

4 Sheets—Sheet 1.

No. 387,705.

Patented Aug. 14, 1888.



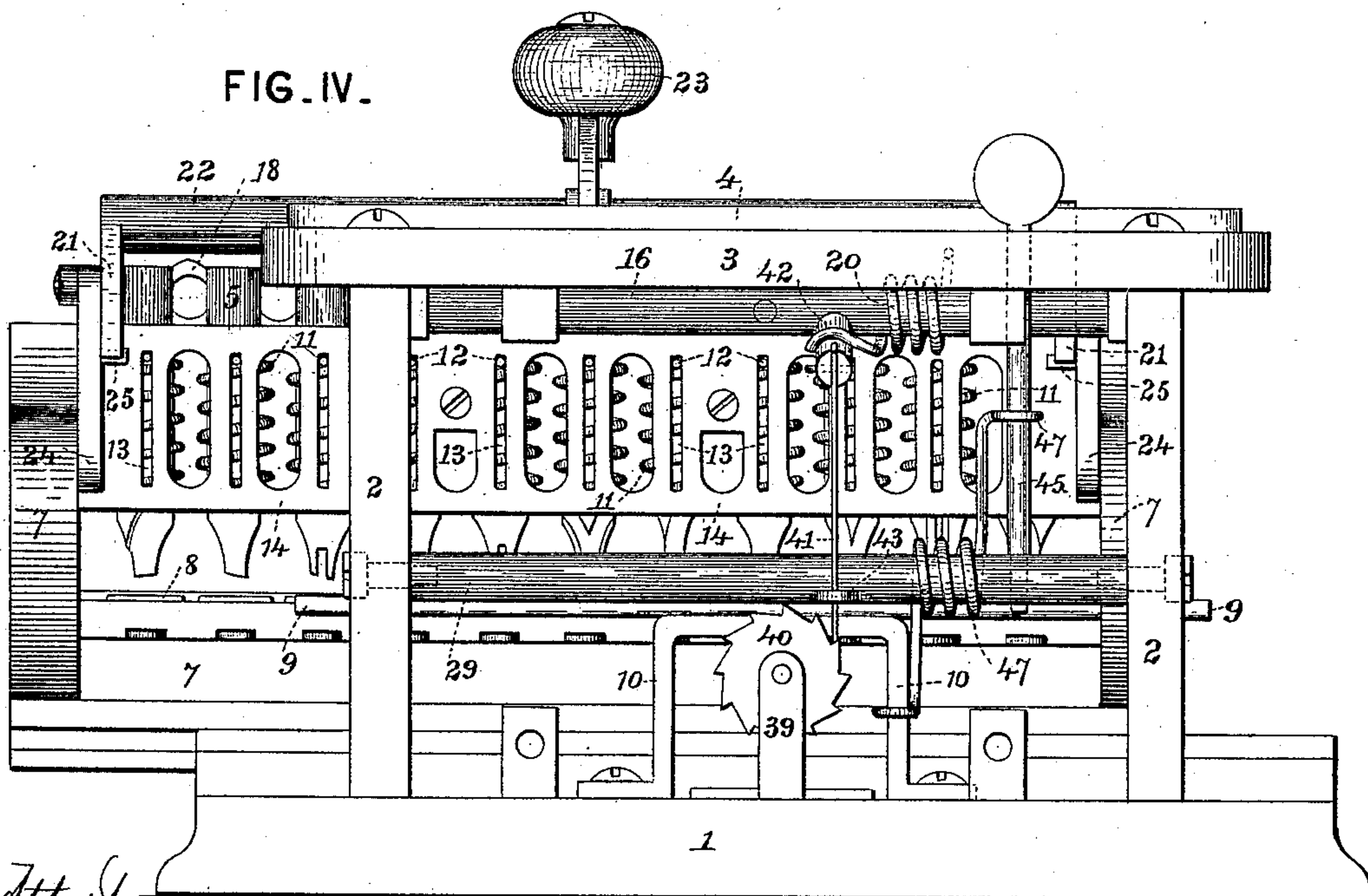
