

J. F. OHMER.
TICKET ISSUING AND RECORDING MACHINE.
APPLICATION FILED FEB. 19, 1904.

2 SHEETS—SHEET 1.

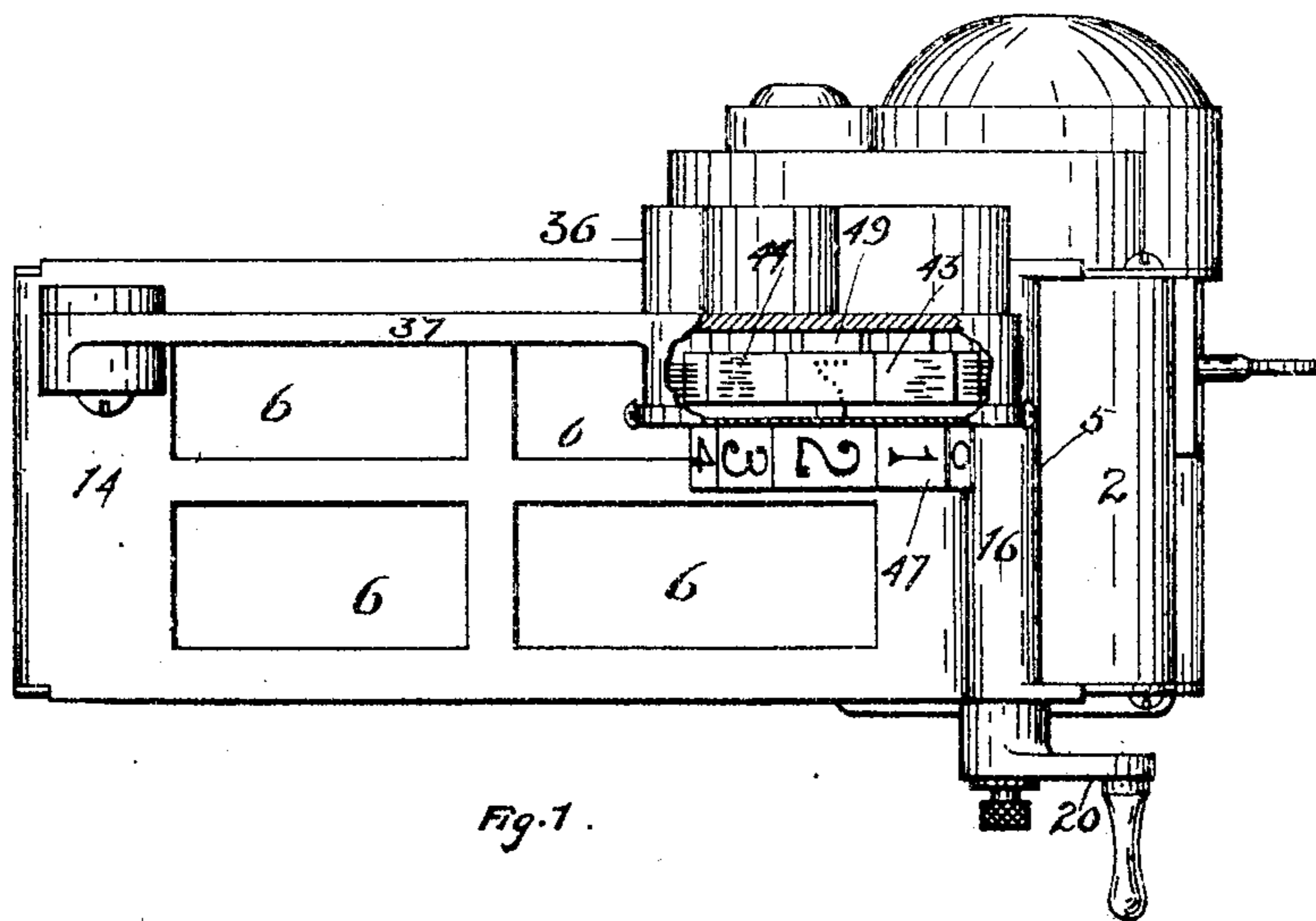


Fig. 1.

