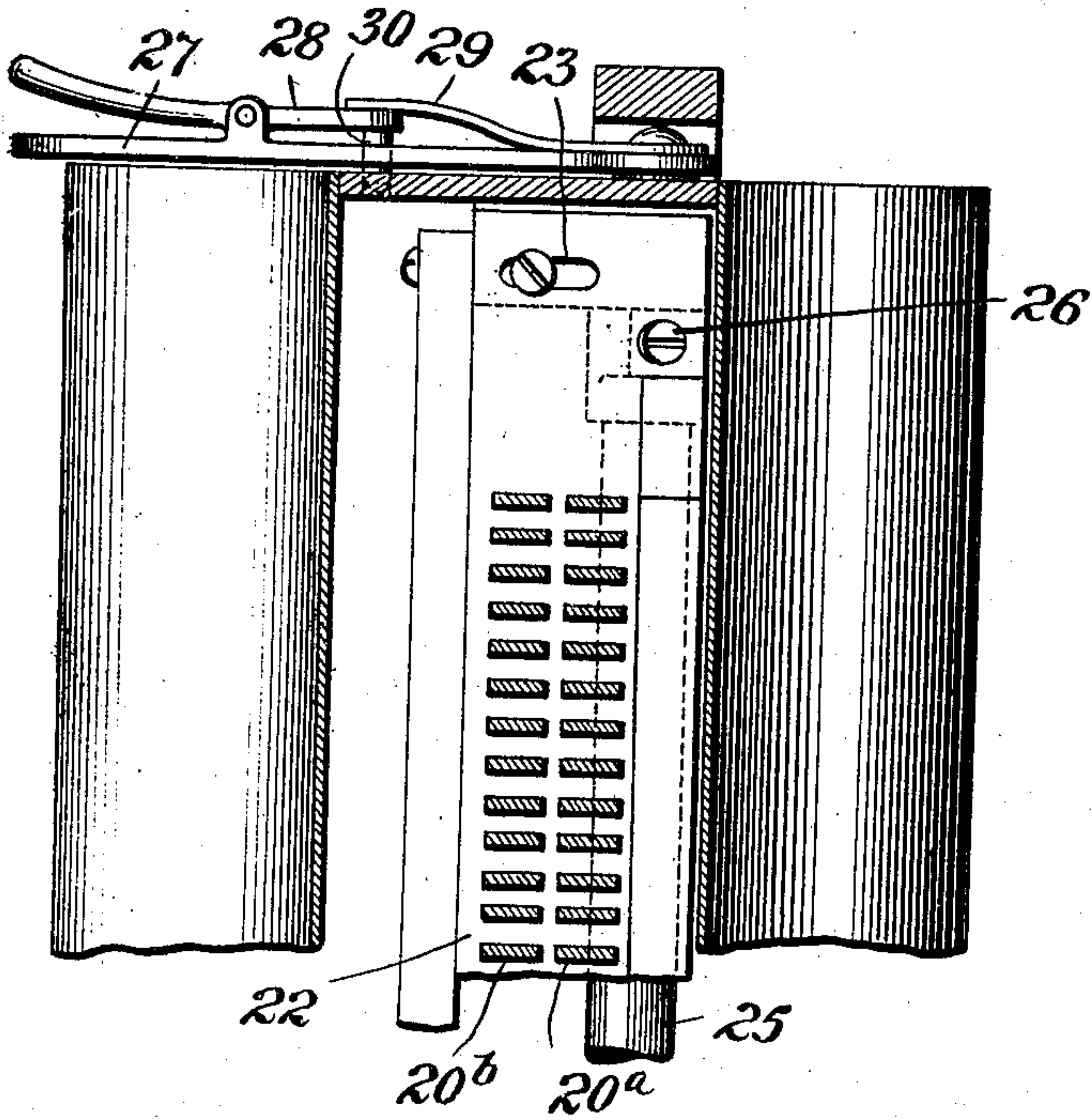
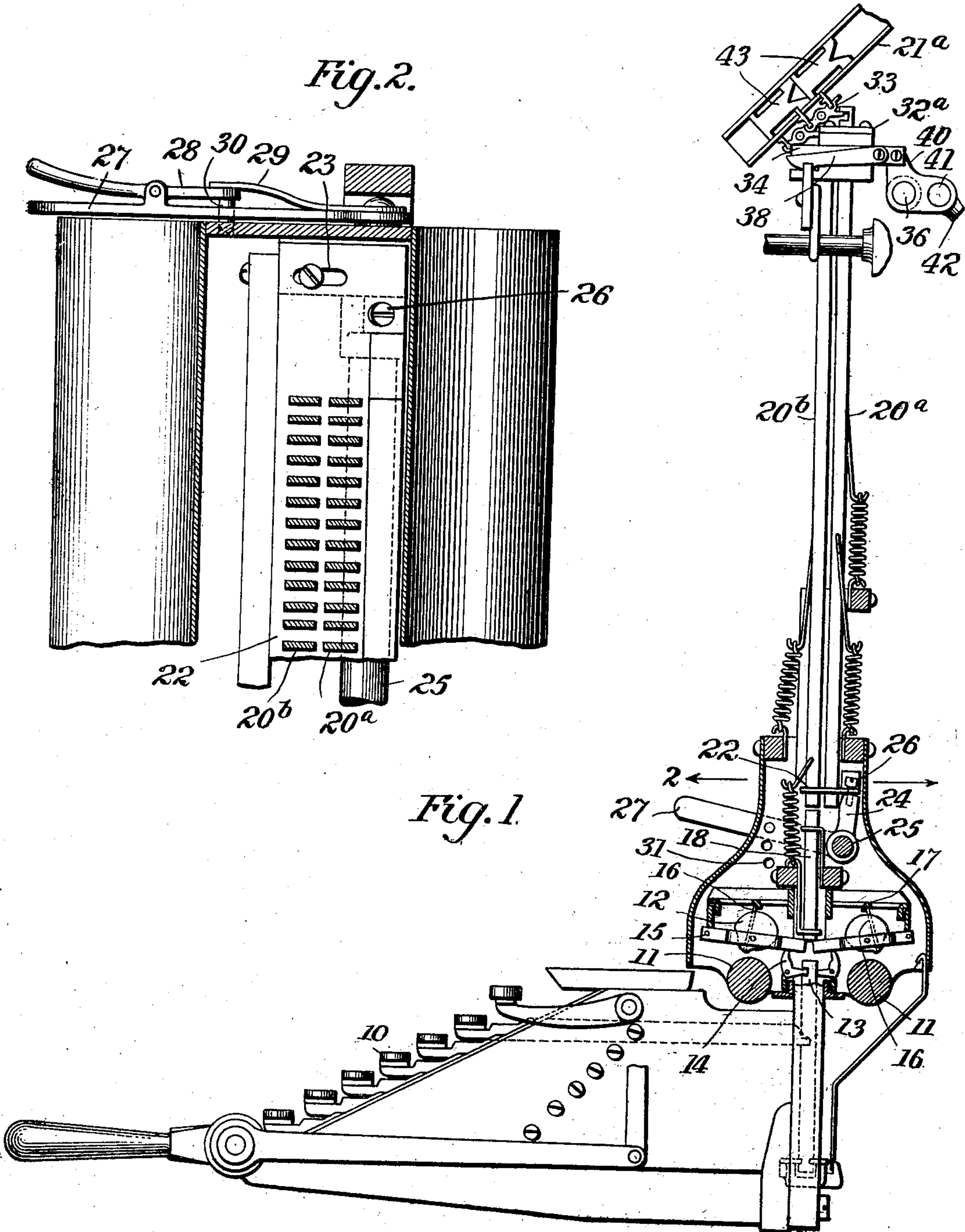


