

(No Model.)

2 Sheets—Sheet 1.

W. W. & W. H. WYTHER.
CHECK PRINTER AND RECORDER.

No. 491,626.

Patented Feb. 14, 1893.

Fig. 3.

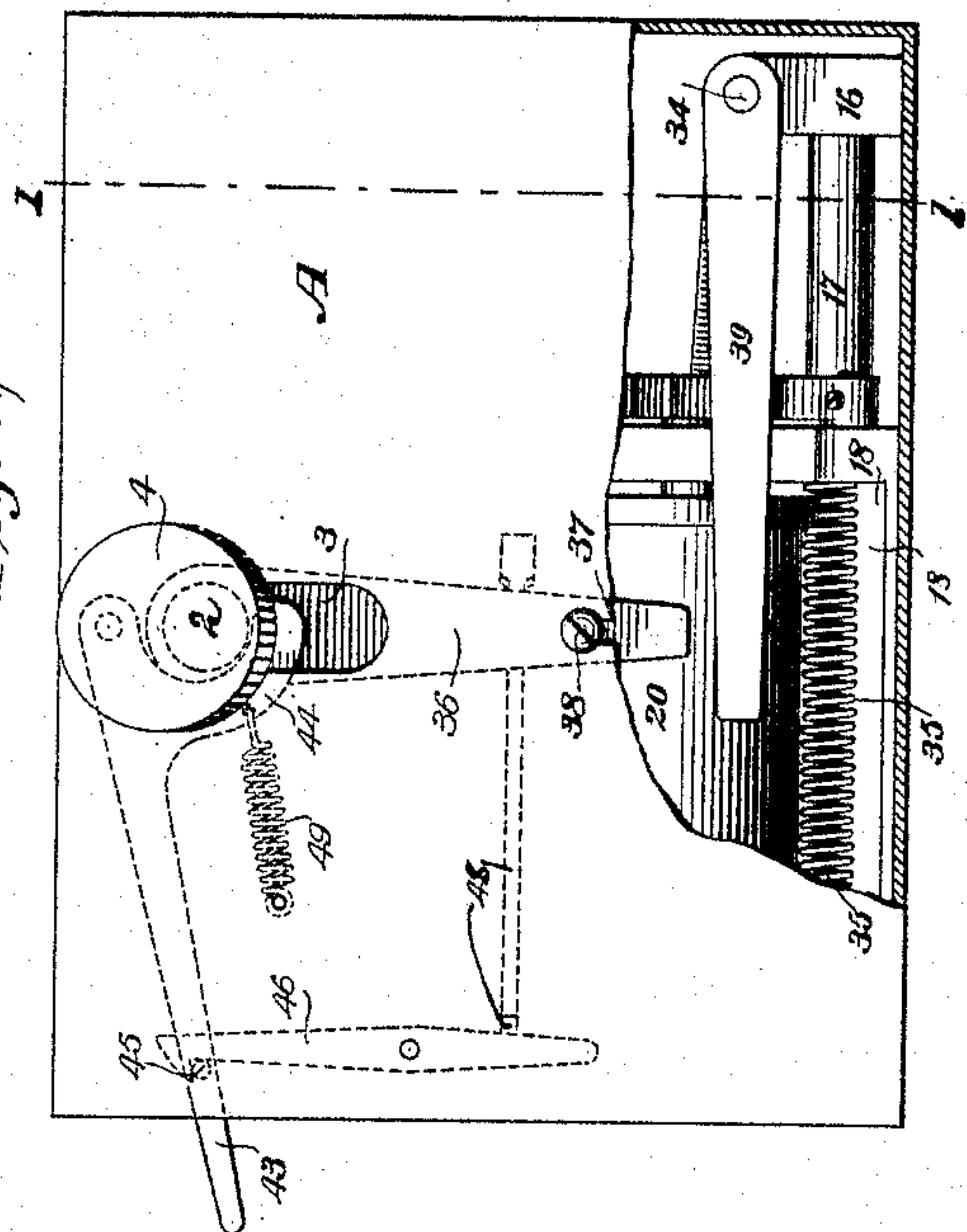


Fig. 4.

