

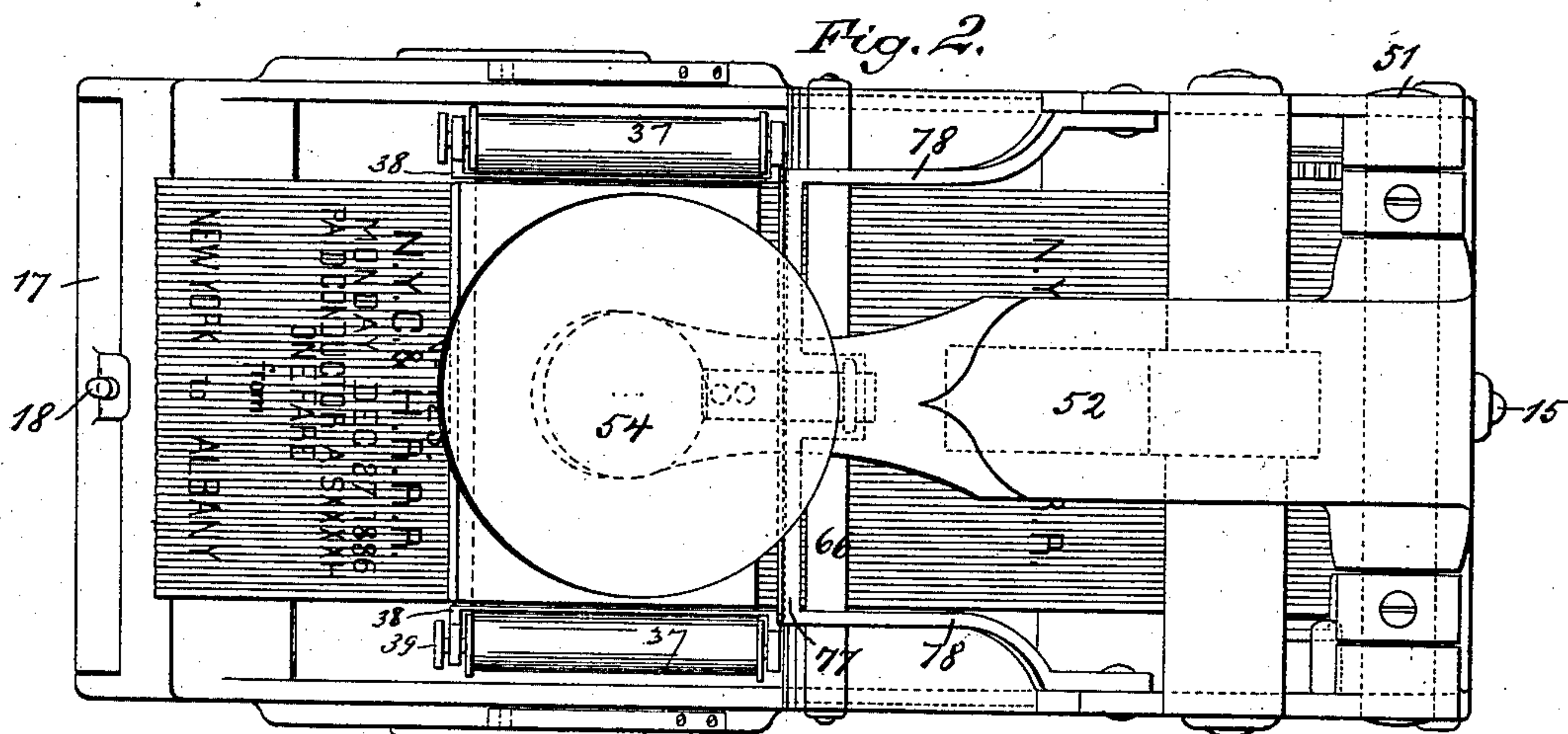
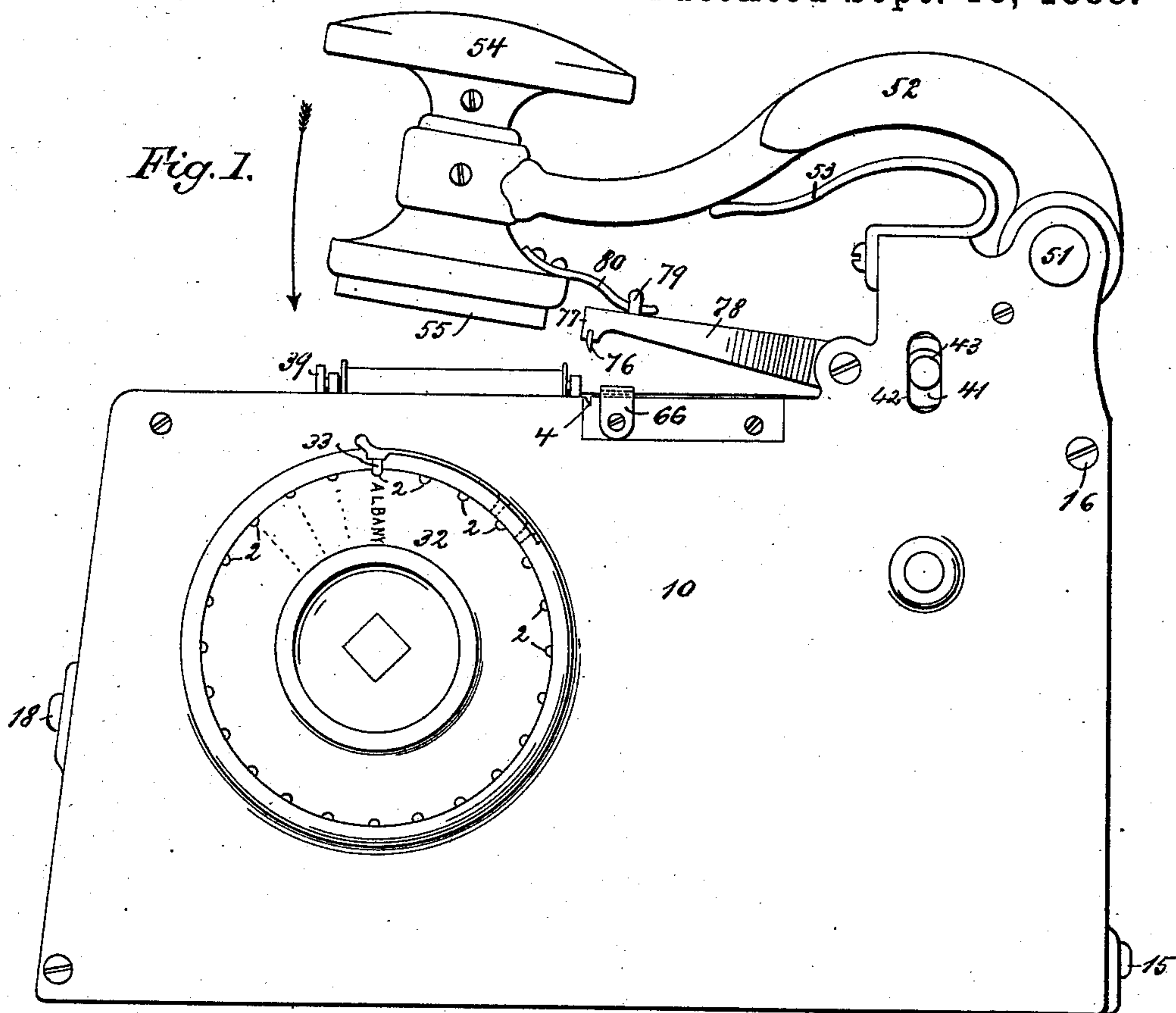
(No Model.)