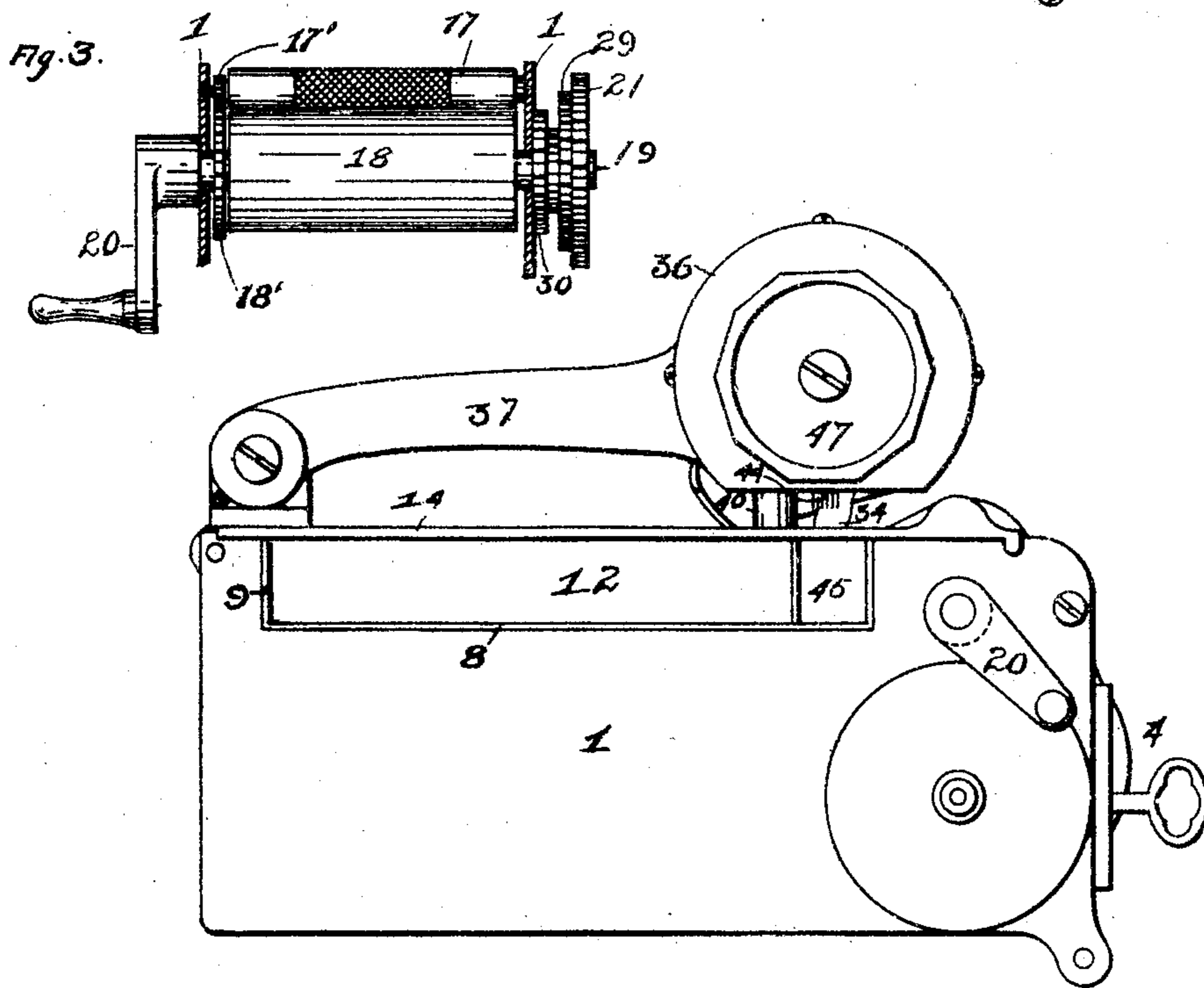


Fig. 2.