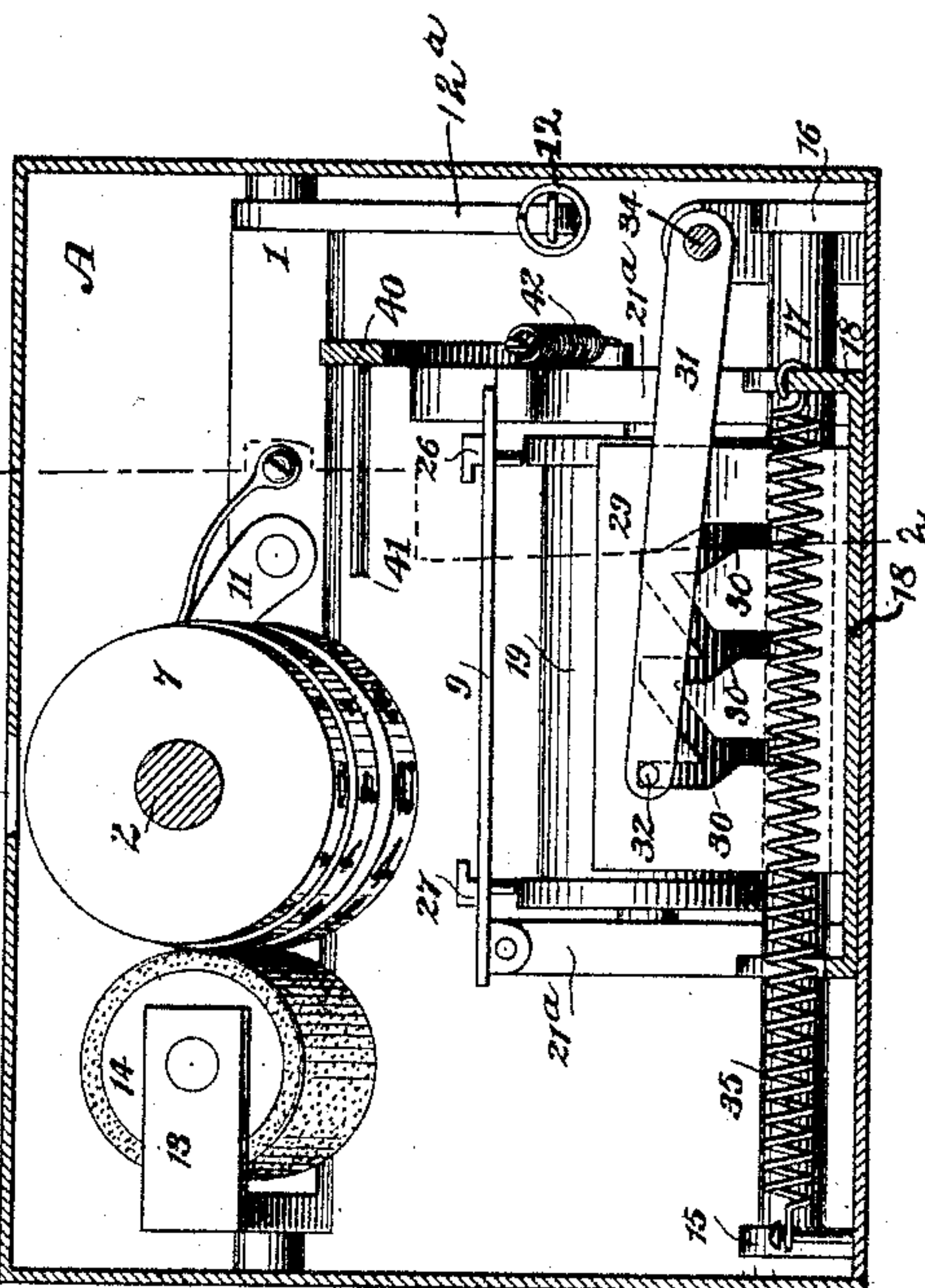


Fig. 1.

