

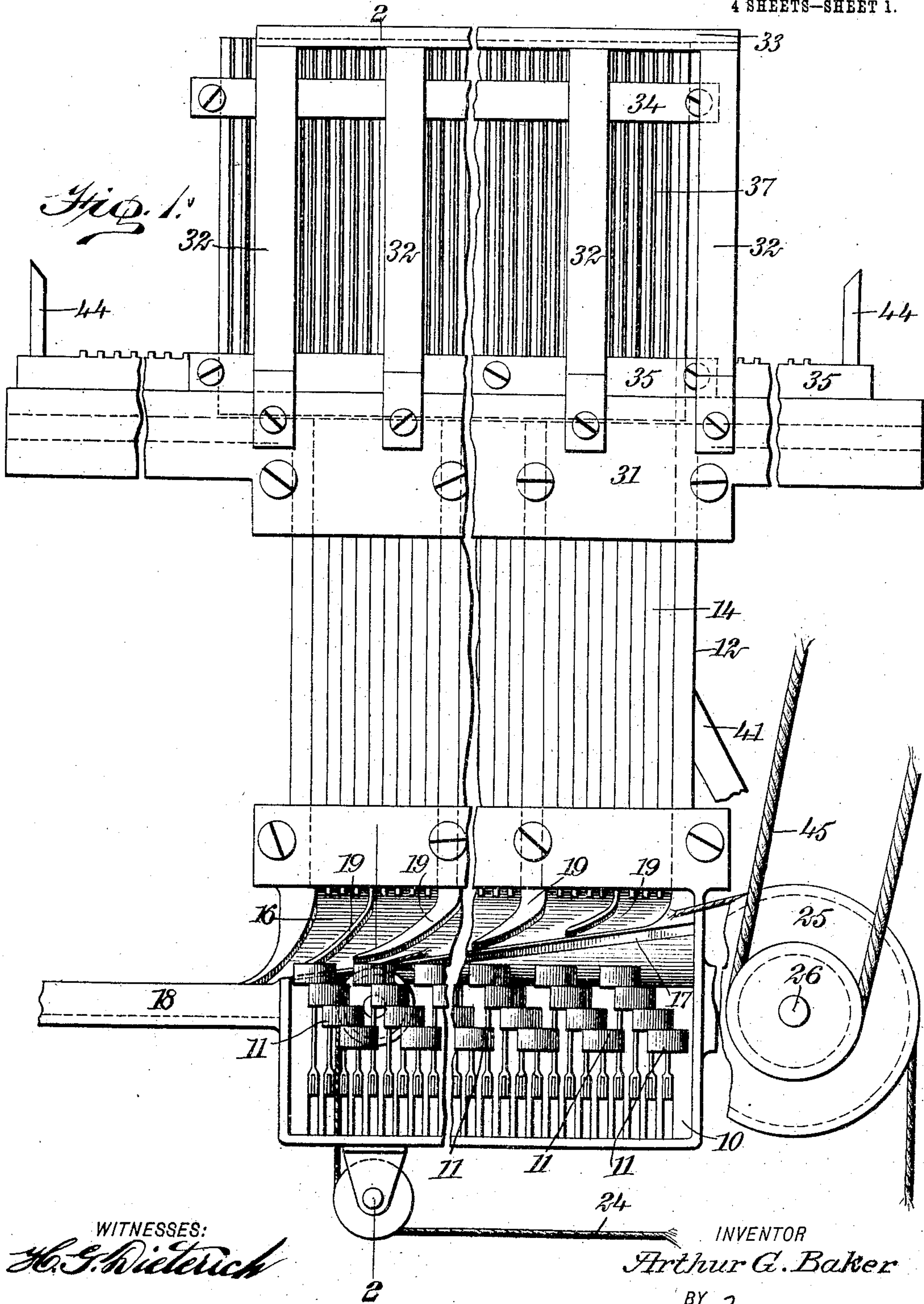
No. 835,346.

PATENTED NOV. 6, 1906.

A. G. BAKER.
TYPE SETTING AND DISTRIBUTING MACHINE.

APPLICATION FILED DEC. 9, 1905.