Fig. 1.



Witnesses

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Inventor

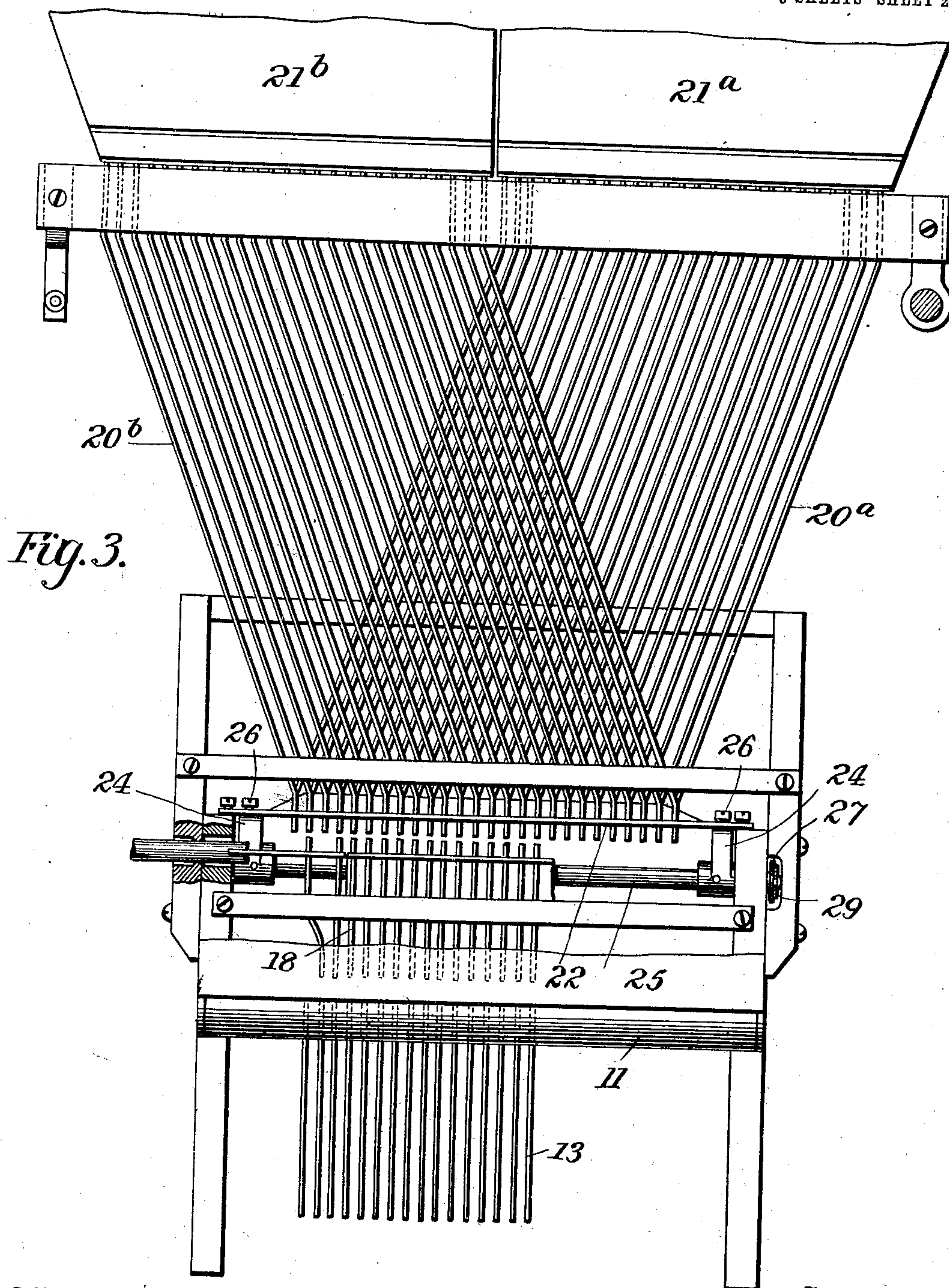
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