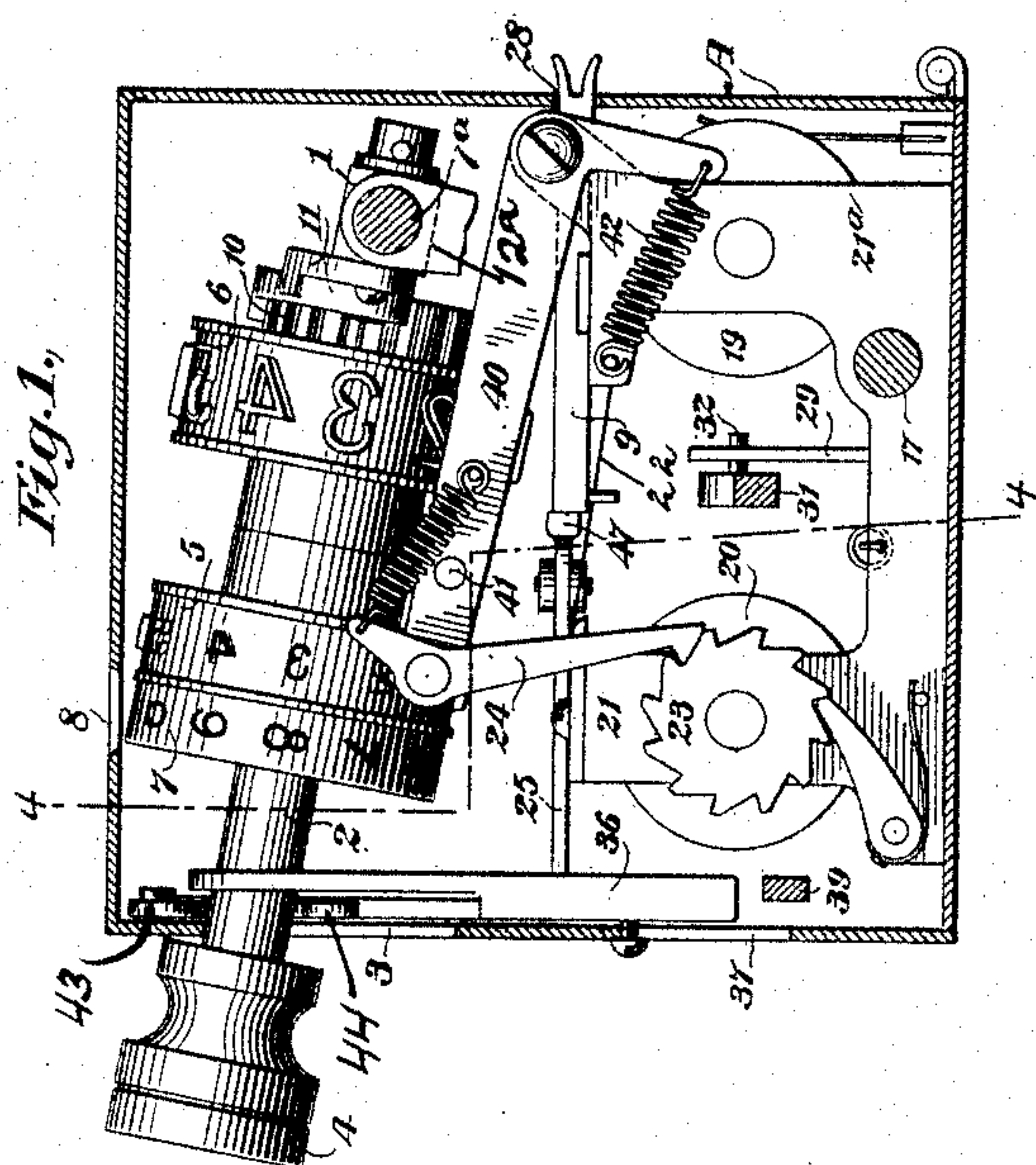
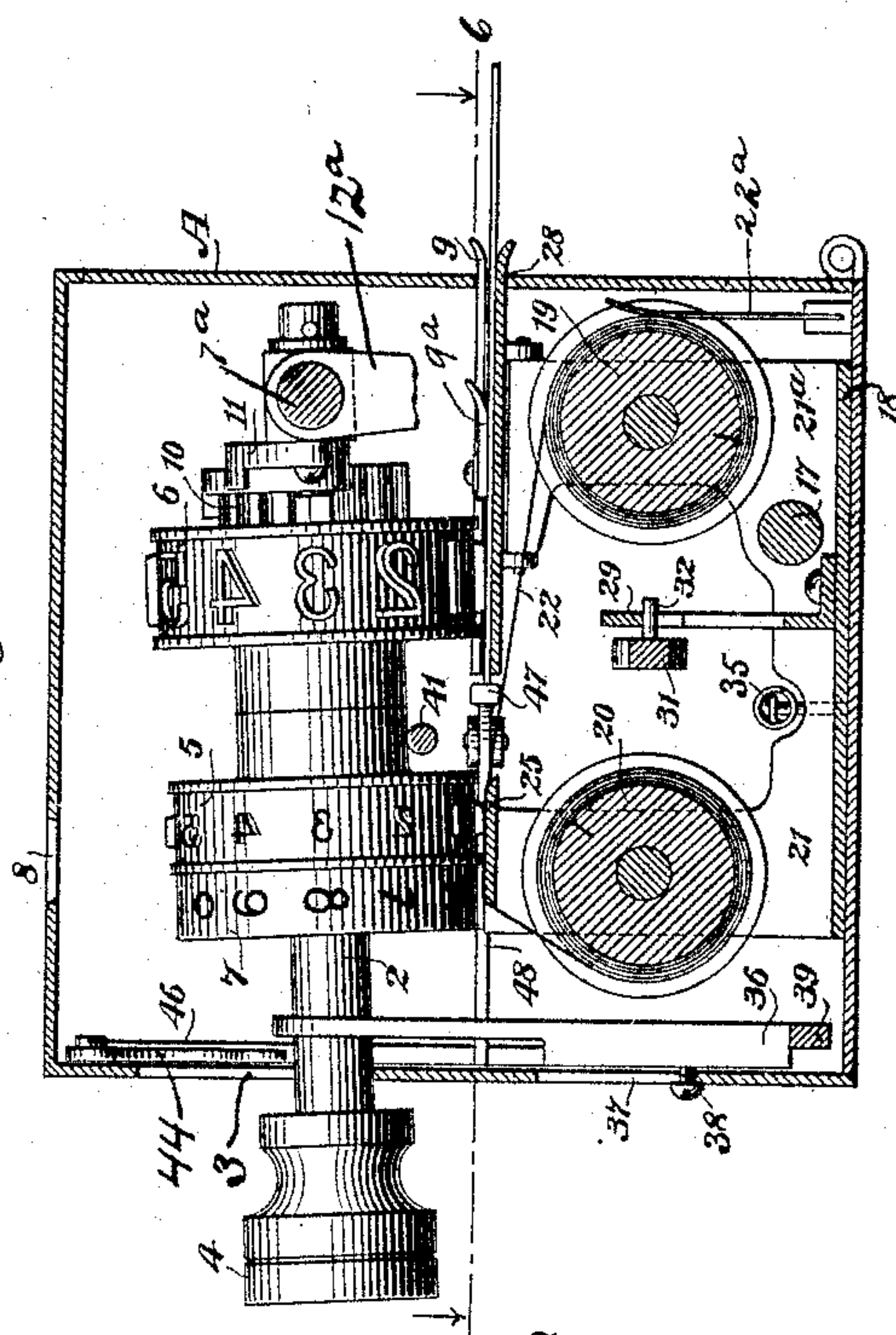


Fig. 2.



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Fig. 5.