4 SHEETS—SHEET 1.



WITNESSES:

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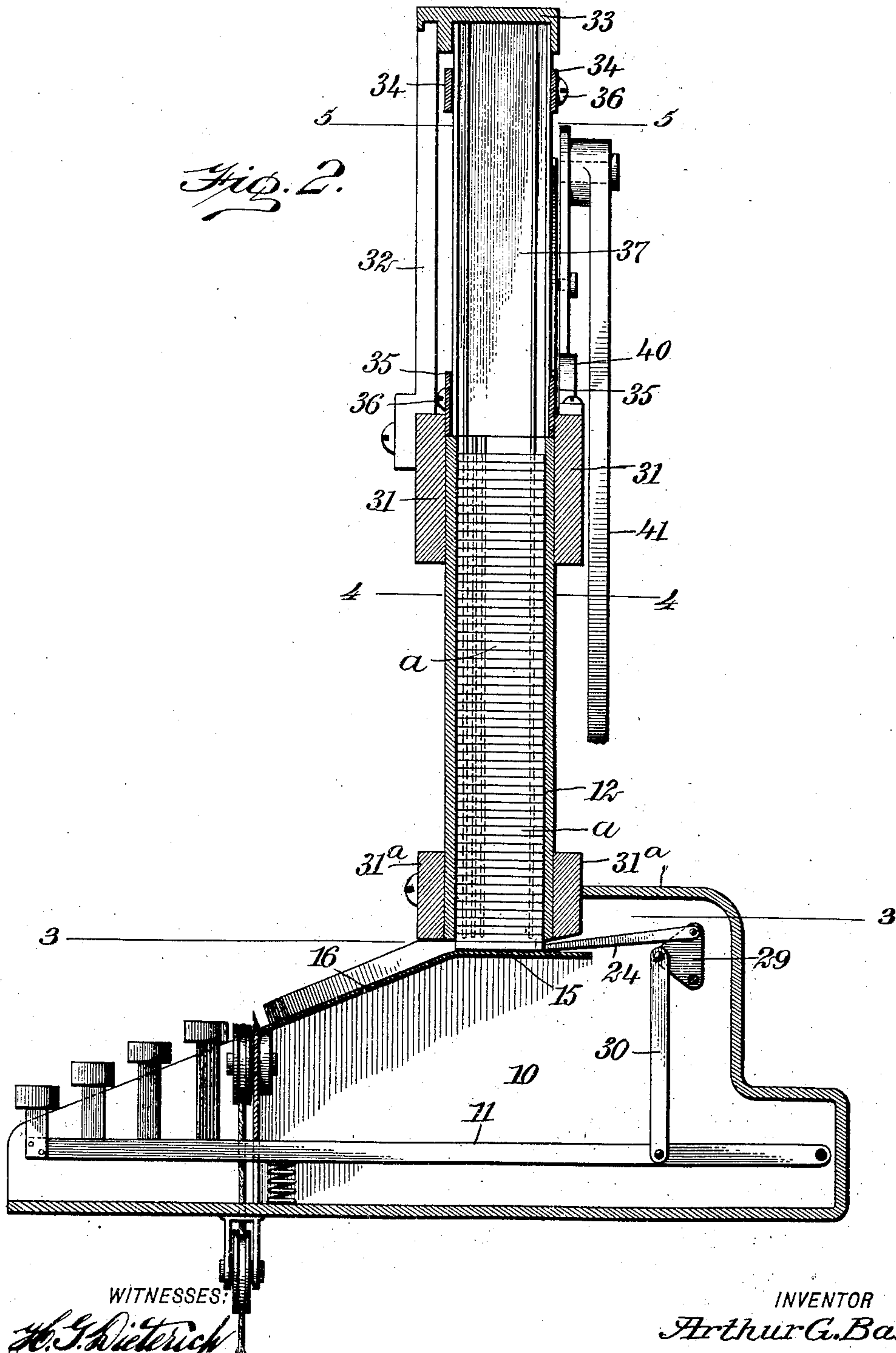
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