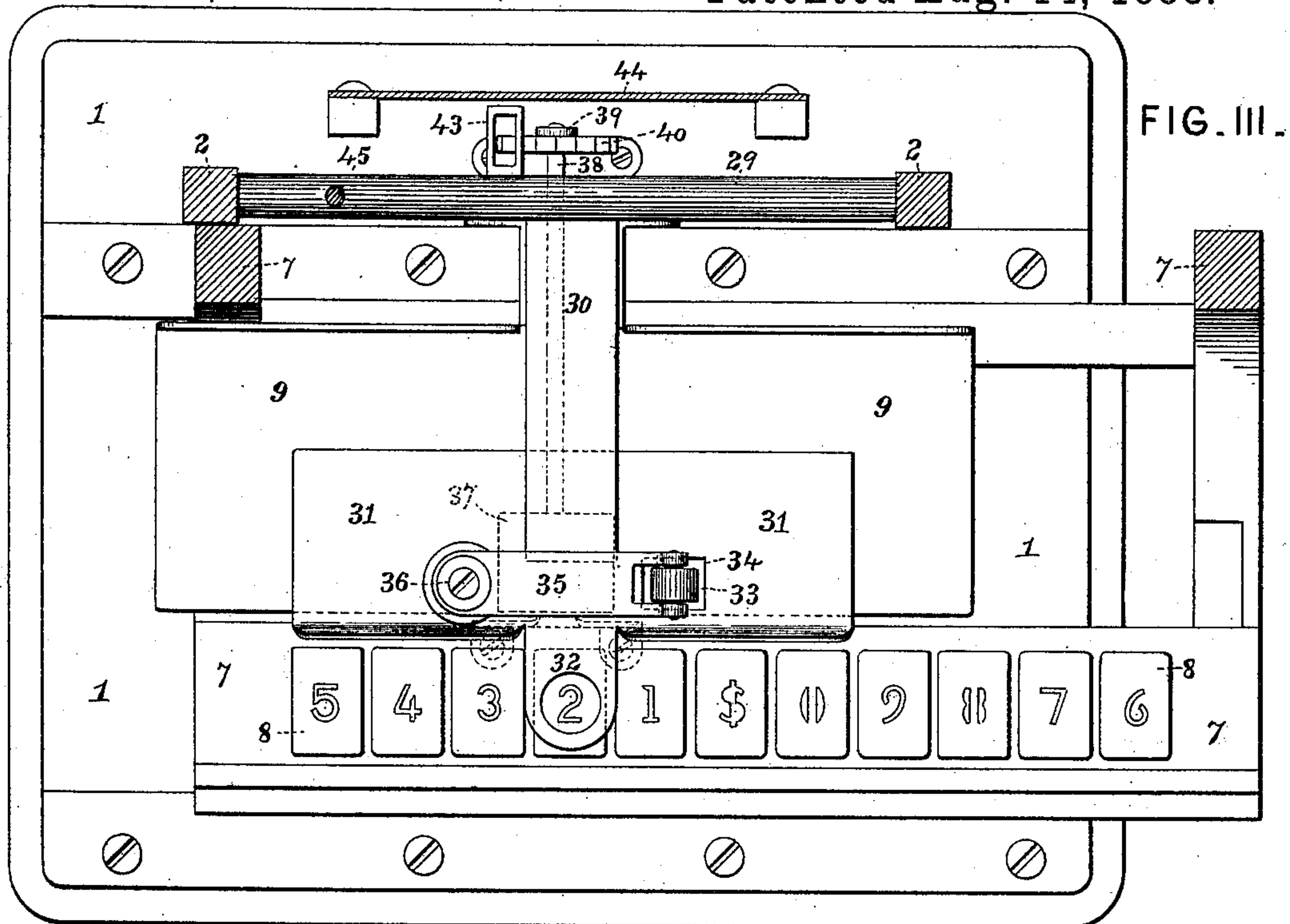
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J. N. WILLIAMS.
CHECK PUNCHING MACHINE.