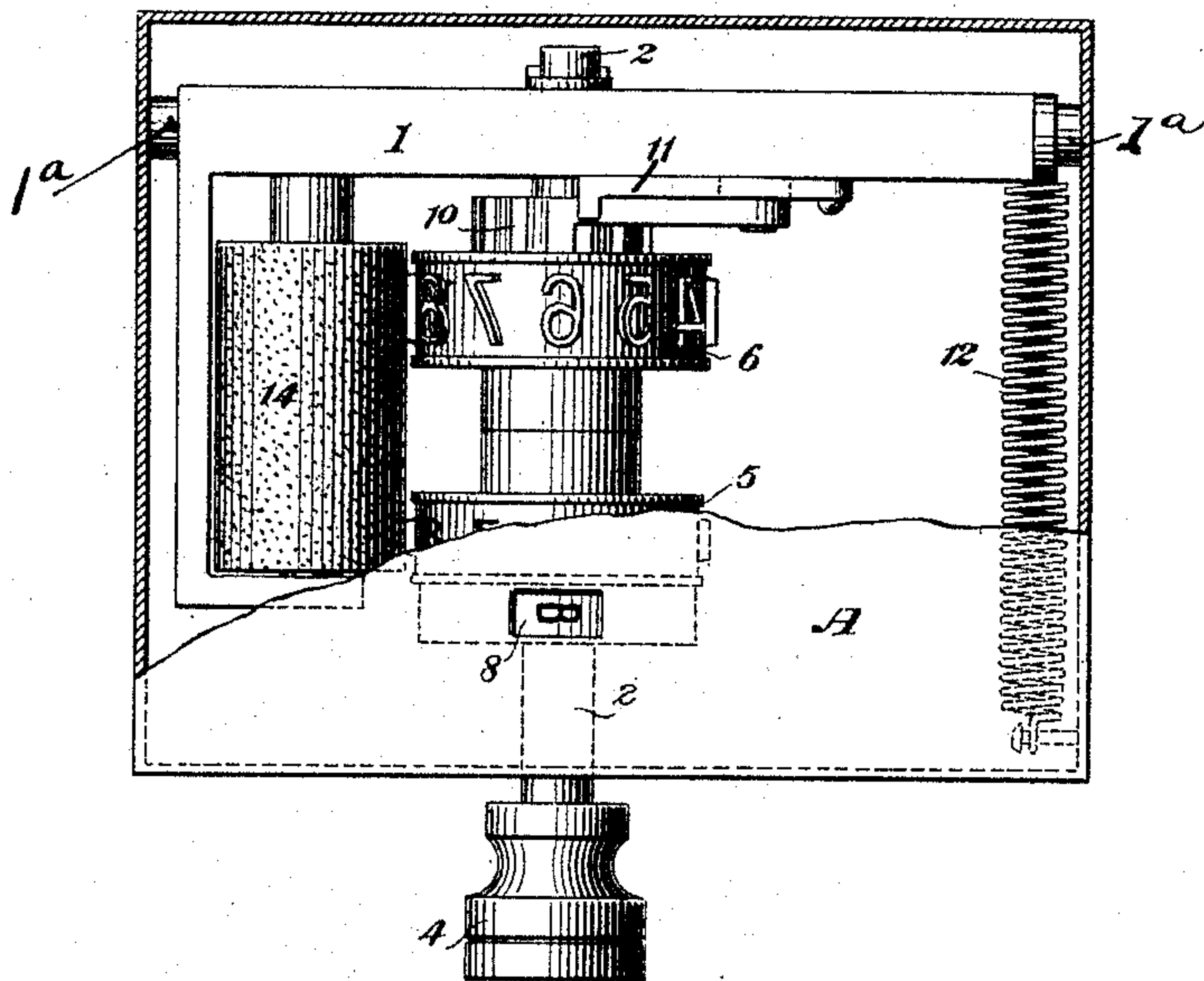
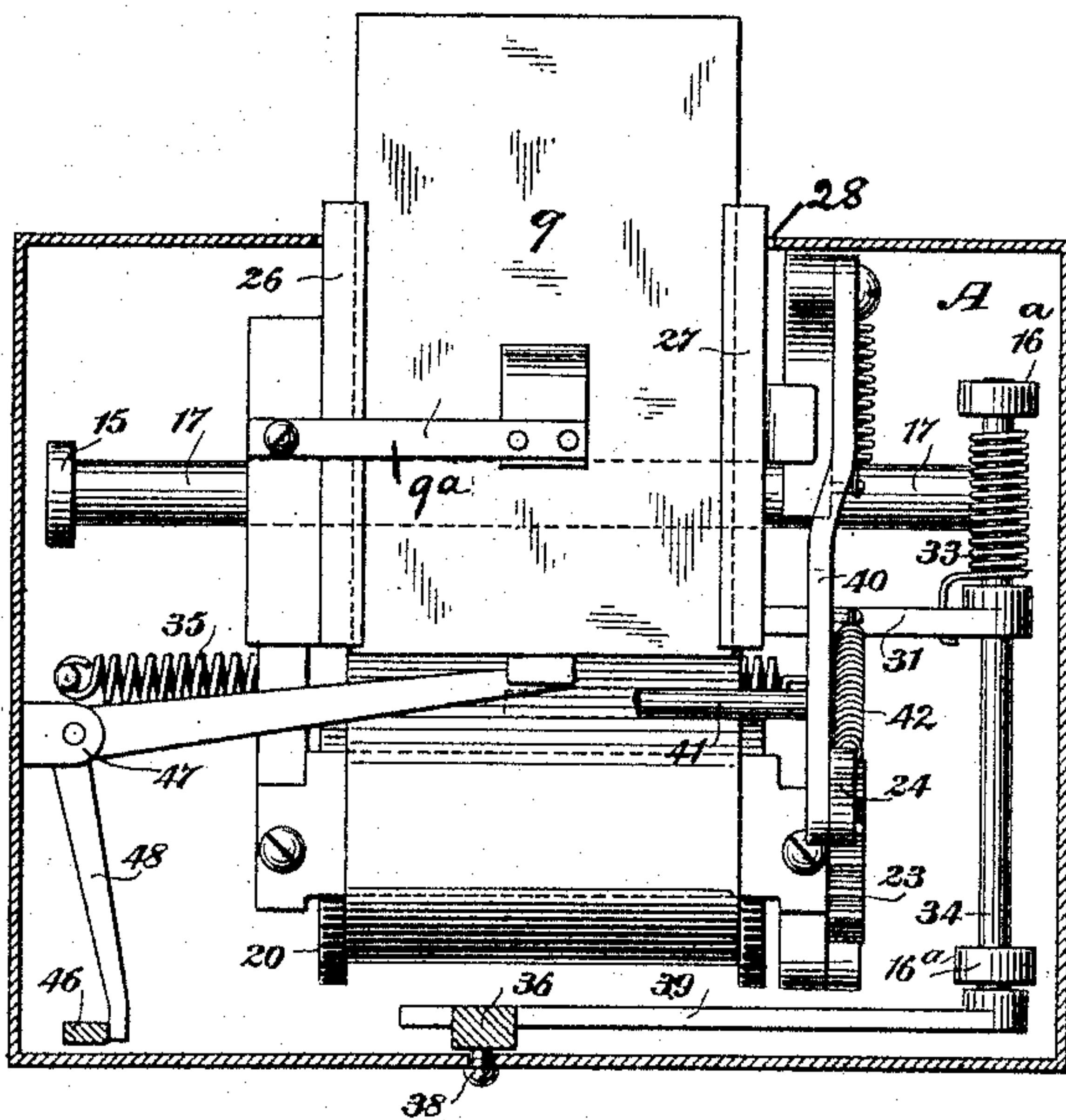


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM W. WYTHER AND WILLIAM H. WYTHER, OF ORANGE, NEW JERSEY,
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CHECK PRINTER AND RECORDER.