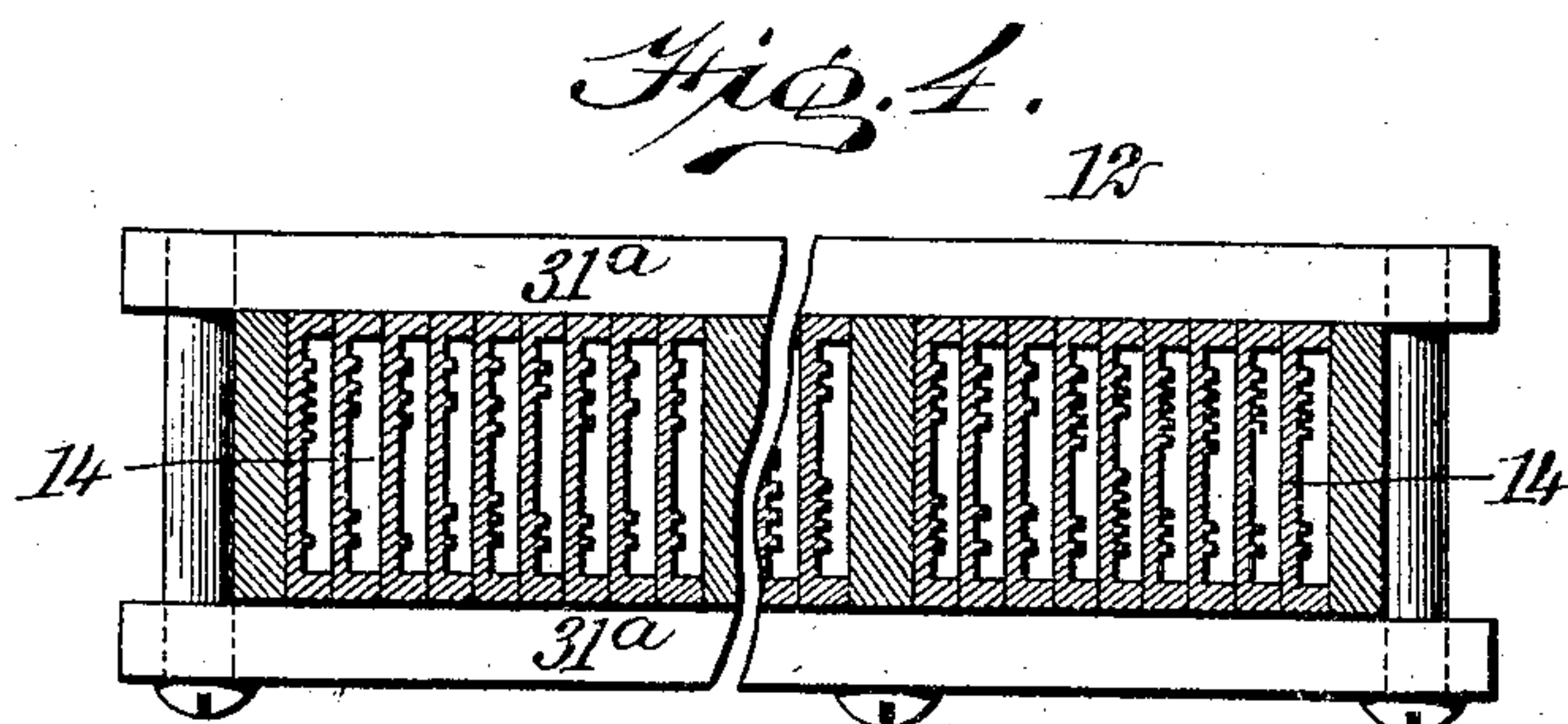
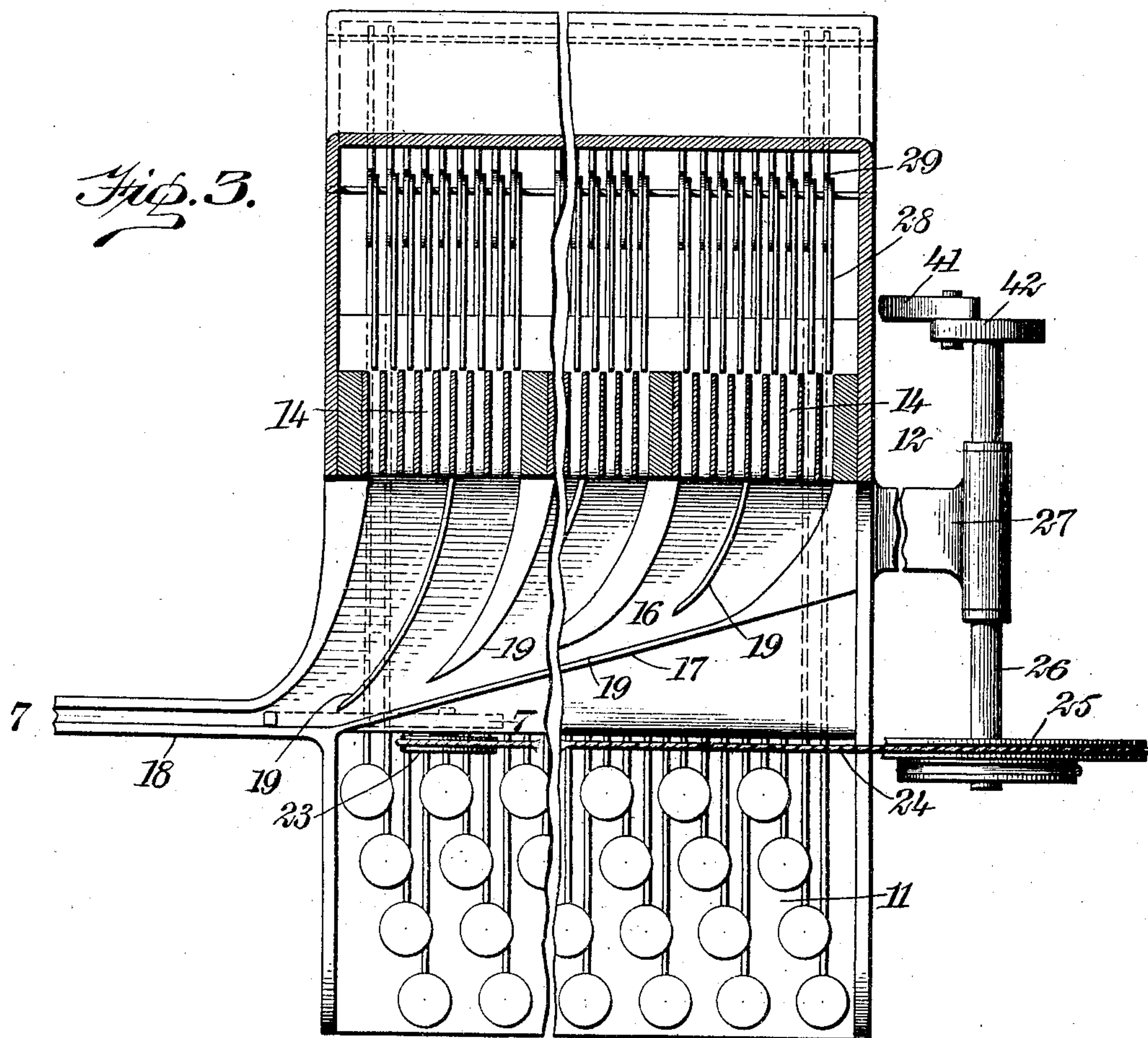
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Fig. 5.