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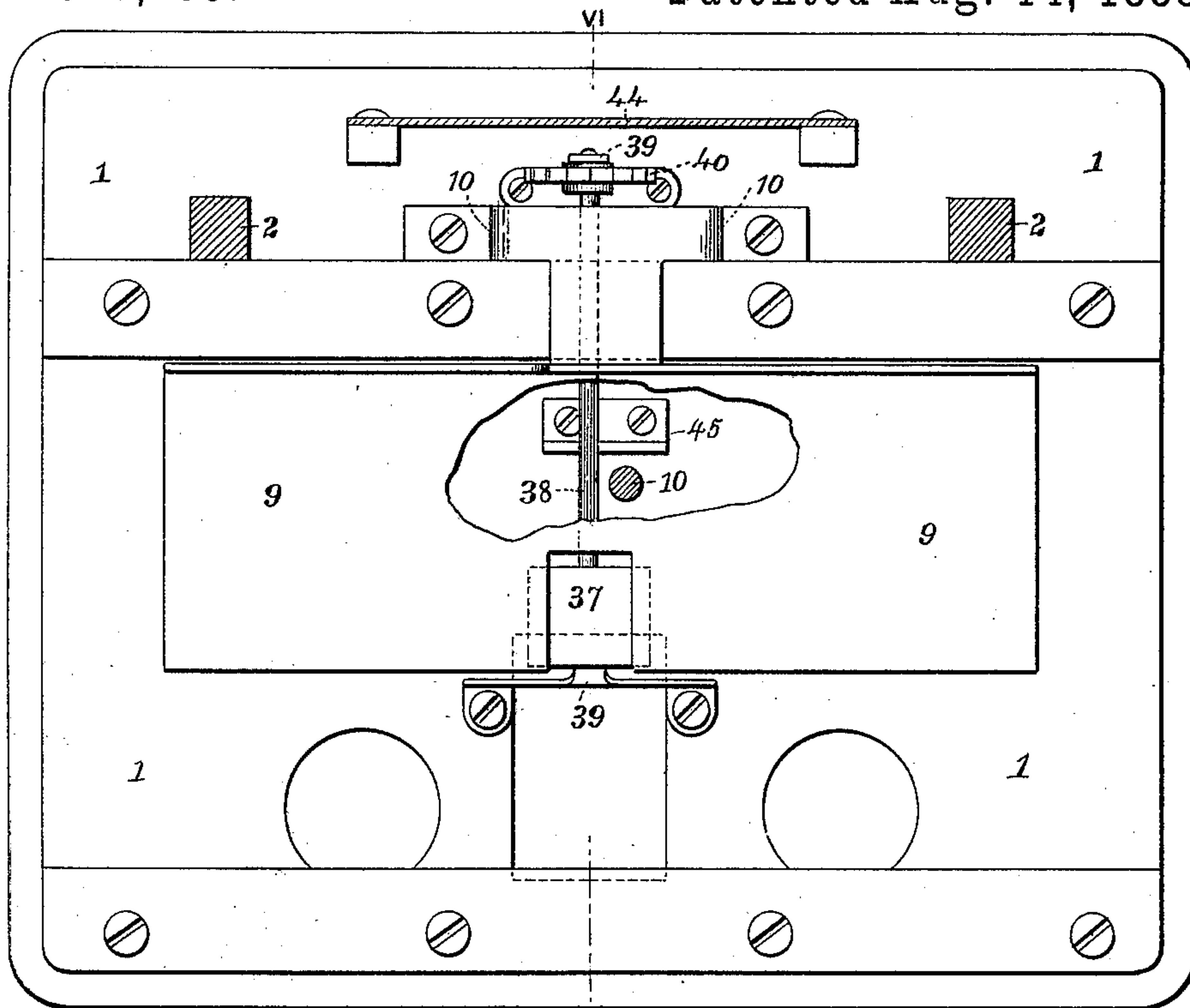


FIG. V.