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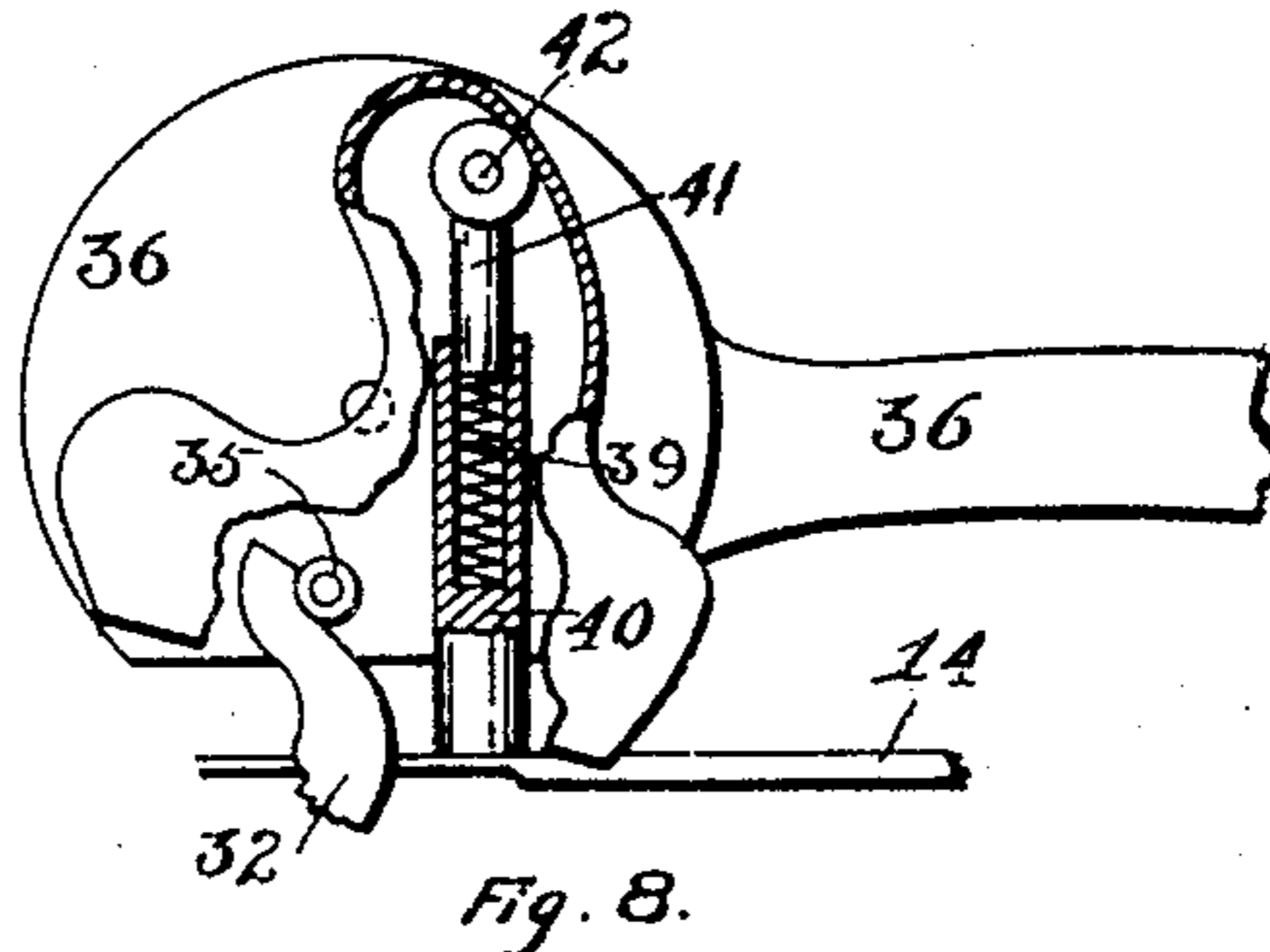
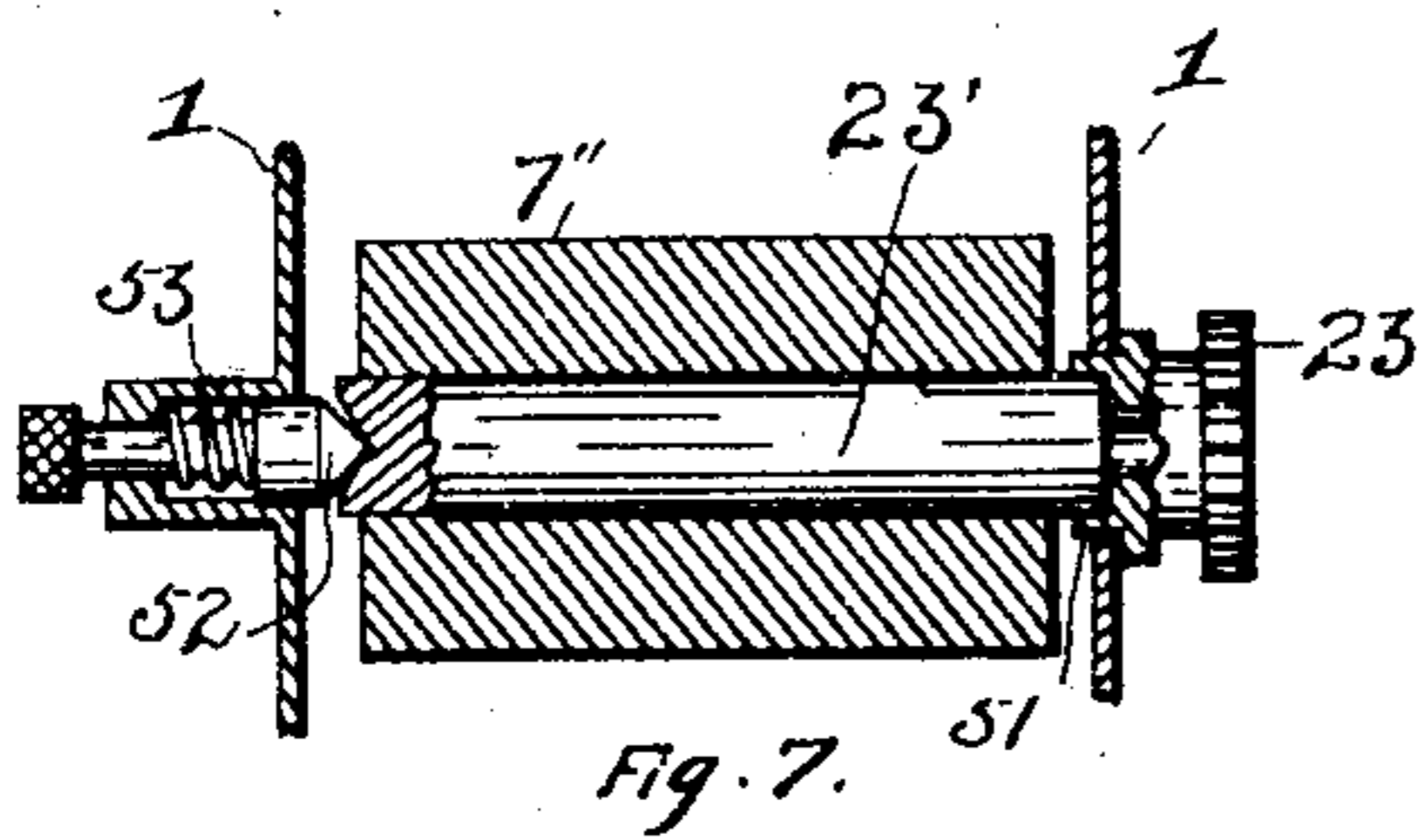