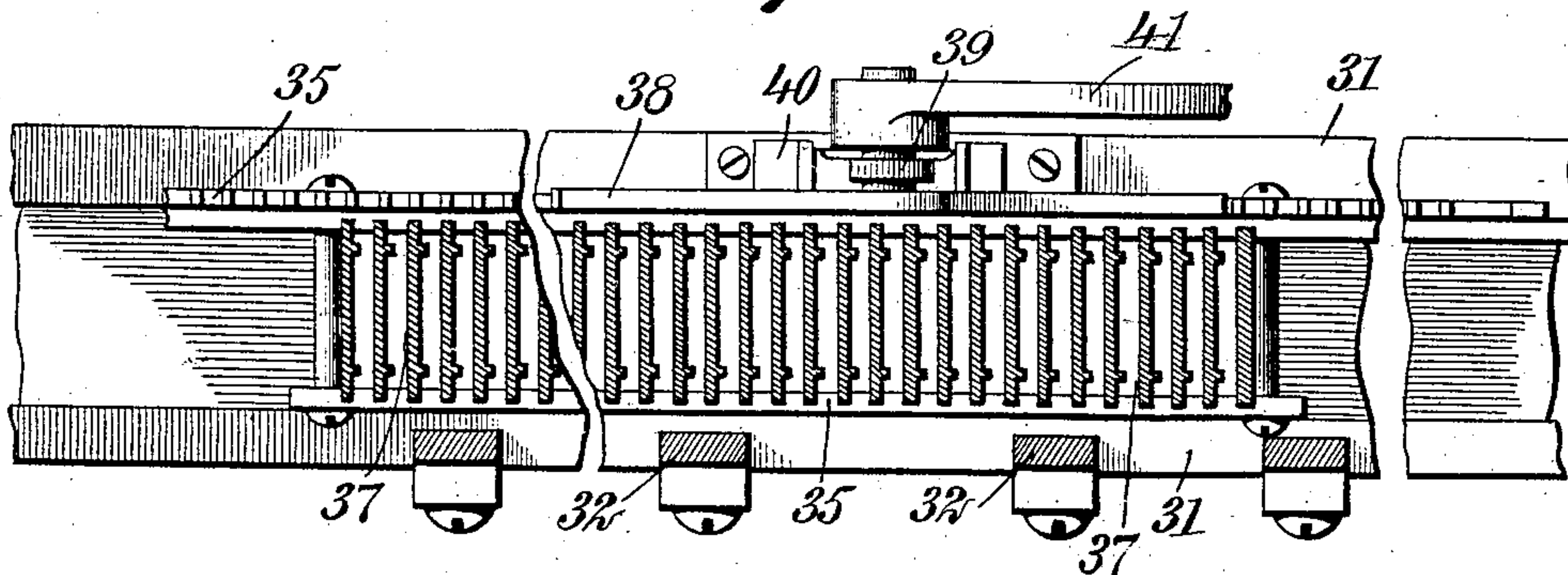


Fig. 6.