VI

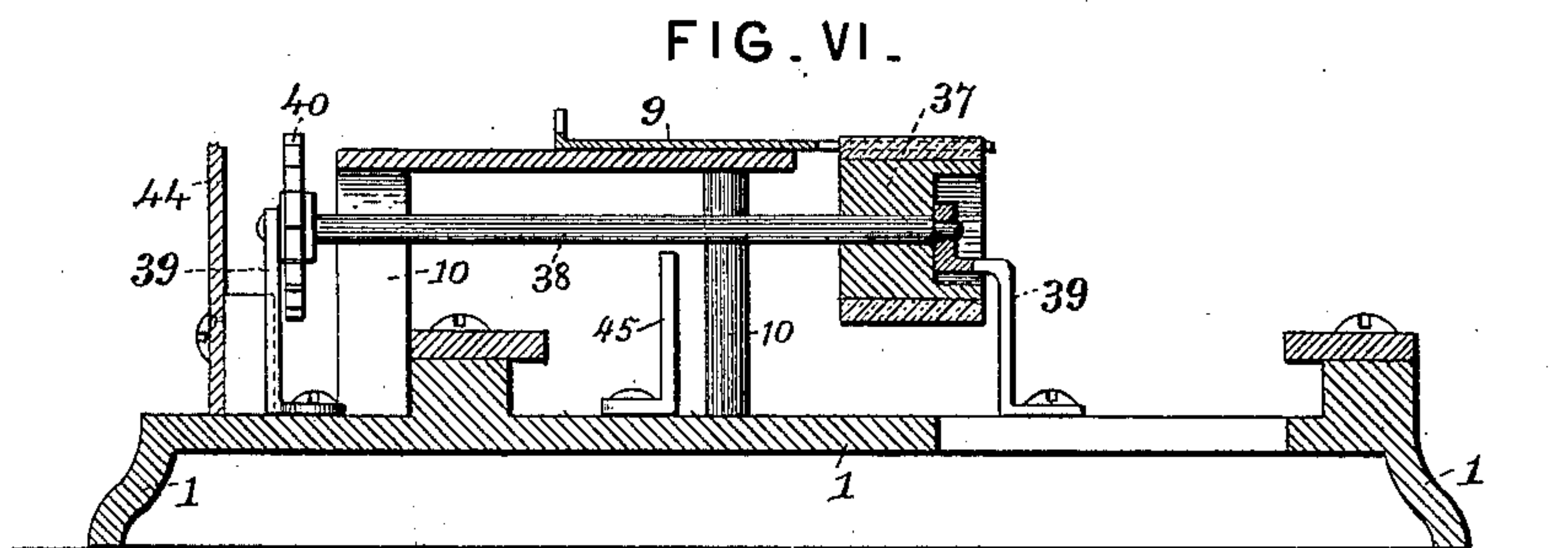


FIG. VI.