SPECIFICATION forming part of Letters Patent No. 491,626, dated February 14, 1893.

Application filed February 16, 1891. Renewed February 12, 1892. Serial No. 421,286. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM W. WYTHER and WILLIAM H. WYTHER, of Orange, in the county of Essex and State of New Jersey, have
5 invented certain new and useful Improvements in Check Printers and Recorders, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

10 Our invention has for its object the provision of novel and improved means for printing upon checks or tickets, and also upon a record-strip, the amounts of sales in stores, restaurants and like places; and its novelty
15 consists in the new constructions, combinations and modes of operation of the various parts, all as will be hereinafter set forth and specifically pointed out in the claims.

In the accompanying drawings Figure 1
20 represents a vertical section of our improved machine approximately on the line 1—1 of Fig. 3; Fig. 2 a vertical section approximately on the line 2—2 of Fig. 4; Fig. 3 a front elevation of the machine with a portion of the
25 casing broken away to expose the parts within; Fig. 4 a vertical section approximately on the line 4—4 of Fig. 1; Fig. 5 a top-plan view part of the casing broken away and some of the parts removed; Fig. 6 a horizontal section
30 of the machine approximately on the line 6—6 of Fig. 2.

The same letters and numerals of reference are used to indicate identical parts in all the figures.

35 The working parts of the machine are inclosed in a box or casing A provided in its upper side with an opening 8 through which the numbers upon one of the wheels hereafter described may be seen, and in its forward side with a vertical slot 3 through which
40 projects a shaft 2, provided on its front end with a knob or thumb-piece 4. This shaft is journaled at its rear end in a frame 1, which frame is fast upon and carried by a shaft 1^a
45 journaled at its opposite ends in the sides of the casing, as seen in Fig. 5. This pivotal arrangement of the frame 1 permits the front end of the shaft 2 to be raised and lowered in the slot 3, the shaft operating as a lever
50 with the frame 1 or shaft 1^a as its fulcrum.

A spring 12, Figs. 4 and 5, connected at its front end to the casing and at its rear end to the lower end of an arm 12^a depending from the frame 1 yieldingly holds up the front end of the shaft 2. Fast upon the shaft 2 are two
55 type-wheels 5 and 6 and also a numbered wheel or indicator 7 whose numbers are adapted to be exposed singly through the reading opening 8 before referred to. By turning the shaft 2 the different numbers upon
60 the type-wheels may be brought to the printing point. A pawl 11 spring-pressed into engagement with a toothed wheel 10 fast upon the shaft 2 in rear of the type-wheel 6, Figs. 1, 2 and 5, yieldingly holds the shaft and
65 wheels in the different positions to which they may be turned.

Journaled in a frame beneath the type-wheels are two spools 19 and 20 upon which is carried a strip of paper 22 led from one to
70 the other. The frame in which these spools are mounted, as seen in Figs. 1, 2 and 4, is composed of a bottom plate 18, end or side plates 21 and 21^a, and top plates 25 and 9, the latter plate 9, being hinged to the upper edge
75 of one of the side plates of the frame, so that it may be lifted for the purpose of removing the record-strip and resting at its opposite end upon the opposite side plate, as seen in Fig. 4. The strip of paper 22 is led from the
80 supply-spool 19 over the top of the plate 25 of the frame, as seen in Fig. 2, and thence passes to and is wound upon the spool 20. A spring 22^a operating against the paper upon the supply-spool 19 maintains a proper ten-
85 sion upon the paper strip. The plate 25 over which the strip 22 is led is immediately beneath the type-wheel 5 and co-operates with such wheel as a platen, while the hinged plate 9 is beneath the type-wheel 6 and co-operates
90 as a platen with said wheel. Journaled in a bracket 13 carried by the frame 1, at the left of the type-wheels and bearing against them, as seen in Fig. 4 is an inking roller 14. The plate 9 is provided at its opposite edges with
95 guides 26 and 27 and projects at its rear end through a horizontal slot 28 in the rear side of the casing. The plate 9 is adapted to support a card or ticket inserted from the rear of the machine between the guides 26 and
100

27 and beneath a spring-clip 9^a, Figs. 2 and 6. Upon inserting such a card or ticket and depressing the front end of the shaft 2 until it strikes the lower end of the slot 3 in the front wall of the casing the type-wheel 6 will bear against and print a number upon such card or ticket, while the type-wheel 5 will bear upon and print one of its numbers upon the paper strip 22 above the plate 25, as seen in Fig. 2. The operation of this much of the machine consists in inserting a card or ticket beneath the type-wheel 6, turning the shaft 2 until the number to be printed is exposed upon the indicator-wheel 7 at the reading opening 8, and then depressing the front end of the shaft to its limit of stroke, whereupon the number exposed to view upon the indicator-wheel will be printed by the type-wheels both upon the record-strip and the inserted ticket. The indicator-wheel, as shown, is secured upon the shaft 2 in such position that when any one of its numbers is brought beneath the opening 8 the corresponding numbers upon the type-wheels will be brought to the printing points. The spool 20 has secured upon one end a ratchet 23, Fig. 1, with which co-operates a pawl 24 carried upon the front end of a bell-crank-lever 40. A spring 42 secured at one end to the short arm of said lever and at its other to a pin upon the frame before described yieldingly holds the forward end of the lever 40 and the pawl 24 in the positions shown in Fig. 1, and a coiled spring connected to the upper end of the pawl and to the lever 40 maintains the lower end of the pawl in engagement with the ratchet 23. When the front end of the lever 40 is depressed and released the pawl 24 will turn the ratchet and spool 20, and draw forward the paper strip 22 from the spool 19 and wind it upon the spool 20. The front end of the lever 40 is depressed at the proper time by the depression of the front end of the shaft 2, in the manner hereinafter explained, to advance the record-strip.