4 Sheets—Sheet 1.

R. ROBINSON.
DUPLEX HAND STAMP.

No. 389,667.

Patented Sept. 18, 1888.



WITNESSES:
Wm. Beyer
C. Sedgwick

INVENTOR:
R. Robinson
BY *Mum & Co.*
ATTORNEYS.

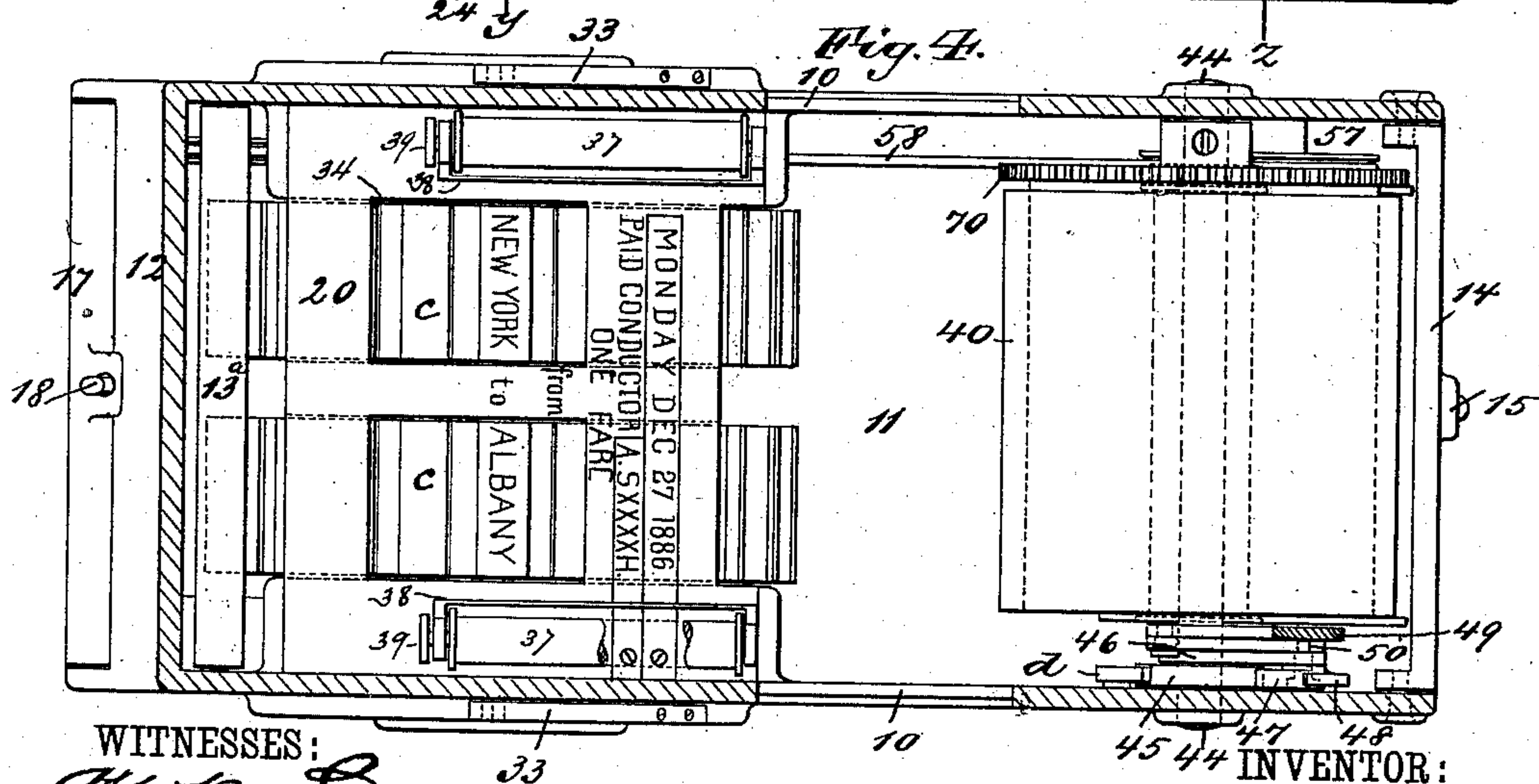
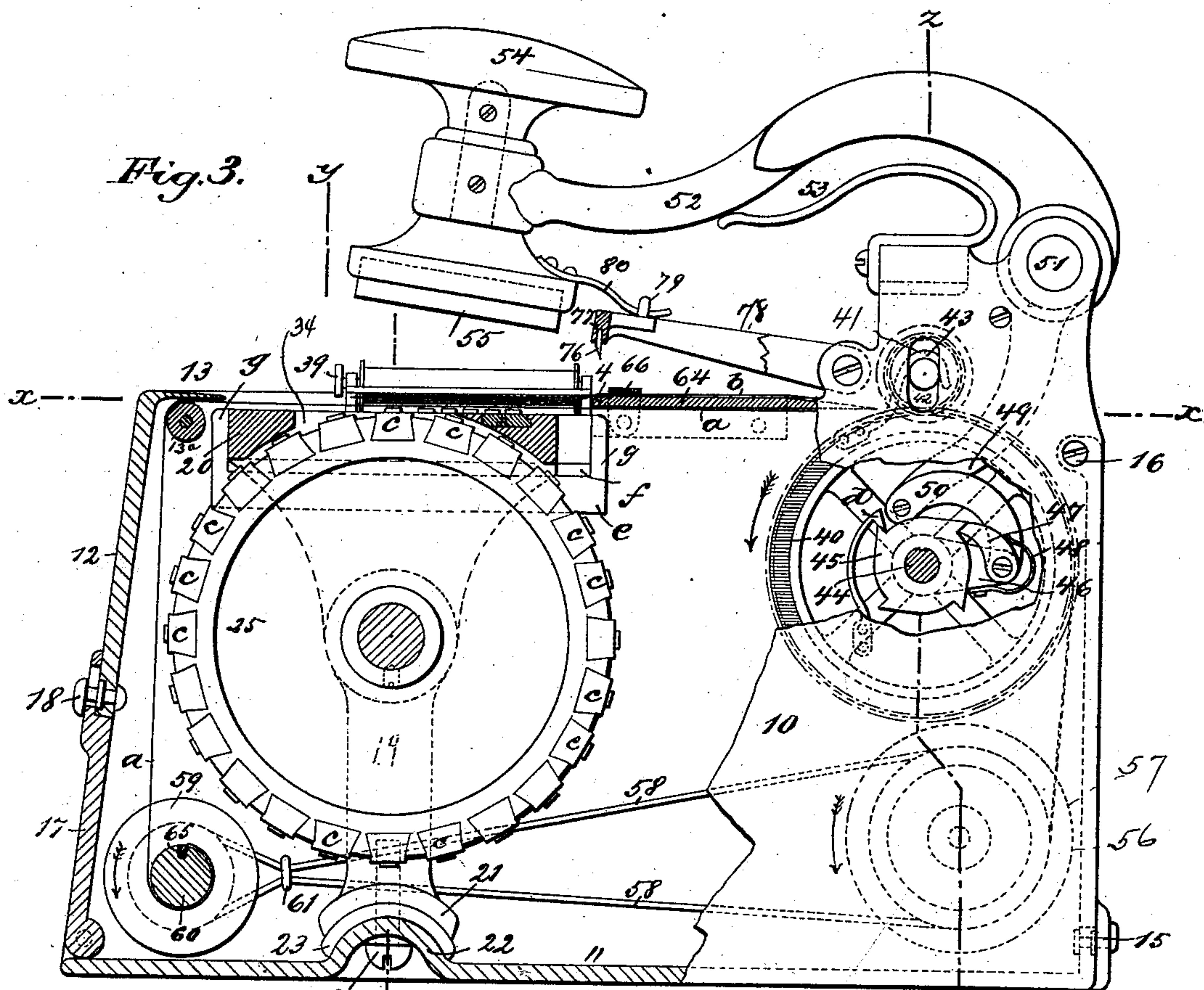
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