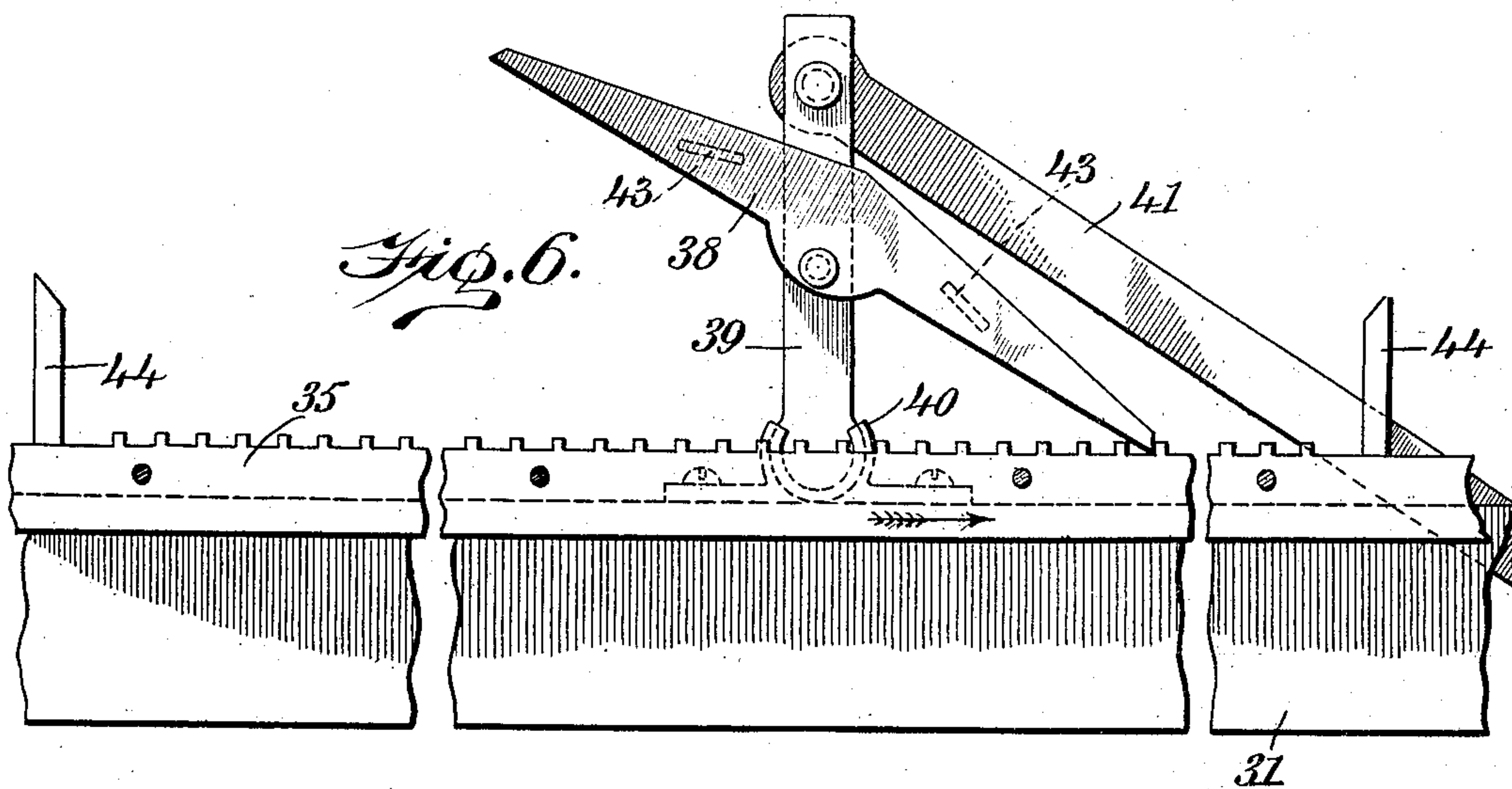
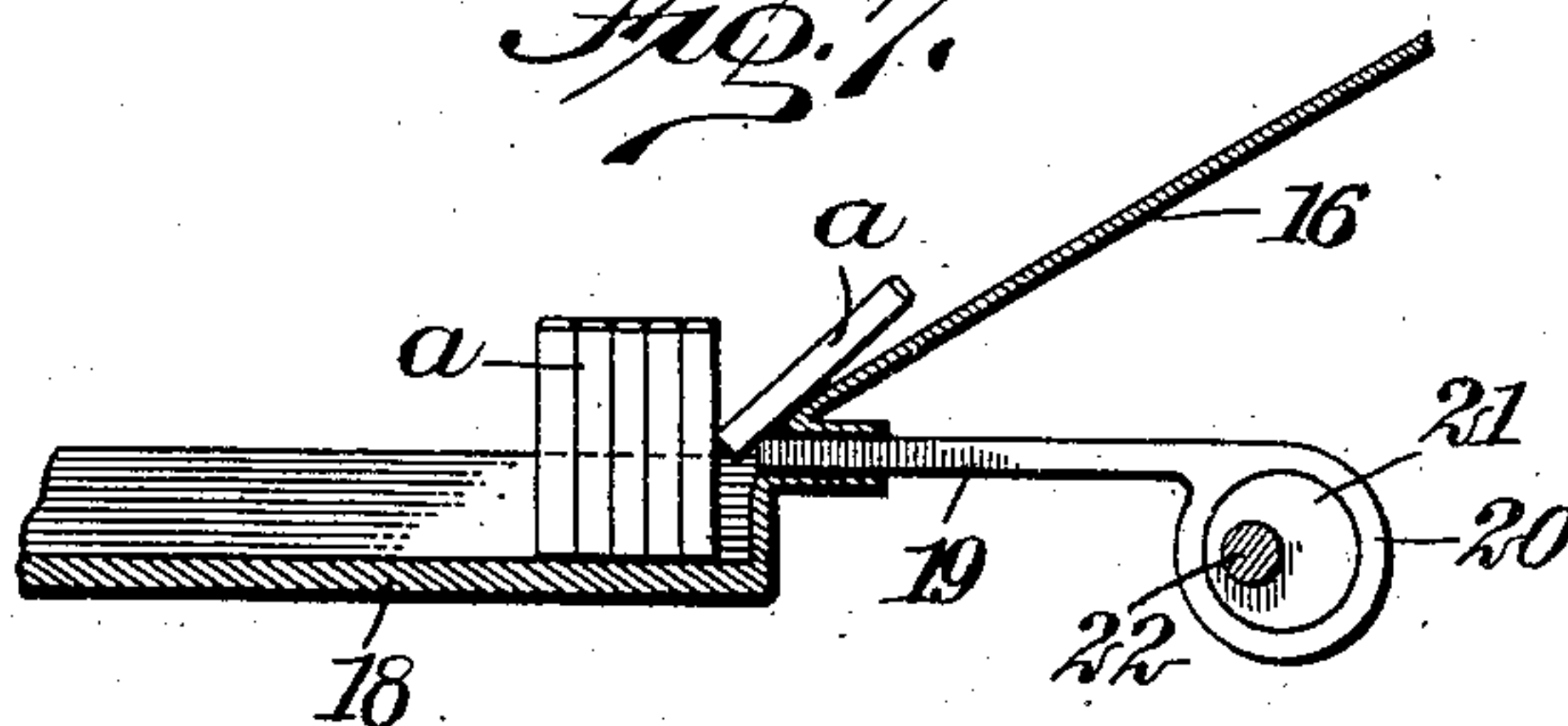