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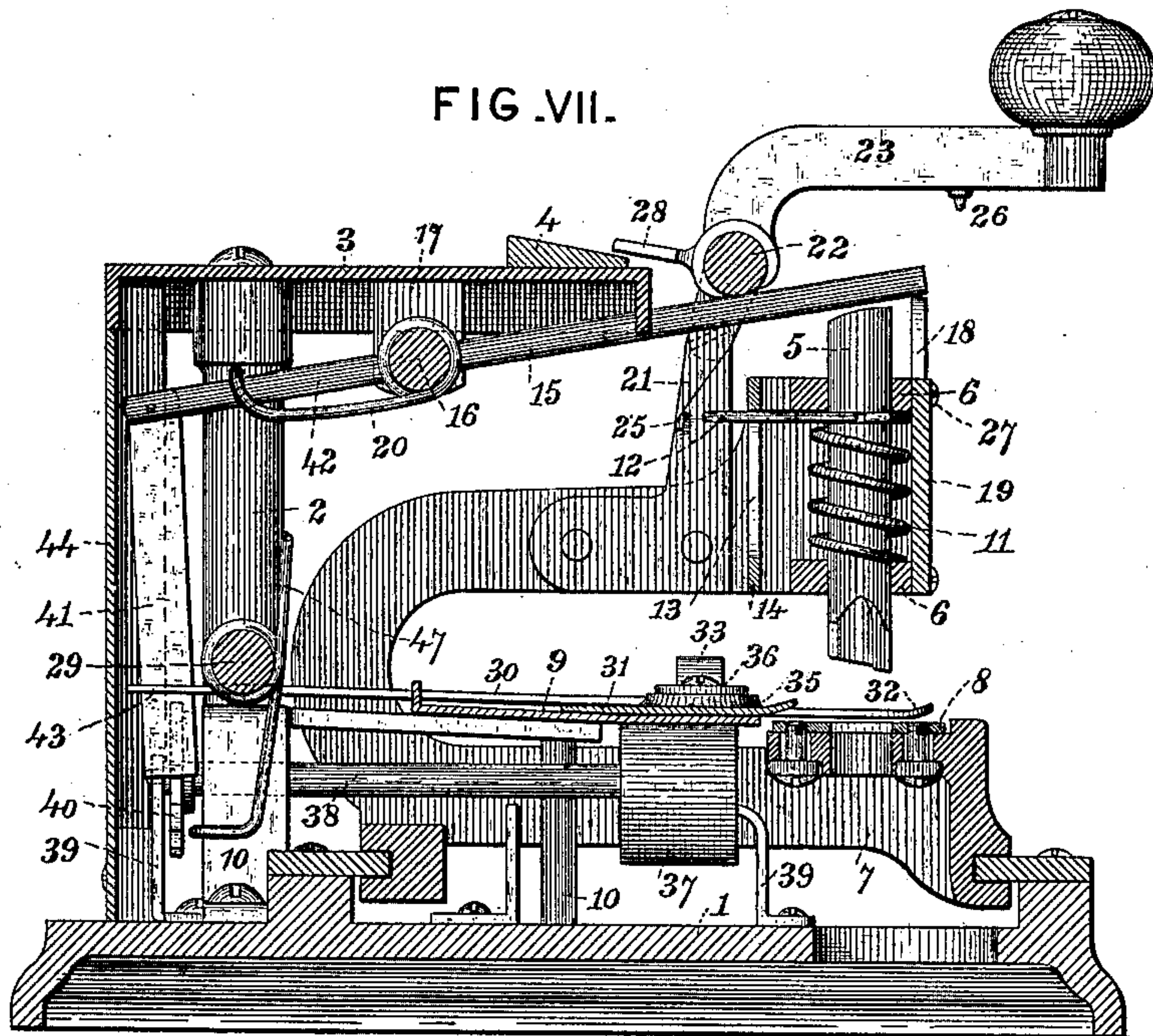
(No Model.)

4 Sheets—Sheet 4.

J. N. WILLIAMS.
CHECK PUNCHING MACHINE.

No. 387,705.

Patented Aug. 14, 1888.



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UNITED STATES PATENT OFFICE.

J. NEWTON WILLIAMS, OF NEW YORK, N. Y.

CHECK-PUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 387,705, dated August 14, 1888.

Application filed September 13, 1886. Serial No. 213,415. (No model.)

To all whom it may concern:

Be it known that I, J. NEWTON WILLIAMS, a citizen of the United States, residing at New York, in the county of New York and State
5 of New York, have invented certain new and useful Improvements in Check-Punching Machines, of which the following is a specification.

My invention relates to those machines which are employed for punching a check with figures to indicate the amount for which it is made, so as to prevent the subsequent alteration or "raising" of the amount.

To this end the invention consists of certain details of construction, more fully described with reference to the accompanying drawings, and pointed out in the claims.

In said drawings, Figure I is a plan view of my improved check-punching machine, a part of the cap-plate being broken off. Fig. II is a front view of the same. Fig. III is a horizontal section on the line III III, V V, Fig. II. Fig. IV is a rear elevation with rear covering-plate removed. Fig. V is a horizontal section on the line V V, Fig. II. Fig. VI is a transverse vertical section of the lower part of the machine on the line VI VI, Fig. V. Fig. VII is a vertical transverse section of the machine on the line VII VII, Fig. I.