The frame heretofore described, which carries the two spools, is mounted to slide laterally across the machine upon a horizontal shaft 17 supported at its opposite ends in lugs 15 and 16 upon the bottom of the casing as seen in Fig. 4. A spring 35 secured at its right hand end to one of the side plates of the sliding frame, as seen in Fig. 4, and at its opposite end to a pin upon the bottom of the casing tends to pull said frame and parts carried by it to the left along the guide rod 17. Carried by the sliding frame, in this instance secured to the bottom plate thereof between and parallel with the spools which carry the record-strip is a plate 29 provided with three connected slots 30 of the shape shown in Fig. 4.

Journalled at its opposite ends in lugs 16^a in the lower right hand corner of the casing, Fig. 6, is a rock shaft 34 having fast upon it an arm 31 extending to the left, as seen in Fig. 4, and provided with a pin 32 which pro-

jects through the slots in the plate 29. A spring 33 coiled around the shaft 34, Fig. 6, and secured to a fixed point at one end and operating against the under side of the arm 31 at the other tends to lift the outer end of said arm and hold it in the position shown in Fig. 4, with the pin 32 in the upper end of one of the slots 30 in the plate 29.

Fast upon the front end of the rock-shaft 34 is a second arm 39 Figs. 3 and 6, which extends to the left beneath the lower end of an arm 36 loosely hung upon the shaft 2 and provided with a pin or screw 38 passing through a vertical slot 37 in the front wall of the casing, said screw and slot operating to guide the arm 36 in its vertical movement when the front end of the shaft 2 is depressed and lifted. Whenever the front end of said shaft is depressed, to cause the type-wheels 5 and 6 to effect the printing in the manner before described, the lower end of the arm 36 will strike and depress the left hand end of the arm 39, Fig. 3, and thereby rock the shaft 34 and depress the left hand end of the arm 31, Fig. 4, causing the pin 32 to travel downward in the left hand slot 30 in the plate 29. When the pin clears the point of the shoulder at the junction of the vertical portion of the slot with the inclined portion leading upward to the right and connecting it with the second or middle slot the spring 35 will pull the sliding frame toward the left, and when the operating shaft 2 is released and thrown upward the sliding frame will be pulled on toward the left by the spring until the pin 32 engages the upper end of the second or middle slot and arrests the frame. At the next depression of the operating shaft 2 the sliding frame will be moved another step toward the left and the pin 32 engaged with the upper end of the right hand slot 30 in the plate 29. The purpose of giving the sliding frame and the parts carried by it this step-by-step motion toward the left is to cause the type-wheels to print their numbers in different columns upon the paper strip and ticket, to indicate dollars, and tens and units of cents, respectively. Thus, supposing a sale of five dollars and twenty-five cents has been made: the operator will grasp the knob 4 on the forward end of the shaft 2 and turn said shaft until the number "5" upon the indicator wheel 7 appears beneath the opening 8 in the top of the casing. This will bring the number "5" upon each of the type-wheels to the printing point at the under side of the same, as seen in Fig. 5. Upon now depressing the front end of the shaft 2 a "5" will be printed in the left hand column or space upon the record-strip and in corresponding position upon the inserted card or ticket. When the knob 4 is now released and the front end of the shaft 2 permitted to move upward the spring 35 will draw the sliding frame and the parts carried by it one step toward the left and bring the second or middle column or space upon the record-strip and ticket beneath the type-wheels. The opera-

tor will now turn the shaft 2 until the number "2" upon the type-wheels is brought to the printing point and will then depress it and print said number upon the strip and ticket. 5 Upon the return stroke of the shaft the sliding frame will be carried another step toward the left and the units space or column brought beneath the type-wheels, whereupon the operator will turn the shaft until the number 5 10 upon the type-wheels is brought to the printing point and will then depress the front end of the shaft and print said number in the units column upon the strip and ticket. In this manner the record-strip and ticket are 15 automatically moved at each operation of the machine to cause the numbers to be printed in the proper spaces upon them. The shape of the slots 30 and connecting slots in the plate 29 is such that after the sliding frame 20 has been moved to the left until the pin 32 is engaged with the upper end of the right hand slot in the plate the sliding frame may be slid by hand toward the right and the pin 32 re-engaged with the upper end of the left hand 25 slot in the plate, as seen in Fig. 4. During this movement of the frame to the right the frame 32 will travel down the inclined slot connecting the upper end of the right-hand vertical slot with the middle or second slot, 30 and thence upward into the inclined slot connecting the middle slot with the left hand vertical slot, thence down said inclined slot and into the left hand slot, the end of the arm 31 being vibrated accordingly. The sliding 35 frame is moved to the right by hand, at the end of an operation of the machine or preceding the next operation, by means of the plate 9 and guides 26 and 27 which project through the slot 28 in the rear side of the 40 casing, the operator taking hold of these parts and moving the frame to the right against the stress of the spring 35. If the next amount to be printed is as much as a dollar the operator will move the sliding 45 frame into its extreme right hand position so that at the downward stroke of the type-wheels the number at which they are set will be printed in the dollar column; if the amount to be printed exceeds nine cents but is less 50 than a dollar, the operator will move the sliding frame to the right only far enough to bring it to its middle position, with the pin 32 engaged with the upper end of the middle slot in the plate 29, and the column for tens of 55 cents immediately beneath the type-wheels; while if the amount to be printed is less than ten cents he will not move the sliding frame at all but will leave it in its extreme left hand position, so that the number will be 60 printed in the column representing units of cents. It will be understood that the sliding frame is left in this latter position at the end of each operation of the machine, no matter what amount has been printed, for if the sale 65 should have amounted to even dollars, without any cents, the operating shaft will have been depressed three times, to print the proper

number in the dollar column, and a zero in each of the other columns, thereby moving the sliding frame into its extreme left hand 70 position.