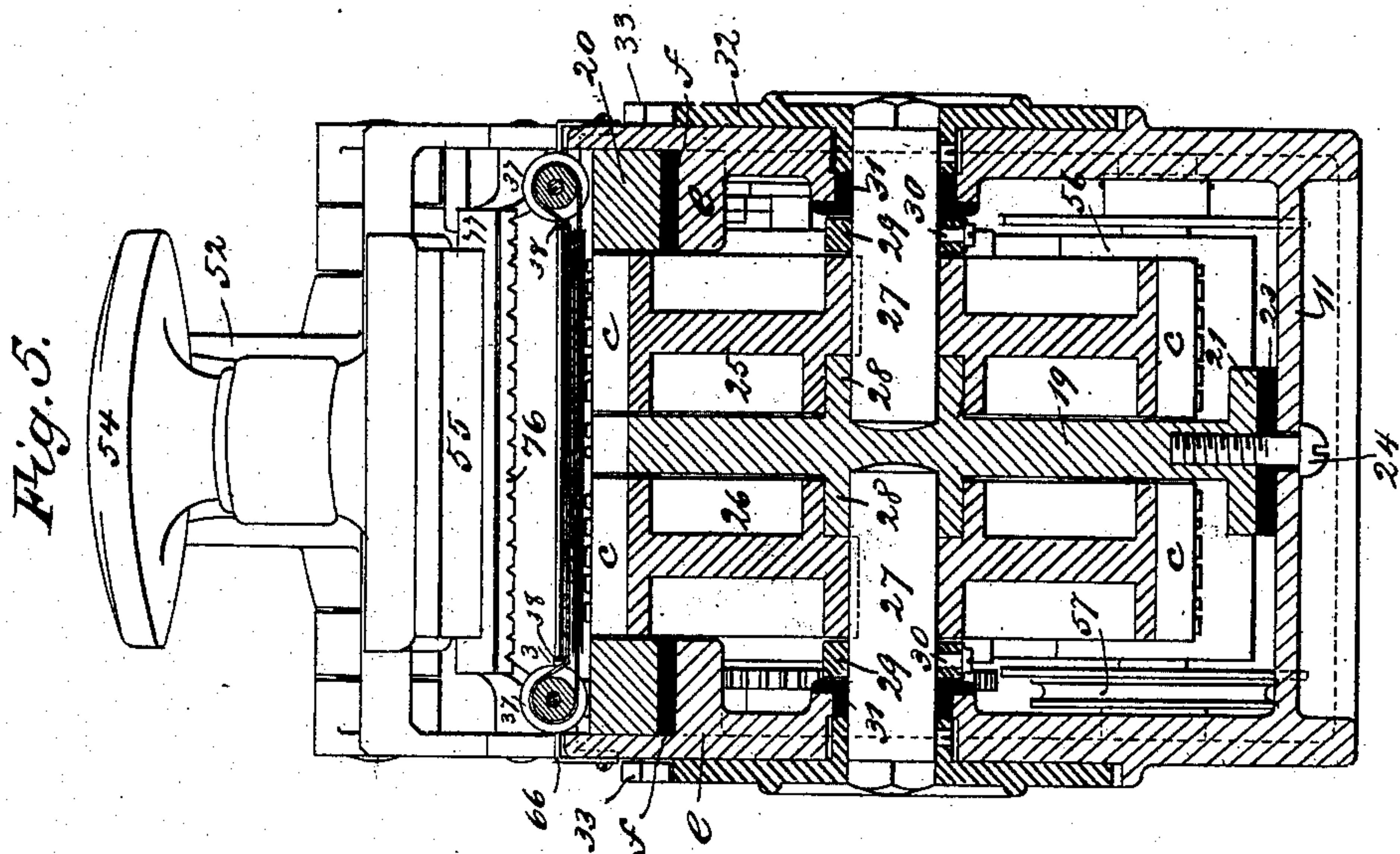
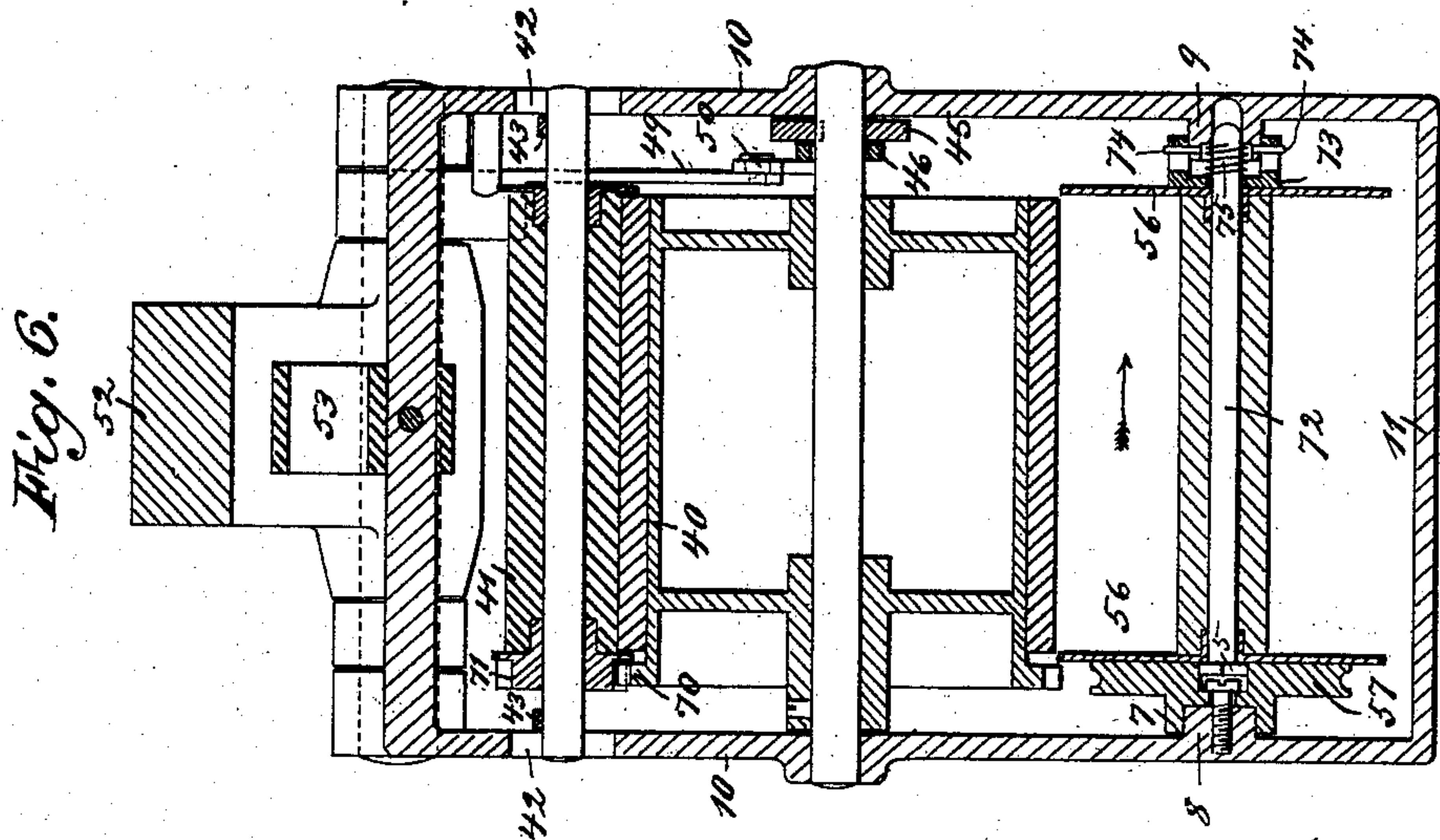
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4 Sheets—Sheet 3.