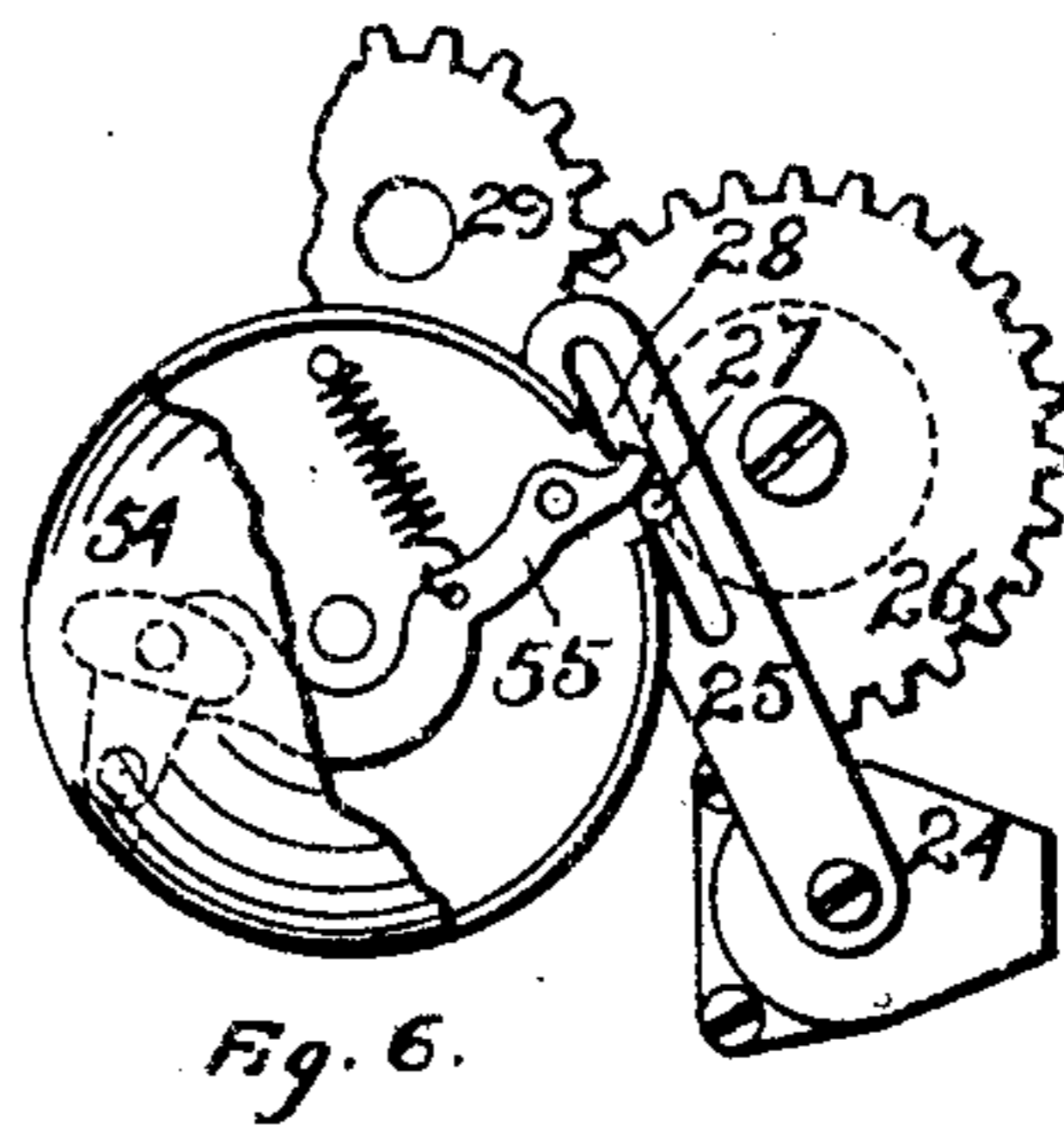
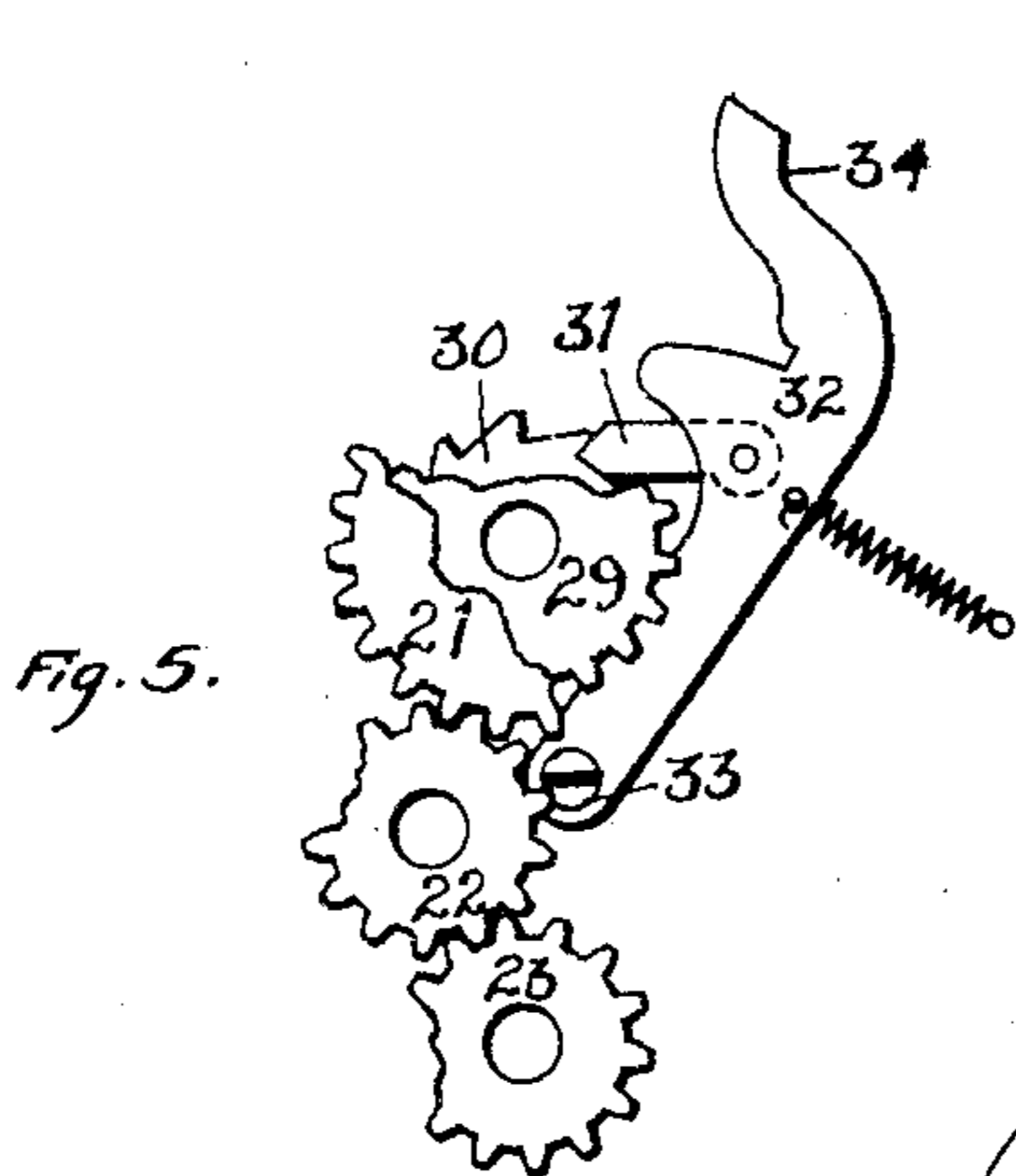
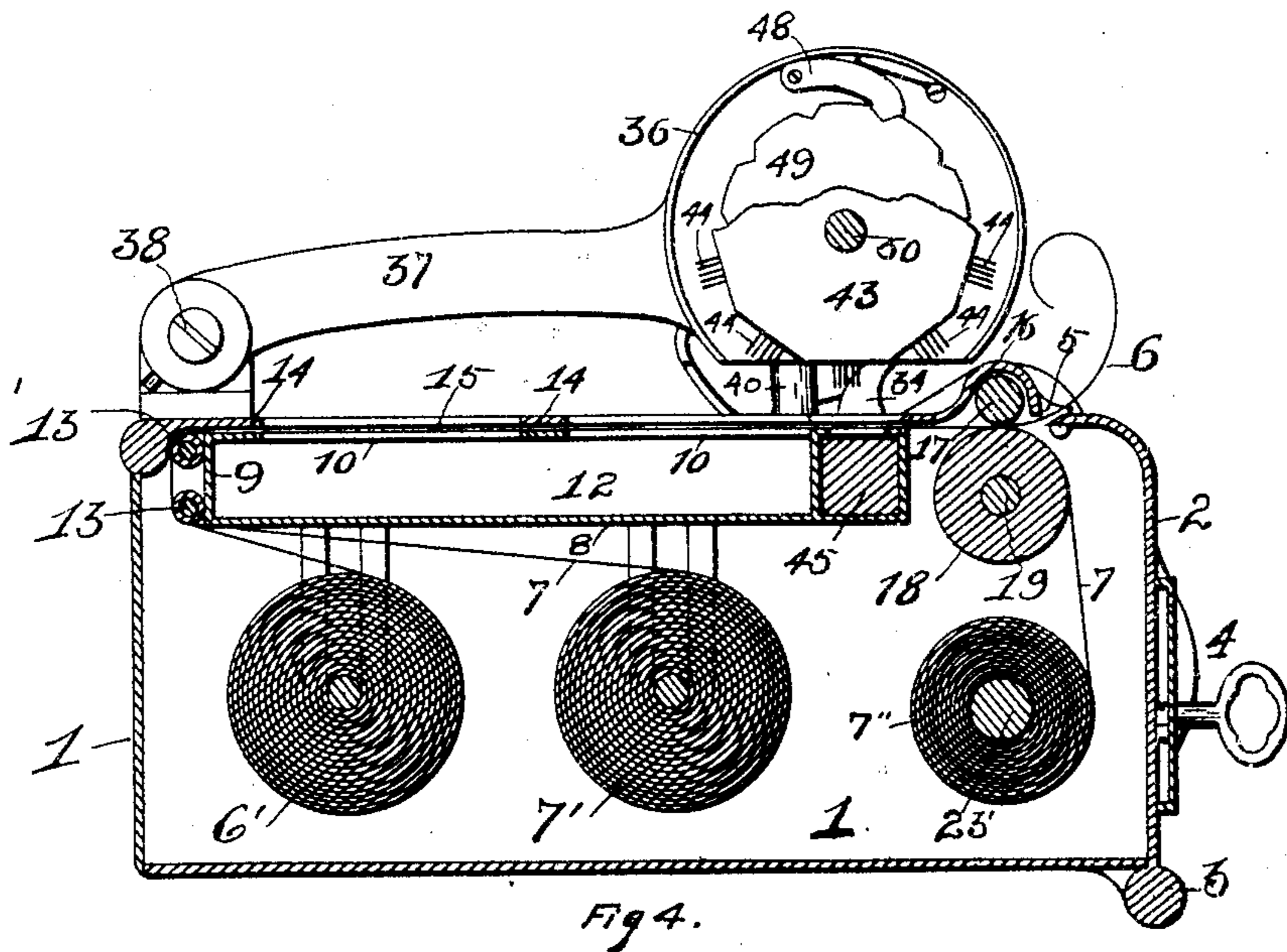
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN F. OHMER, OF DAYTON, OHIO, ASSIGNOR TO THE OHMER FARE REGISTER CO., OF ROCHESTER, NEW YORK.