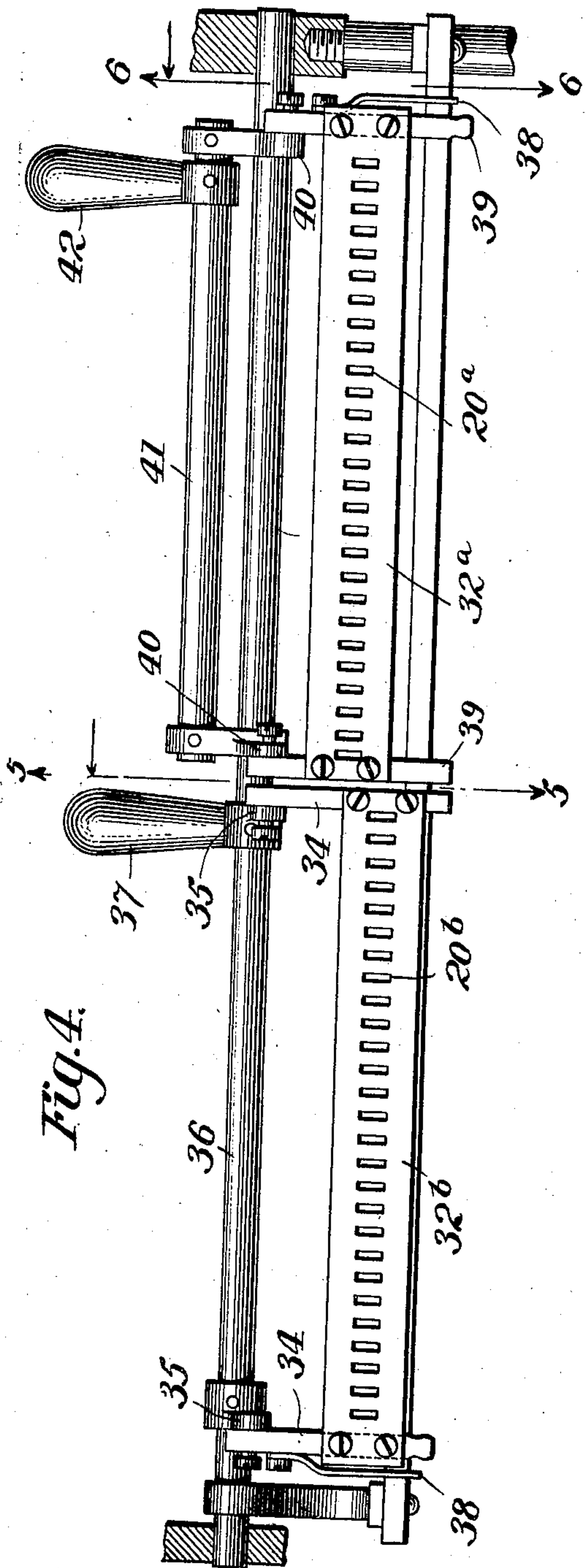


Fig. 4.