Fig. 7.



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UNITED STATES PATENT OFFICE.

ARTHUR G. BAKER, OF ALBION, MICHIGAN, ASSIGNOR OF ONE-HALF TO
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TYPE SETTING AND DISTRIBUTING MACHINE.

No. 835,346.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed December 9, 1905. Serial No. 291,093.

To all whom it may concern:

Be it known that I, ARTHUR G. BAKER, a citizen of the United States, and a resident of Albion, in the county of Calhoun and State of Michigan, have invented a new and Improved Type Setting and Distributing Machine, of which the following is a full, clear, and exact description.

The invention relates to a machine for setting individual type under the control of a keyboard for automatically distributing the type into various compartments or cases provided therefor, the machine being capable of performing the operations of setting and distributing either simultaneously or independently.

According to the embodiment of the invention here illustrated the apparatus comprises a series of type-containing tubes or compartments, each having a form or configuration characteristic of the type which it is adapted to contain. Above the type-compartment is arranged a distributor, which has a number of compartments in which the type are indiscriminately placed and which is arranged to travel over the top of the type-containing compartments, so that when a certain type reaches the position opposite its compartment the type falls from the distributor into said compartments. At the base of the type-compartments are arranged the devices actuated through the keyboard for selecting and releasing the type and also the devices for assembling the released type in proper position in the galley.