TICKET ISSUING AND RECORDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 778,264, dated December 27, 1904.

Application filed February 19, 1904. Serial No. 194,331.

To all whom it may concern:

Be it known that I, JOHN F. OHMER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Ticket Issuing and Recording Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a ticket or sales-slip issuing machine, and comprises means for issuing and storing duplicate tickets or sales-slips with the value or amount of each ticket or sales-slip indicated thereon either in perforated figures or embossed figures, the stored ticket or sales-slip being on a continuous roll, which is stored within the machine, and the issued ticket or sales-slip being severed from a separate continuous roll after the same has been perforated or embossed and fed from the machine, also a total record of the tickets or sales-slips or other transactions performed by the machine is obtained within the machine, all as will hereinafter be more fully described.

Preceding a detail description of the invention reference is made to the accompanying drawings, of which—

Figure 1 is a top plan view of the machine. Fig. 2 is a side elevation. Fig. 3 is a front elevation of the feeding-rollers. Fig. 4 is a longitudinal sectional view through the machine. Figs. 5 and 6 are detail views of the consecutive-counter mechanism, bell-sounding mechanism, and adjunctive devices. Fig. 7 is a sectional view through the axis of the storage-roll. Fig. 8 is a detail view illustrating the certain mechanism operating in connection with the perforating or embossing stamp.

In a detail description of the invention similar reference characters indicate corresponding parts.

1 designates an oblong rectangular casing, the forward end of which has a cover 2, which is hinged at 3 and is controlled by suitable

lock and key 4. The upper end of this lid or cover is curved and forms one side of a slot or opening 5, through which the issued tickets or sales-slips 6 are fed, said issued tickets or slips being unwound from a continuous roll 6', which is mounted within the casing. There is also a record-strip 7 below said strip of tickets or sales-slips 6, which is unwound from a roll 7' within the casing and is stored in a continuous roll 7'' in the forward end of said casing.