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(No Model.)

4 Sheets—Sheet 4.

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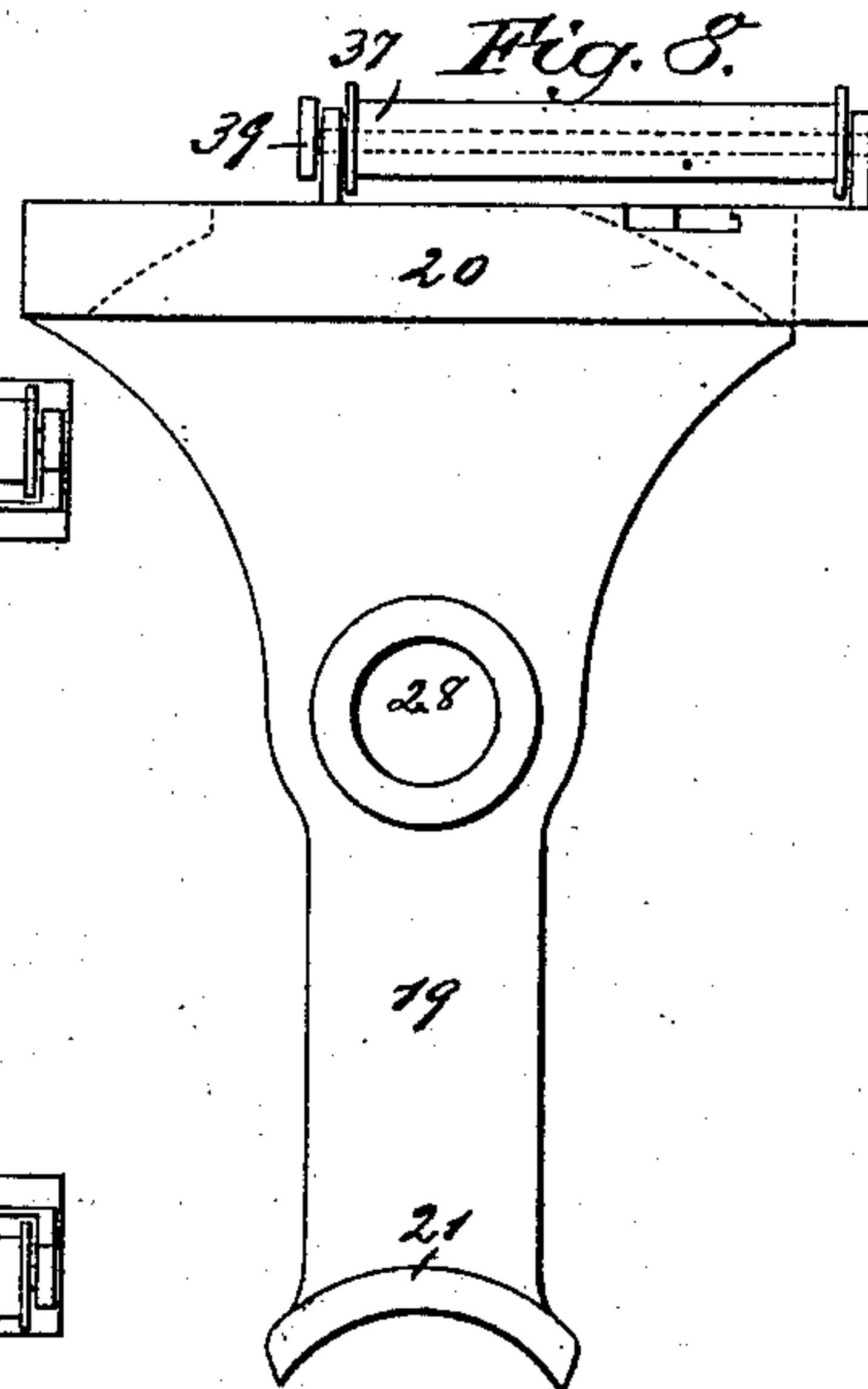
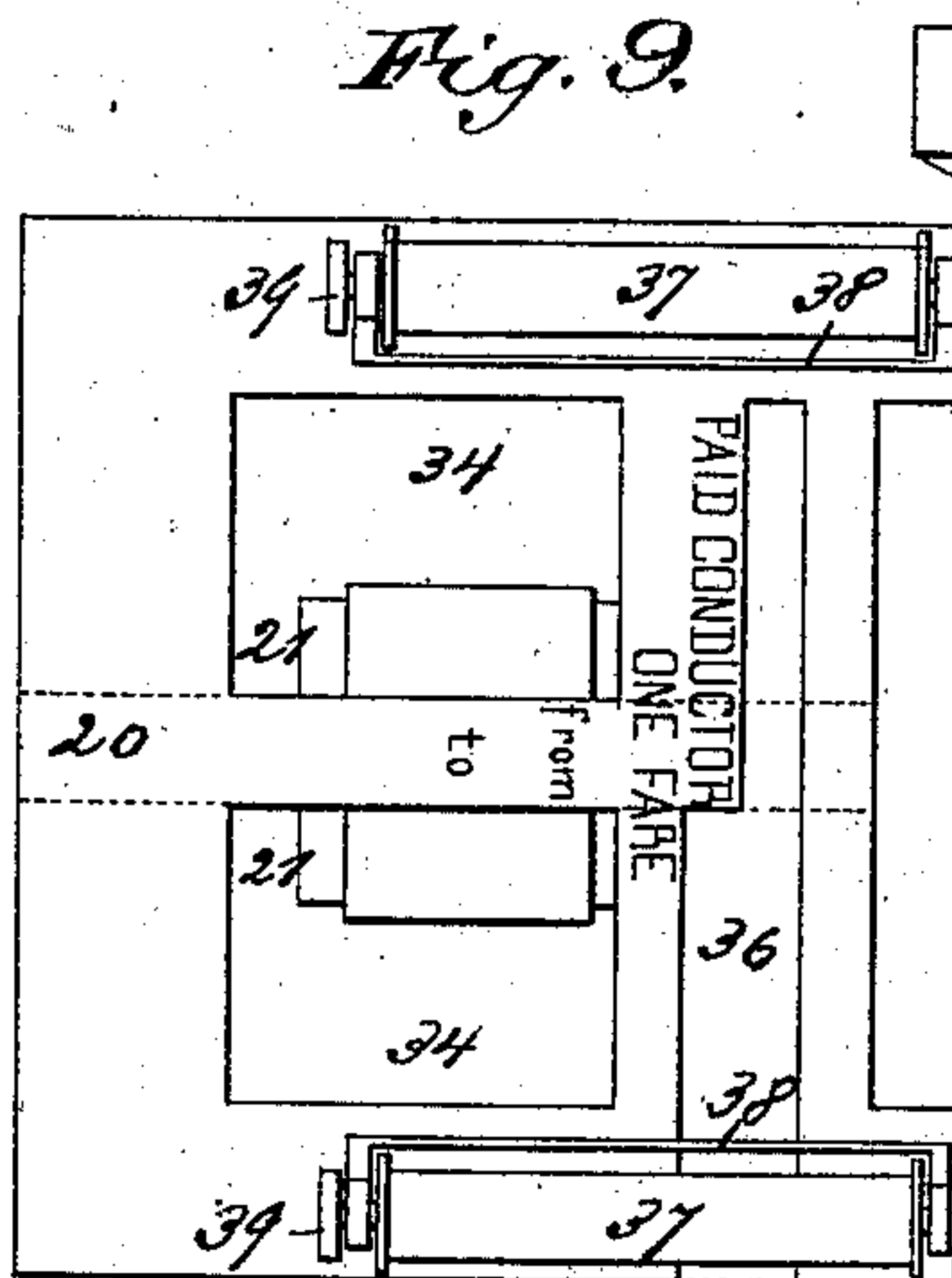
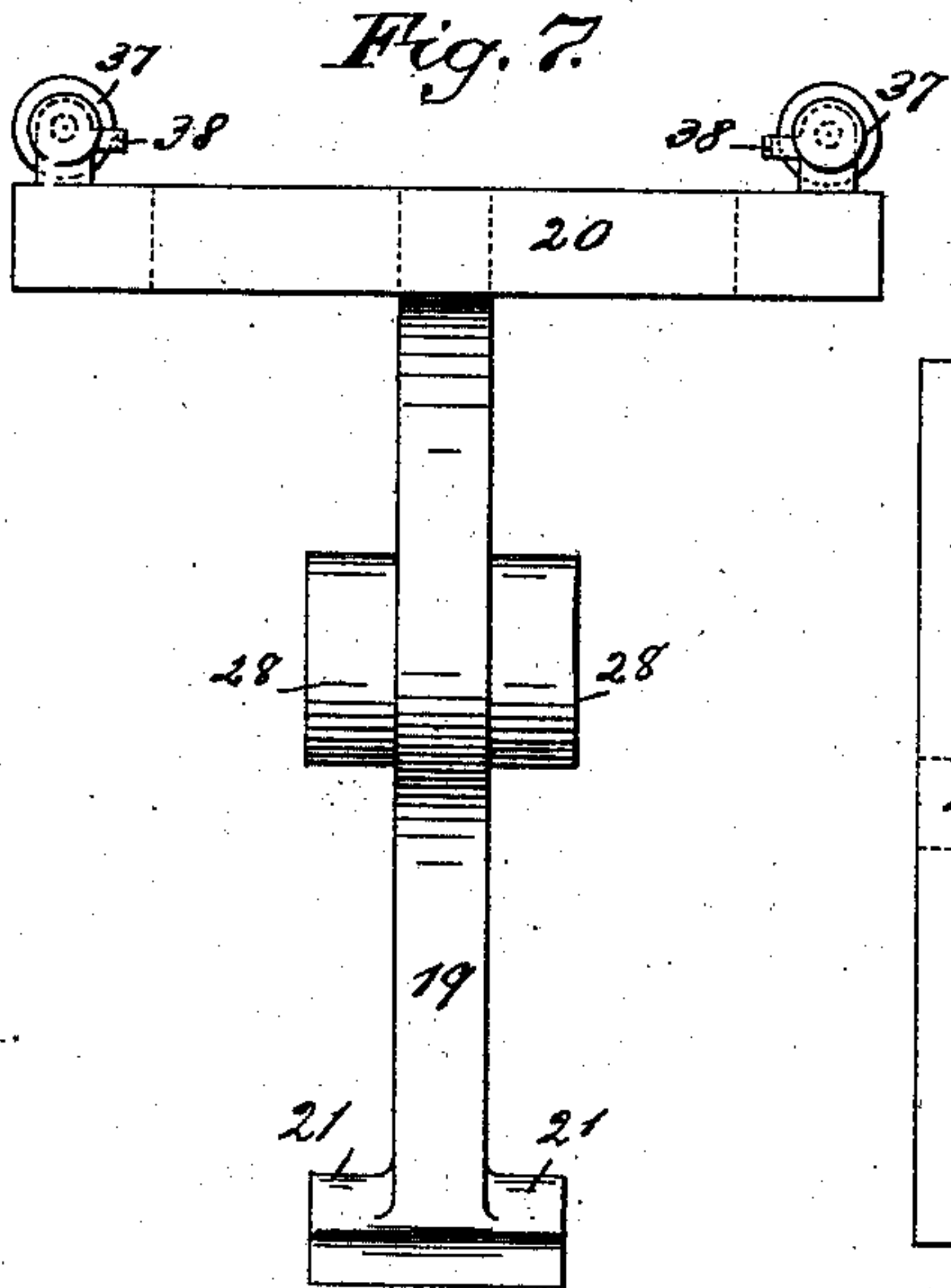