The invention resides in certain special features of construction and combination of parts, which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, which illustrate as an example the preferred embodiment of my invention, in which drawings—

Figure 1 is a front elevation of the invention, the same being illustrated and broken away in order to show the whole of the apparatus in one view. Fig. 2 is a vertical section on the line 2 2 of Fig. 1. Fig. 3 is a horizontal section on the line 3 3 of Fig. 2. Fig. 4 is a horizontal section on the line 4 4 of Fig. 2. Fig. 5 is a horizontal section on the line

5 5 of Fig. 2. Fig. 6 is a detail of the pawl-and-ratchet devices for moving the distributor back and forth over the type-receiving compartments, and Fig. 7 is a detail view showing the device for assembling the type in the galley.

The base 10 of the apparatus is in the form of a box containing the keyboard mechanism 11. On said base is erected a vertically-extending casing 12, having, as shown best in Fig. 4, a number of type-compartments 14. These type-compartments are interiorly ribbed, as shown, so that the notches in the type as the type are moved over the compartments will register with the ribs in the compartments. At its bottom the casing 12 has a wall 15, which is located slightly below the lower end of the casing and in which the type rest, the type being indicated at *a* in the drawings. The bottom wall 15 is so arranged that the type have a free passage horizontally of the casing. The type pass from the casing on a forwardly and downwardly inclined table 16, which has a diagonal wall 17 extending across it to guide the type into the assembling-galley 18. The table has also curving guides 19, which control the movement of the type and cause them to fall sidewise against the wall 17. The diagonal wall 17 also serves to render an approximately equal distance from all of the type-compartments 14 to the assembling-galley 18, so that the same or approximately the same time is required to move the type from the several compartments to the assembling-galley, thus insuring that the type will reach the galley in proper relative order.

In Fig. 7 the galley 18 and table 16 are shown, and the type are illustrated as they slide from the table into the galley. The type *a* are advanced along the galley by means of a push-rod 19, which is connected to a strap 20, encircling an eccentric 21, the shaft 22 of which is driven through a pulley 23 and belt 24, passing from the driving-pulley 25. This driving-pulley 25 is carried on a shaft 26, mounted in a bracket 27, located at one side of the machine, as illustrated in Figs. 1 and 3. Fig. 2 illustrates the push-rods 28 for dislodging the type from the casing 12. These rods are arranged one for each

type-compartment and are connected to elbow-levers 29, actuated from the key mechanism through the medium of links 30, respectively connecting the elbow-levers with the key-levers.

In the top of the casing 12 are arranged two track-bars 31, located at the front and rear of the casing and projecting horizontally beyond each side thereof. These track-bars carry standards 32, located at the front of the machine, and the standards support a top guide or track 33. Between the members 31 and 33 a distributor-carriage is arranged, and the distributor is arranged to move horizontally between the track-bars 31 over the top of the casing 12. Said carriage comprises upper and lower clamp-bars 34 and 35, respectively extending horizontally, and connected by bolts or screws 36 or equivalent means. The clamp-plates 34 and 35 hold between them a number of vertically-extending plates 37, as shown in Fig. 5, which form the various compartments for the type. These compartments are internally ribbed, as shown; but these ribs are uniform and are so arranged that any compartment in the distributor-carriage will receive any one of the type. Said ribs serve to receive uniform notches in the type and to retain the type in true position in these compartments.

The distributor, as shown best in Fig. 2, moves over the top of the casing, and the type will drop into the type-compartments of the casing whenever the notches in one of the type register with the ribs in the type-compartments of the casing 12. In this way the type are distributed into the casing, each compartment thereof receiving type of the same character. The rear clamp-plate 35 is ratcheted at its upper edge, as shown, and with this ratcheted edge of the clamp-plate 35 a double pawl 38 operates. Said pawl is intermediately pivoted on a rocking arm 39, which is held in a bearing 40, attached to the rear track-bar 31. The arm 39 is connected by a link 41 with a crank 42 on the shaft 26, so that when said shaft is in operation a regular rocking movement is imparted to the arm. The double pawl 38 has two lips 43 projecting therefrom, respectively, at opposite sides of the pivot of the arm, and these lips are adapted to be engaged by detents 44, attached to the sliding clamp-plate 35 of the distributor-carriage. The pawl 38, as shown in Fig. 6, is engaging the carriage to move the same in the direction indicated by the arrow in said view, and when the left-hand detent 44 strikes the right-hand lip 43 it will reverse the pawl, and the regular rocking movement of the arm 41 will then cause the carriage to reverse its movement, which operation will continue until the right-hand detent 44 strikes the corresponding lip 43 of the

pawl, returning the parts, as shown in Fig. 6. In this manner the distributor is automatically moved over the type-casing with a uniform step-by-step movement.