The top of the casing 1 is inclosed by an open box or frame consisting of a solid or imperforate bottom 8 and a similar end 9, and the top of which has suitable openings below which is a space 12 for the entrance of a suitable punch in perforating or punching the tickets or sales-slips which lie above the openings 10 10 in said frame. At the end of said frame there are rollers 13, over which the strips of tickets or sales-slips 6 and 7 are carried. Above said frame and above the strips of tickets or sales-slips 6 there is a further frame 14 with openings corresponding to the openings in the top of said lower frame and which, together with the top of said lower frame, provide a guideway 15, through which said ticket or sales-slip strips pass. The forward end 16 of said frame 14 is suitably curved to surround the top of feed-roller 17. The said feed-roller lies above a larger feed-roller 18, through which the strips are fed. The upper feed-roll 17 is driven from the lower feed-roll by means of gears 17' and 18'. The extreme forward edge 16 of the uppermost frame forms the rearward inclosure of the slot 5, through which the issued tickets or sales-slips are fed, as before stated. The spindle 19 of the lower feed-roll 18 has a crank-handle 20, by which it is turned, and which roller in turn rotates the smaller feed-roller 17 by friction to withdraw the paper from the rolls 6' and 7'. The storage-roll 7'' is rotated from the feed-roll 18 at the same ratio of speed through means of a spur-wheel 21 on spindle 19 of said feed-roll, which meshes with a transmission spur-wheel 22, that in turn meshes with a similar-sized spur-wheel 23 on the shaft 23' of the storage-roll.

The spindle 23' is detachable by having one of its ends mounted in a recess 51 in the inner side of the casing and the other end engaged by a cone-shaped journal 52, which enters a corresponding recess in that end of the spindle and is normally pressed in engagement by means of a coil-spring 53, which incloses the shaft of said cone 52.

Owing to the constantly-increasing diameter of the take-up or storage roll 7'', it is obvious that the shaft 23' of said roll and the gear-wheel 23 thereof, which is driven from the feed-roll 18, cannot at all times move in unison. This contingency is provided for by so mounting the shaft 23' that when under tension due to the storage-strip the gear-wheel 23 and the cup 51 may move independently of the said shaft. It will be remembered that the end of the shaft is not rigidly mounted in the cup 51, but is held therein by the insertion of the spring 53. (See Fig. 7.)

The consecutive counters, which are of the usual construction, are mounted in a casing 24 on a side of the machine upon which the gearing is located, the said side being the uppermost side, as shown in Fig. 1. The spindle of said consecutive counters is connected with a lever 25, which in turn is connected with a spur-wheel 26 by means of a pin 27, projecting from the face of said spur-wheel and entering the oblong slot 28 in the upper end of said lever. Wheel 26 is driven from a spur-wheel 29, fixed to the spindle 19 of the feed-roll 18 and lying on the inner side of the spur-wheel 21. Adjacent to said spur-wheel 29, on the inner side thereof and on the same spindle, there is mounted a ratchet-wheel 30, which is engaged by a pawl 31, that is pivoted to a lever 32, said lever 32 being pivoted at 33 to a side of the casing and lying on the inner side of the spur-wheel 26. This lever 32 has a suitable curved end 34, which is engaged by a roll-stud 35, which is mounted on the head 36 of the embossing or perforating lever 37. The lever 37 has its fulcrum at 38 at one end of the machine and is normally maintained in the upper position, as shown in Fig. 4, by means of a coil-spring 39, which is inclosed within a fixed tube 40, which is fast upon one side of the upper frame 14. Engaging with the upper end of this spring 39 is a pin 41, that is pivoted at 42 to the head 36, and it will be seen that upon each depression of the lever 37 the spring 39 will compress, and when pressure is removed from the head 36 the expansion of said spring will elevate the lever to the position shown in Fig. 4. Mounted upon said head is the embossing or stamping wheel 43, with the numbers from "1" to "0" appearing in pin-figures 44, said pins perforating the figures in the tickets or sales-slips which lie above the inking-pad 45, located in the forward corner of the frame below the strips, so that when the head 36 is depressed the pins will

perforate the paper and form therein the figures and will color the perforations in the paper according to the color of ink in the pad.

47 is a visible index-wheel fixed to the shaft upon which the pin-wheel 43 is fixed and the figures on said index-wheel being correspondingly arranged with the figures on the pin-wheel so that the figures on the pin-wheel are properly indexed from the wheel 47. There is also means provided for arresting the index movements of said wheels so they will be stopped at suitable points, said means consisting of a spring-pressed pawl 48, which is pivoted upon the head 36 and engages with the teeth of the arresting-wheel 49, said arresting-wheel being fixed to the shaft 50, upon which the perforating or pin wheel 43 and the index-wheel 47 are fixed.

54 designates a bell having a hammer 55, which is engaged by the pin 27 on each complete rotation of the wheel 26, and the bell is thus sounded concurrently with each operation of issuing the slip or ticket from the machine and recording the same upon the consecutive counters.

It will be understood that the rolls of strips are provided with the necessary printed forms. If they are in the nature of tickets to be issued for fares upon the street-cars or other public conveyances, the said tickets are provided with the necessary stations and other data indicating the particular road or line for which said tickets are issued, or if the strips are intended to provide sales-slips they are accordingly made to contain the proper printed matter.