Witnesses  
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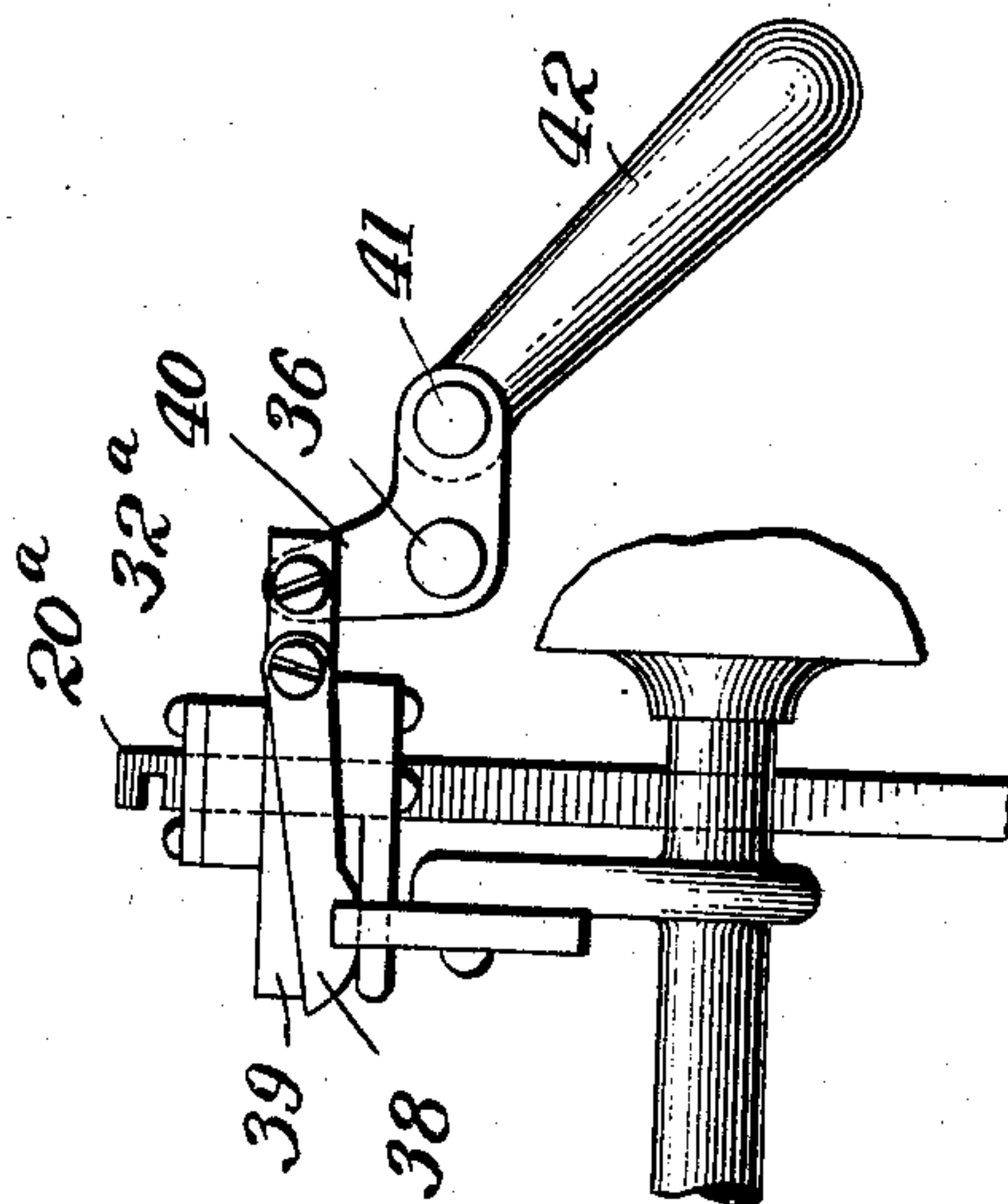
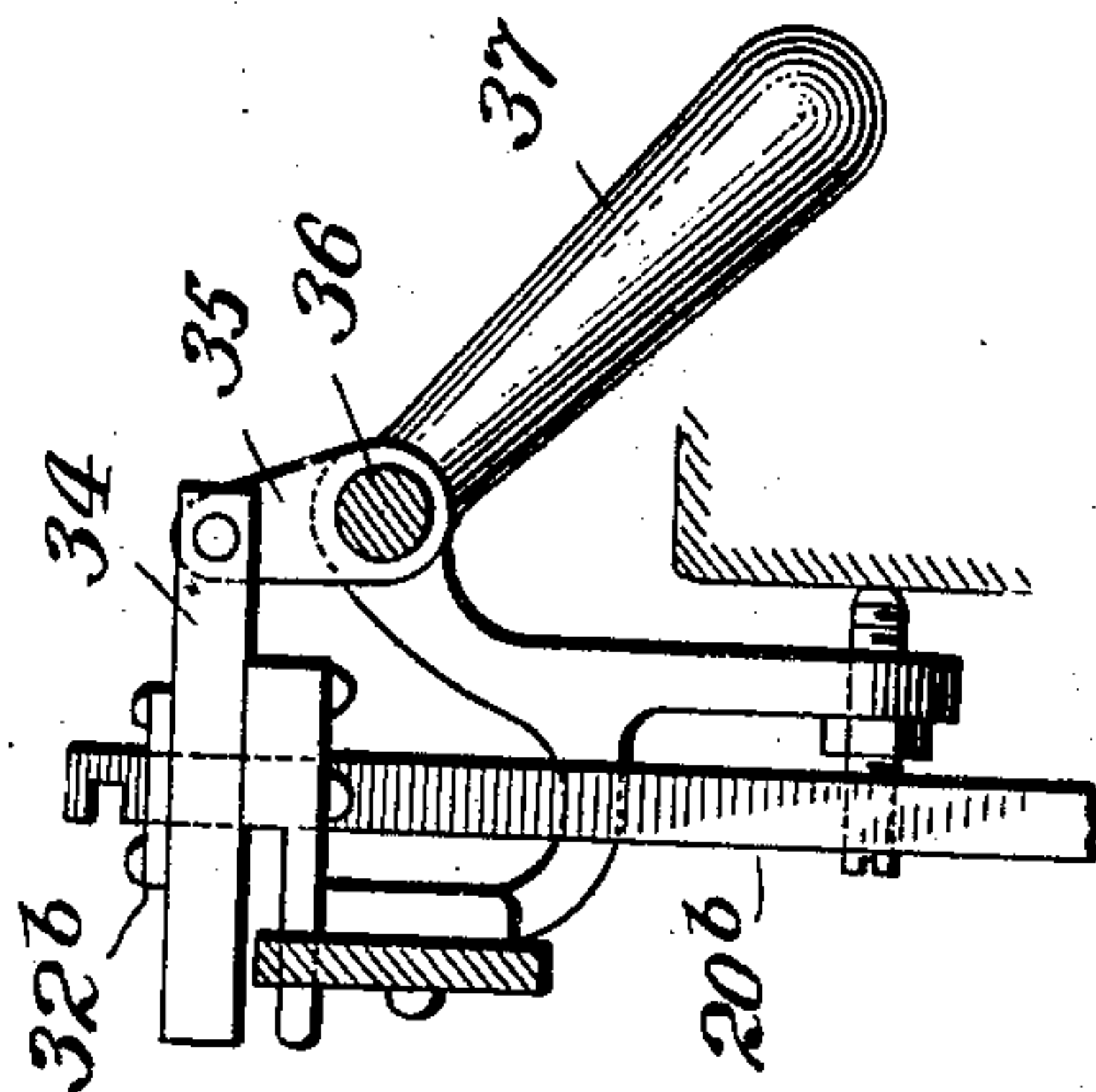


Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## TYPOGRAPHIC MACHINE.

No. 828,564.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed July 29, 1904. Serial No. 218,697.

*To all whom it may concern:*

Be it known that I, CARL MUEHLEISEN, a citizen of the United States, residing at Berlin, Germany, have invented certain new and useful Improvements in Typographic Machines, of which the following is a specification.

The present invention comprises improvements in the composing mechanism of typographic machines; and it relates especially to mechanism for assembling type or matrices from a plurality of magazines by means of a single keyboard.

The invention will be described in connection with the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of a keyboard of a typographic machine and the connections from the keyboard to the magazines, parts being shown in section. Fig. 2 is an enlarged section on the line 2 2 of Fig. 1. Fig. 3 is a front elevation showing the arrangement of connections from the keyboard to the magazines. Fig. 4 is a plan view of the upper guides for the escapement-actuating rods. Fig. 5 is a section on the line 5 5 of Fig. 4, and Fig. 6 is a section on the line 6 6 of Fig. 4.

Referring to the drawings, 10 indicates the keyboard of a typographic machine. For convenience the keyboard of an ordinary linotype-machine is illustrated, which is identical with that shown and described in United States Patent to Ottmar Mergenthaler, No. 531,266, dated December 18, 1894. I have also shown power devices for actuating the escapements similar to those illustrated and described in said patent. These devices, briefly described, comprise constantly-running rolls 11, over which rotatable cams 12 are normally supported out of contact with the rolls, there being one cam to each key of the keyboard. When a key is operated, it raises a rod 13 and rocks an elbow 14, thus lowering the support 15 of the cam 12. The detent 16 of the cam is thus freed from the stop 17, and the cam, which is normally unbalanced, quickly rotates into contact with the roll 11. The roll imparts to the cam a complete rotation, and owing to its eccentric mounting the support 15 is thus vibrated upward, raising the lifter-rod 18. The cam makes one complete revolution and comes to rest against a stop 17.

The parts enumerated all operate as described in the patent previously referred to, and as they constitute no part of the present invention a more detailed description may be omitted.

The present invention includes two series of escapement-actuating rods 20<sup>a</sup> and 20<sup>b</sup>, arranged as shown in Figs. 1 and 3—that is, there are a series of rods 20<sup>a</sup> inclined upwardly to the right and a series of rods 20<sup>b</sup> inclined upwardly to the left from the lifting-rods 18. The actuating-rods are preferably provided with vertical lower ends and vertical upper ends, as indicated in Fig. 3. The actuating-rods are arranged to cross each other, the lower vertical ends of the series 20<sup>a</sup> being in the rear of the lower vertical ends of the series 20<sup>b</sup>. The upper ends of the rods 20<sup>a</sup> cooperate with the escapements of a magazine 21<sup>a</sup>, while the upper ends of the rods 20<sup>b</sup> cooperate with a companion magazine 21<sup>b</sup>.