In the operation of the machine the type are manually placed indiscriminately into the compartments of the distributor-carriage and the shaft 26 is set in motion by means of a belt 45, (shown in Fig. 1,) or by any other desired device. This causes the distributor-carriage to move back and forth over the type-casing, and the type will be selected and dropped into their corresponding compartments 14, the superimposed pile of type resting on the bottom wall 15, as shown in Fig. 1. This distribution of the type will go on automatically and without the operator's attention. In order to assemble the type, the operator strikes the desired keys and the type selected are pushed out on the table 16 by means of the push-bars 28. This type will fall by gravity along the inclined table and enter the galley, where the line is steadily pushed forward by the continuous pusher or plunger 19.

Having thus described the preferred form of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a movable type-distributor having a rack and a detent at each end of the rack, a swinging arm, means for operating the arm, and a reversible pawl carried by the arm and coacting with the rack and adapted to be alternately struck by the detents, for the purpose specified.

2. The combination of a movable type-distributor comprising a rack and a detent at each end thereof, a swinging arm, means for operating the arm, and an intermediately-pivoted pawl adapted to coact at its ends with the rack and to be alternately struck by the detents, automatically to reverse the pawl.

3. In a type setting and distributing machine, the combination of a base, type-selecting mechanism therein, vertically-extending plates rising from the base, horizontally-extending bars clamping said plates together spaced apart from each other to form type-compartments, the upper bars forming a track, a distributor mounted to move horizontally on said track, the distributor comprising vertically-extending plates and means for clamping them together spaced apart from each other to form type-compartments, a rack on said distributor, a swinging arm, a reversible pawl mounted on the arm and coacting with the rack, detents at each end of the rack adapted to strike the pawl to reverse the same, and means for imparting regular movement to said arm.

4. In a type setting and distributing machine, the combination of a base, type-selecting mechanism therein, vertically-extending

plates rising from the base, horizontally-extending bars clamping said plates together spaced apart from each other to form type-compartments, the upper bars forming a track, a distributor mounted to move horizontally on said track, the distributor comprising vertically-extending plates and means for clamping them together spaced apart from each other to form type-compartments, a rack on said distributor, a swinging arm, a reversible pawl mounted on the arm and contacting with the rack, detents at each end of the rack adapted to strike the pawl to reverse the same, means for imparting regular movement to said arm, a table mounted on the base and inclining forward and downward from the lower type-compartments, curved guides extending along the upper surface of said table to control the movement of the type delivered thereon, a galley to which said guides lead, and means for advancing the type in the galley.

5. In a type setting and distributing machine, the combination of a base, type-selecting mechanism therein, vertically-extending plates rising from the base, horizontally-extending bars clamping said plates together spaced apart from each other to form type-compartments, the upper bars forming a track, a distributor mounted to move horizontally on said track, the distributor comprising vertically-extending plates and means for clamping them together spaced apart from each other to form type-compartments, a rack on said distributor, a swinging arm, a reversible pawl mounted on the arm and contacting with the rack, detents at each end of the rack adapted to strike the pawl to reverse the same, means for imparting regular movement to said arm, a table on the base inclining downwardly and forwardly from the lower type-compartments and adapted to receive the type from the selecting mechanism, a diagonal wall extending along said table from the upper part to the opposite lower corner thereof, curving guides on top of the table directing the type from said lower corner of the table, a galley adapted to receive the type from said lower corner, a push-rod adapted to advance the type in the galley, and means for reciprocating the push-rod.

zontally on said track, the distributor comprising vertically-extending plates and means for clamping them together spaced apart from each other to form type-compartments, a rack on said distributor, a swinging arm, a reversible pawl mounted on the arm and contacting with the rack, detents at each end of the rack adapted to strike the pawl to reverse the same, means for imparting regular movement to said arm, a table on the base inclining downwardly and forwardly from the lower type-compartments and adapted to receive the type from the selecting mechanism, a diagonal wall extending along said table from the upper part to the opposite lower corner thereof, curving guides on top of the table directing the type from said lower corner of the table, a galley adapted to receive the type from said lower corner, a push-rod adapted to advance the type in the galley, and means for reciprocating the push-rod.

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

ARTHUR G. BAKER.

Witnesses:

R. B. KENNEDY,
EDNA L. HAVEN.