The bell-crank-lever 40, Fig. 1, which carries the actuating pawl 24 for the ratchet 23 of the storage spool 20, is provided with a rod 41 projecting to the left of it as seen in Fig. 4. 75 This rod 41 is of such length that when the sliding frame has been moved to its extreme left hand position the end of the rod 41 will be beneath the shaft 2 or the hubs of the type-wheels 5 and 6, so that when the operating shaft is depressed to print a number in the space or column representing units of cents the end of the arm 41 will be struck and the forward end of the bell-crank-lever 40 thrown downward, causing the pawl 24 to 85 engage a fresh tooth of the ratchet 23, and upon the release and re-setting of the shaft 2 and type-wheels and the consequent upward movement of the lever 40 under the stress of the spring 42, the pawl 24 will turn the ratchet 90 23 and wind up the record-strip upon the spool 20, drawing a fresh portion of the same over the plate 25 in position to be printed upon by the type-wheel 5 at the next operation of the machine. 95

The operating shaft 2 is normally locked from movement, and automatically released by the insertion of the card or ticket to be printed, in the manner and by the means to be now described. Pivoted to the inner side 100 of the front wall of the casing at a point above the shaft 2 is a lever 43 provided with a pendant curved arm or hook 44 extending around and beneath the shaft 2, as seen in Fig. 3. A spring 49 connected to this hook 44 pulls 105 the hook toward the left and tends to draw it out of the path of the shaft 2, but the hook is normally held in the locking position shown in Fig. 3 by a latch 46 which is yieldingly held in normal position, Fig. 3, by a spring not shown, 110 and whose hooked upper end catches over a pin 45 projecting from the side of the lever 43. When the latch is disengaged from this pin the spring 49 will throw up the left hand end of the lever 43 and carry the hook 44 out 115 of the path of the shaft 2. Pivoted between ears 47 upon the inner face of the left hand side wall of the casing, as seen in Fig. 6, is a horizontally arranged bell-crank-lever 48 whose forwardly extending arm bears at its 120 end against the lower end of the latch 46, and the end of whose rear transversely extending arm lies immediately in front of the plate 9 over and upon which the card or ticket to be printed is placed. When such card is pushed 125 in to proper position its inner end will engage the end of the bell-crank-lever 48 and slightly oscillate said lever, causing its forwardly extending arm to throw the lower end of the latch 46 to the left and thereby disen- 130 gage its hooked upper end from the pin 45 on the lever 43, thus releasing said lever and permitting the spring 49 to throw it upward and unlock the shaft 2, as will be readily under-

stood. The shaft may be re-locked by depressing the left hand end of the lever 43 which projects outside the casing, the pin 45 riding over the beveled nose of the latch 46 and catching under the same.

Having thus fully described our invention we claim:

1. The combination of a type-carrier mounted upon a depressible support and axially movable to bring its different numbers to the printing point, a platen co-operating therewith, a supply reel and a storage reel, a record-strip carried upon the supply-reel and led thence over the platen and wound upon the storage-reel, and means intermediate the type-carrier-support and the storage-reel for actuating the latter to advance the record-strip.

2. The combination of a type-carrier mounted upon a depressible support and axially movable to bring its different numbers to the printing point, a platen movable beneath the same transversely to its axis and provided with a guide-way or retaining device adapted to receive an inserted ticket and carry it with the platen, and means intermediate the type-carrier-support and platen for moving the latter and the inserted ticket transversely beneath the carrier, whereby upon inserting a ticket between the guides upon the platen and successively depressing the type-carrier the numbers upon the latter may be printed upon the ticket in different spaces and the ticket be then readily withdrawn, substantially as described.

3. The combination of a type-carrier mounted upon a depressible support and axially movable to bring its different numbers to the printing point, a platen co-operating with the type-carrier and movable beneath the same transversely to its axis, a supply-reel and a storage-reel movable with the platen, a record-strip carried upon the supply-reel and led thence over the platen and wound upon the storage-reel, and means intermediate the type-carrier-support and storage-reel for actuating the latter to advance the record-strip.

4. The combination of a type-carrier mounted upon a depressible support and axially movable to bring its different numbers to the printing point, a platen co-operating therewith and movable transversely to its axis, a supply-reel and a storage-reel movable with the platen, a record-strip carried upon the former and led thence over the platen and wound upon the storage-reel, and means intermediate the type-carrier-support and the platen for moving the latter and the record-strip and reels transversely of the type-carrier.

5. The combination of a type-carrier mounted upon a depressible support and axially movable to bring its different numbers to the printing point, a platen co-operating therewith and movable transversely to its axis, a supply-reel and a storage-reel movable with the platen, a record-strip carried upon the former and led thence over the platen and wound

upon the storage-reel, means intermediate the type-carrier-support and the platen for moving the latter transversely beneath the carrier, and means intermediate said type-carrier-support and the storage-reel for actuating the latter at the end of the transverse movement of the platen in one direction, to advance the record-strip.