Referring particularly to Figs. 1 and 2, it will be seen that the lower ends of both series of actuating-rods are guided in a plate 22, which has a sliding movement forward and back for the purpose of moving the lower ends of either set of actuating-rods into position directly over the lifter-rods 18 for the purpose of operating either set of said actuating-rods by said lifter-rods. The plate 22 is retained in position and guided by pin-and-slot connections 23 with the main frame. It is reciprocated by means of arms 24 on a rock-shaft 25, the said arms being loosely connected to the plate by pins or screws 26. The shaft 25 is rocked by means of the hand-lever 27, and said hand-lever is held in any desired position by means of a latch 28 and a cooperating spring 29, said latch being provided with a pin 30, which enters holes or depressions 31 in the fixed part of the machine. It will be seen that by rocking the shaft 25 either set of the actuating-rods 20<sup>a</sup> 20<sup>b</sup> may be made to cooperate with the lifting-rods 18.

Referring to Figs. 1, 4, 5, and 6, the upper vertical ends of the rods 20<sup>a</sup> are guided in slots in a plate 32<sup>a</sup>, while the upper ends of the rods 20<sup>b</sup> are guided in slots in a corresponding plate 32<sup>b</sup>. The plates 32<sup>a</sup> 32<sup>b</sup> are adapted to be shifted laterally to carry the upper ends of the rods out of engagement with the escapements 33. The escapements illustrated are of the usual linotype construc-



tion, such as illustrated and described, for instance, in Patent No. 531,266, before referred to. The guide-plate 32<sup>b</sup> is mounted on bars 34, which are connected to arms 35, fixed on a rock-shaft 36. Said shaft is rocked by means of a handle 37 to shift the guide-plate to the rear to disengage the rods from the escapements. When the rods are in engagement with the escapements the guide-plate is held in position by a latch 38.

In order to provide for independent movement of the guide-plates 32<sup>a</sup> 32<sup>b</sup> the guide-plate 32<sup>a</sup> is connected to rods 39, which are pivoted to arms 40, which in turn are pivotally mounted on the shaft 36. The arms 40 are rigidly connected by a bar 41, whereby they rock in unison when actuated by a handle 42. The plate 32<sup>a</sup> is also provided with a latch 38 to lock it in operative position.

As shown, the magazines 21<sup>a</sup> 21<sup>b</sup> are arranged in tandem and in the same plane, while the actuating-rods 20<sup>a</sup> pass behind the actuating-rods 20<sup>b</sup>. It is evident that the same arrangement might be extended to three or more magazines—that is, they might be arranged in tandem and actuating-rods be made to converge to a common keyboard.

In the drawings I have illustrated the magazines 21<sup>a</sup> 21<sup>b</sup> as containing linotype-matrices 43. It will be evident that the present invention is likewise adapted for releasing other forms of matrices or for discharging types from the magazines of type-setting machines.

Therefore, without limiting myself to the precise construction and arrangement of devices illustrated and described, I claim—

1. In a typographic machine, a plurality of magazines arranged in tandem, corre-

sponding series of matrix-releasing devices, a single keyboard, series of actuating-rods extending from the respective magazines toward the keyboard in converging lines, and means whereby a single key may be caused to operate the corresponding rods of the respective magazines at will.

2. In a typographic machine, the combination with two magazines arranged in tandem, of a keyboard comprising a single series of keys and key-levers arranged centrally below the two magazines, type or matrix releasing devices connected with the magazines, and two series of actuating-rods, one in the rear of the other, and arranged in converging and intersecting lines, whereby each key of the keyboard is adapted to operate the corresponding releasing devices of the two magazines.

3. In a typographic machine, the combination with a plurality of magazines provided with type or matrix releasing devices, and with a single keyboard, of a plurality of series of actuating-rods for the releasing devices the different series being arranged in different planes and in intersecting lines and connecting the several magazines with the keyboard, a shifting guide for the lower ends of said rods whereby either series of rods may be brought into operative relation with the keyboard, and means for shifting said guide.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL MUEHLEISEN.

Witnesses:

HENRY HASPER,  
FRANK H. MASON.