The main frame of the machine consists of
30 a bed-plate, 1, having at rear and near each end standards 2 2 cast thereon. These standards afford support to a cap-plate, 3, which carries near its front edge a transverse indicator-plate, 4. This plate is rigid on the cap-plate 3, and the characters are preferably arranged, as shown—namely, with the \$-mark in the center and the figures on each side thereof—in such manner that those characters which are most frequently employed will be near the
40 center.

5 5 are punches arranged vertically in series in a bearing-block, 6. The punches 5 bear on their lower ends characters which are shown on the indicator-plate 4. When arranged in
45 their bearing-blocks, however, the characters on the punches are precisely opposite in position to the corresponding ones on the indicator-plate; thus a figure at a certain distance to the right of the \$-mark on the indicator-plate is placed
50 to an equal distance on the left, on the punch which carries the \$-mark. The bearing-block

is guided so as to have free transverse movement on the bed-plate 1. Resting on the carriage immediately under the corresponding punches 5 are the female dies 8. A check to be punched is placed between the punches and dies, (the arms of the carriage being so shaped as to present no obstruction,) and rests at rear upon the table 9, which is brought close up against dies at rear, but is supported rigidly from the bed-plate by three legs, 10.

The punches are pressed upward and away from their dies by springs 11. Projecting from the rear of each punch is a pin, 12, of soft steel or other pliable metal. These pins ride in vertical slots 13 in a plate, 14, fixed to the rear of the bearing-block 6. These pins and slots thus act as guides for preserving a precisely vertical and non-rotary movement to the punches, and by arranging such guides at a distance from the punch and making the pins of pliable metal it will be seen that I am able to adjust the punch, so as to correspond very accurately with its prepared female die, and to preserve such correspondence for a great length of time.

15 is a lever employed for depressing the punches. This is arranged directly over the center of the machine, and is carried by a rock-shaft, 16, mounted at its ends in lugs 17 on the under side of cap-plate 3. The effect of providing an elongated rock-shaft, 16, having its bearings at great distance apart, is to greatly increase the ease of working and durability of these parts. Arranged along in front of the series of punches (although it may be equally well at rear) is a plate, 19, having a series of rounded projections, 18, arranged to alternate with the punches 5. This plate 19 and its projections serve as a comb, which, when the lever 15 is not precisely over the punch to be depressed, will, as the lever continues to descend, be forced either to the one side or the other until the lever enters the narrow slot between the two projections 18, and is then, when the punch is entering the paper, immediately over the center of said punch. The punch is thus brought necessarily at each operation to the exact position desired in the machine before it can enter the paper. After the lever has performed its part of depressing the punch it will be lifted with the punch by spring 11 thereon, and, further, by a spring,

20, which insures the lifting of the lever 15 slightly above the tops of punches 5 and projections 18, so as not to interfere with the transverse movement of the carriage. It will be seen that lever 15 is stationary, so far as movement transverse of the machine is concerned. It is for this purpose that the feed-carriage is made transversely movable, and one of the main objects of my present invention is to effect this transverse movement of the feed-carriage with the same member that depresses the lever 15. As here shown, such member is a lever consisting of arms 21, bar 22, connecting the upper ends of such arms, and handle or finger-piece 23, preferably arranged at the middle of such bar. These parts are rigid with one another. The arms 21 are pivoted to lugs 24 at the ends of the carriage and project slightly beyond, so that at the proper limit of the upward movement of this member they may impinge upon pins or stops 25 on the lugs 24. The handle 23 has a projection, 26, which impinges on a screw-head, 27, to limit the movement of this member in the opposite direction. At the portion leaving the bar 22 the handle 23 is curved upwardly to a sufficient extent to prevent contact with the head of any punch over which said handle may be depressed. At rear the bar 22 carries an index, 28, which travels over the indicator-plate 4, and assists in locating the proper punch to be depressed beneath the lever 15.