The operation of the machine is as follows: The casing having been supplied with the necessary rolls of strips 6' and 7', which are carried forward through the guideway 15 and through the feed-rollers 17 and 18, and the storage-strip given its initial connection with the storage-roll 7'', the proper ticket or slip is made to appear at the openings between the guideway 15 and is punched by inserting a common form of punch in the space 12, as shown in Fig. 4, one jaw of said punch being above the upper frame 14 and the other jaw being within the space 12 below the top of the lower frame. The number-perforating wheel 43 is turned to bring the proper pin-number 44 in position, this movement being determined from the position of the index-wheel 47. The head of the lever is then depressed by the hand to perforate the ticket or slip with the unit-figure. This depression of said lever causes the roll-stud 35 to engage the curved end 34 of the lever 32, and said lever, through the pawl 31 and the ratchet-wheel 30, rotates the feed-roll 18 a sufficient extent to feed the strips forward to prepare the next place for the next figure or the tens-figure. Whatever the next figure may be, it is indexed or moved in position by turning the index-wheel 47 to bring the proper figure on the pin-

wheel in position, and the lever is again depressed in a similar manner. When the proper figures are thus perforated in the strips, the length of the ticket or sales-slip is fed by one complete rotation of the crank-handle 20, which feeds the ticket or sales-slip 6 to the proper position to be torn off and correspondingly feeds the storage-strip 7 upon the roll 18. Two complete rotations of the feed-roll 18 are necessary to complete each feeding operation after the perforations, and it will be borne in mind that in each perforating operation movement is imparted to said feed-roll through the lever 32, as hereinbefore referred to. In completing the feeding operation the crank 20 is moved from the position it was carried to by the last perforating operation, and from that position the crank-handle is moved to complete the movement of the feed-roll 18, as hereinbefore stated.

Having described my invention, I claim—

1. In a machine of the class specified, the combination with a casing having duplicate strips of paper mounted therein, upper and lower open frames mounted in the top of said casing and providing a guideway through which said strips are fed, a wheel having pin-figures arranged around its periphery and placed above said duplicate strips, an index-wheel having figures thereon arranged to correspond in positions with the pin-figures, feeding-rollers by which said strips are fed below said pin-wheel, a consecutive counter upon which is recorded the number of transactions, gearing interposed between said counters and the primary feeding-roller by means of which the consecutive counter is actuated upon each operation of the feeding-rollers, a lever geared to the primary feeding-roller and actuated upon each depression of the pin-wheel to shift the strips upon each operation of perforating a figure therein, substantially as set forth.

2. In a machine of the class specified, a casing constructed to contain a number of rolls of strips each consisting of tickets or sales-slips, a storage-roll within said casing upon which a duplicate in a continuous strip of each transaction is stored, a guideway through which the strips are fed, an inking-pad located in said guideway, a perforating-wheel above said inking-pad, an index-wheel attached to said perforating-wheel and forming an index for the movement of said perforating-wheel, a lever upon which said perforating and index wheels are mounted, feeding-rollers, a consecutive counter upon which is recorded each ticket or sales-slip issued from said rolls, gearing interposed between said consecutive counters, the storage-roll and the primary mem-

ber of the feeding-rollers, and whereby each operation of feeding a ticket or slip from the machine correspondingly actuates the counting-wheels and the storage-roll, a ratchet-lever geared to the primary feeding-roll, and means upon the lever of the perforating-wheel for actuating said ratchet-lever upon each operation of perforating the tickets or sales-slips, and to shift the paper to a position for perforating the same, substantially as set forth.

3. In a machine of the class specified, an operating-lever, a perforating-wheel on said lever, means for indexing said perforating-wheel, means operated from said lever for intermittently actuating the feed-rollers to space the record-strips in positions to receive each successive perforation, means for operating the feed-rollers to feed said strips after each complete perforating operation, a consecutive counter to record the number of tickets or sales-slips perforated and issued, and means interposed between the feed-rollers and said consecutive counter for actuating said counter during the issuance of the tickets or sales-slips from the machine.

4. In a machine of the class specified, a lever, a number-perforating wheel and an index-wheel therefor mounted upon said lever, feed-rollers to feed strips of tickets or sales-slips below said perforating-wheel, means operated by said lever and acting upon said feed-rollers to slightly advance said strips after each number is perforated therein, means for completing the movement of the feed-rollers, a consecutive counter, and means actuated by said lever whereby said counter is actuated to indicate the number of tickets or sales-slips perforated and issued from the machine.

5. In a machine of the class specified, feeding-rollers to feed strips of tickets or sales-slips, a lever, a number-perforating wheel to puncture numbers in said tickets or sales-slips, a lever supporting said perforating-wheel, a consecutive counter to record each ticket or sales-slip issued, bell mechanism to signal each operation of issuing and recording, a common lever acting upon the consecutive counter and the bell mechanism, and means interposed between said lever and said feeding-rollers whereby said lever is operated upon each operation of the feed-rollers.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. OHMER.

Witnesses:

R. J. McCARTY,
C. M. THEOBALD.