6. In a cash-recording and check-printing apparatus, the combination of two type-carriers mounted upon a depressible support and axially movable in unison to bring corresponding numbers to the printing points, a record-strip led beneath one carrier, and a platen or platens co-operating with said carriers, whereby upon turning the carriers to any given number and depressing them said number may be printed by one carrier upon the record-strip and by the other upon an inserted card or ticket.

7. In a cash-recording and check-printing apparatus, the combination of two type-carriers mounted upon a depressible support and axially movable in unison to bring corresponding numbers to the printing points, two platens co-operating therewith and movable beneath the same transversely to their axes, a record-strip led between one carrier and its co-operating platen, and means intermediate the type-carrier-support and the platens for moving the latter transversely beneath the carriers, whereby upon successive operations of the type-carriers their numbers may be printed in different spaces upon the record-strip and upon an inserted card or ticket.

8. In a ticket-printing device, the combination of a casing provided with a transverse slot or opening permitting the insertion and lateral movement of a ticket, a type-carrier mounted upon a depressible support within the casing and axially movable to bring its different numbers to the printing point, a platen co-operating with the type-carrier, and between which and the carrier the ticket is inserted, a support and guide-way for the inserted ticket movable transversely beneath the type-carrier, and means intermediate said support and the type-carrier-support for intermittently moving the inserted ticket transversely beneath the carrier at successive operations of the latter, for the purpose described.

9. The combination of an axially revoluble lever, a type-carrier fast thereon, a frame movable transversely beneath the type-carrier, a platen carried by said frame, a pair of spools also carried by said frame, for holding a record-strip passed over said platen, and mechanism intermediate the lever and transversely movable frame for giving the latter a step by step motion upon successive depressions of the lever, for the purpose described.

10. The combination of an axially revoluble lever, two type-carriers fast thereon, one for printing upon a record-strip and the other upon a card or ticket, impression platens co-

operating with said carriers, and a pair of spools for holding the record-strip passed over one of said platens, whereby upon turning said lever to the proper point and depressing it the desired number may be printed both upon the record strip and upon the card or ticket.

11. The combination of an axially revolvable lever, two type-carriers fast thereon, one for printing upon a record-strip and the other upon a card or ticket, a frame movable transversely beneath the type-carriers, two impression platens carried by said frame and co-operating with the respective type-carriers, a pair of spools also carried by said frame, for holding a paper strip passed over one of said platens, and mechanism intermediate said transversely movable frame and the lever for giving the frame a step by step movement at successive operations of the lever, for the purpose described.

12. The combination of an axially revolvable, depressible lever, a type-carrier fast thereon, a platen co-operating with the carrier, a pair of spools for holding a paper strip passed over said platen, a ratchet upon one of said spools, a pawl for turning said ratchet, and mechanism intermediate the pawl and operating lever for actuating the pawl upon the stroke of such lever, whereby upon turning the lever until the desired number is brought to the printing point and then depressing and releasing it said number will be printed upon the paper strip and the latter advanced for the next operation.

13. In a ticket printing device, the combination of a type-carrier, a platen, an operating lever or handle, and a lock for the operating lever arranged to be released by the insertion of the card or ticket between the platen and type-carrier.

14. In a ticket printing device, the combination of a type-carrier, a platen, an operating lever, a locking arm or lever for said operating lever, a latch for holding such arm in locking position, and a trip for the latch operated by the insertion of the card or ticket between the platen and type-carrier.

15. The combination of the casing A, the frame 1 pivoted therein, the shaft 2 journaled in the frame 1 and projecting through the slot 3 in the casing, the type-wheel 5 fast upon said shaft, the indicator wheel 7 also fast thereon beneath the opening 8 in the casing A, and the platen 25 co-operating with the type-wheel 5, substantially as described.

16. The combination of the pivoted frame

1, the shaft 2 journaled therein, the type-wheel 5 fast on said shaft, the sliding frame mounted on the shaft 17, the platen 25 carried by said frame beneath the type-wheel 5, the slotted plate 29 carried by said frame, the spring 35 acting on said frame, the rock-shaft 34, the arm 31 fast thereon and provided with the pin 32 engaging the slots in the plate 29, the arm 39 also fast on the rock-shaft 34, and the pendent arm 36 carried by the shaft 2 and co-operating with the arm 39, substantially as described.

17. The combination of the pivoted frame 1, the shaft 2 journaled therein, the type-wheel 5 fast on said shaft, the platen 25, the spool 20 provided with the ratchet 23, the lever 40 provided with the pin 41, the spring 42 applied to said lever, and the pawl 24 carried by said lever and co-operating with the ratchet 23, substantially as described.

18. The combination of the pivoted frame 1, the shaft 2 journaled therein, the type-wheels 5 and 6 fast on said shaft, the bracket 13 on the pivoted frame, the inking roller 14 journaled in said bracket and bearing against the type-wheels, and the platens 9 and 25 co-operating with said type-wheels, substantially as described.

19. The combination of the pivoted frame 1, the shaft 2 journaled therein, the type-wheel 6 fast on said shaft, the platen 9 co-operating with said type-wheel, the lever 43 provided with the locking hook 44 co-operating with the shaft 2, the spring 49, the latch 46 co-operating with the pin 45 on the lever 43, and the trip lever 47 co-operating with the latch 46 and arranged to be operated by the card or ticket inserted above the platen 9, substantially as described.

20. The combination of the casing A provided with the transverse slot 28, the platen 9 and guides 26 27 co-incident with the slot 28 and supported upon a transversely movable frame, the axially-movable depressible lever 2 projecting outside the casing, the type-carrier 6 fast thereon and co-operating with the platen 9, and means intermediate the lever 2 and platen-supporting frame for intermittently moving the platen transversely beneath the type-carrier 6 at successive operations of the lever 2, substantially as and for the purpose described.

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In presence of—

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THOS. S. IRVIN.