Mounted on the standards 2 2 is a pivotal bar, 29, from which the arm 30 projects to carry the holding-plate 31, which rests upon the table 9. The stripper 32 formed on the forward edge of the holding-plate 31, surrounds the punch 5, when it is depressed, and strips the paper therefrom. The rigid arm 45 projects upwardly from the bar 29 through a slot, 46, in the cap-plate, and bears an arm-piece which may be pressed backwardly to raise the holding-plate when the check is placed in position. The spring 47, bearing upon the arm 45 and one of the legs, 10, and surrounding the bar 29, keeps the holding-plate pressed down upon the table 9.

The guide and pressure roller 33 rests, when there is no check in position, upon the table 9, projecting for this purpose through a slot, 34, in the holding-plate 31. This roller is carried by a spring-arm, 35, fixed to the holding-plate by a screw and washer, 36. This screw serves as a pivot for the arm 35, and thus allows a circumferential adjustment of roller 33 about the screw. This enables the placing of the roller accurately in such a position as to feed the paper rectilinearly through the machine. In this it acts in connection with the feed-roller 37, which is placed slightly in advance of the roller 33 and directly under the operating-lever 15. This feed-roller is carried by a shaft, 38, mounted in hangers 39, and is positively actuated by a ratchet-wheel, 40, and a pawl, 41, the latter being carried by an arm, 42, projecting from the rear of rock-shaft 16.

This arm affords bearing for one end of the spring 20, and is forced downward by said spring when the lever 15 is released, and a punch is allowed to ascend after perforating the paper. A guard, 43, arranged in proximity to spring-pawl 41, prevents the latter from actuating the ratchet-wheel in its descent until the punch shall have cleared the paper.

To protect the working parts of the feed mechanism the rear of the machine is partially covered by a plate, 44.

The feed-roller is made considerably larger than the roller 33 and bears, when no check is in position, against the under side of the holding-plate. Its periphery is covered with rubber or other gum. I find that when such a roller is used and a check is in position the friction between the paper and the roller is so much greater than that between the paper and the metal of the holding-plate that a positive and strong feed of the paper is insured. In such a construction the feed-roller acts in connection with the rear guide and pressure-roller 33 in insuring the rectilinear movement of the check, and slipping of the check laterally is prevented. A stop, 45, may be fixed to the bed-plate to limit the movement of the carriage in both directions.

I disclaim invention, broadly, of the combination of a movable frame, the punching-dies carried by the same, a single selecting and actuating lever mounted upon and moving with said movable frame, and a single lever interposed between the punches and the single selecting and actuating lever; also of the combination of a movable frame carrying the punches and dies, a punch selecting and actuating lever mounted on and moving with the frame, paper feed devices, and a swinging lever for operating the feed devices interposed between the punches and the punch-selecting lever, and depressed by the latter to operate the punches.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination of fixed frame 1, carriage 7, guided thereon, spring-retracted punches 5 and corresponding dies, 8, in line on said carriage, shaft 38, carrying ratchet-wheel 40 and feed-roller 37, rock-shaft 16, mounted on the stationary frame, spring-retracted lever 15 on said shaft, carrying on one end feed-pawl 41 and projecting at the other over the punches, horizontal bar 22, having arms 21 pivoted on the carriage, and hand-lever 23 on said horizontal bar, substantially as set forth.

2. The combination of a stationary frame, a carriage mounted so as to slide thereon, a series of vertically-moving punches mounted in said carriage, a lever pivoted on the stationary frame and projecting over said punches, a spring for maintaining said lever in elevated position, a horizontal bar over said lever parallel with the series of punches and having arms at each end pivoted to the carriage, a

finger-piece for operating said bar, and stops on the said carriage for limiting the motion of said arms and bar, substantially as set forth.

3. The combination of a stationary frame, a
5 table supported thereon, a feed-roller mounted below and projecting through said table peripherally, a check-holding plate mounted above said table, a guide-roller, a spring whereon

said guide-roller has bearings, and a pivot-screw for said spring fixed to said holding-plate in line with the feed, substantially as
10 forth.

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Witnesses:

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