Fig. 10.

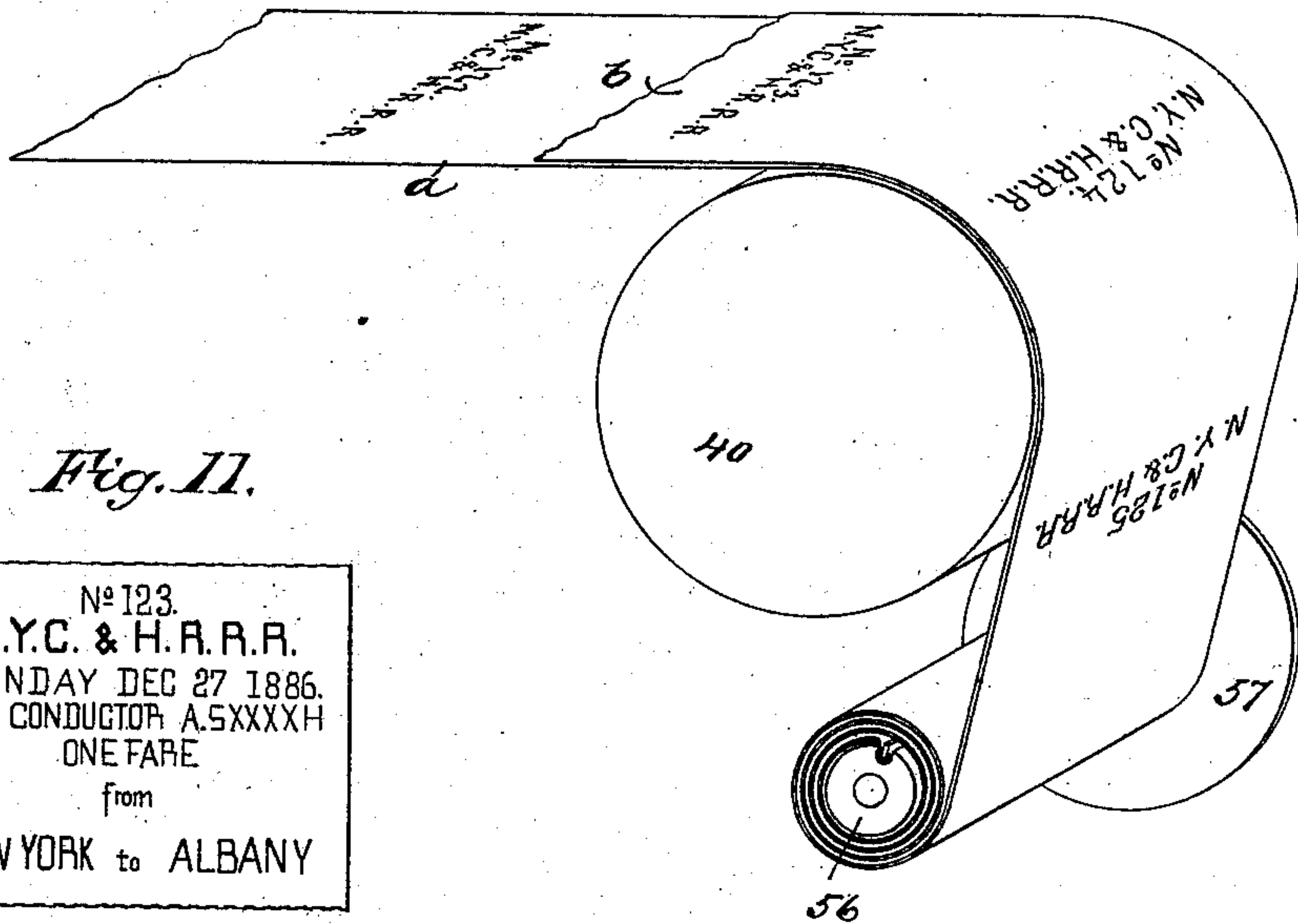
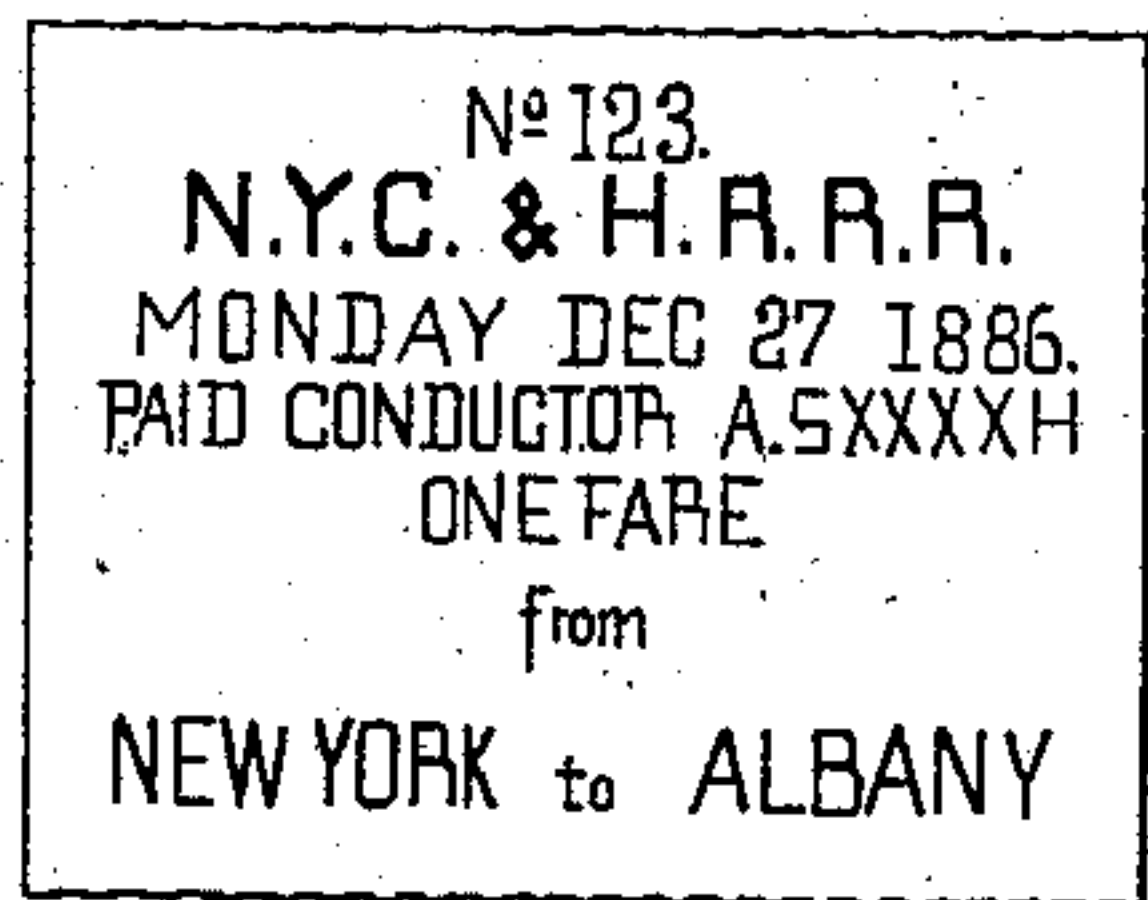


Fig. 11.



WITNESSES:
Pro Roper
to Seitzinger

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UNITED STATES PATENT OFFICE.

ROBERT ROBINSON, OF ALBANY, NEW YORK.

DUPLEX HAND-STAMP.

SPECIFICATION forming part of Letters Patent No. 389,667, dated September 18, 1888.

Application filed May 3, 1887. Serial No. 237,011. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ROBINSON, of Albany, in the county of Albany and State of New York, have invented a new and Improved Duplex Hand-Stamp, of which the following is a full, clear, and exact description.

This invention relates to hand-stamps; and it consists in the construction and arrangement of parts, as will be hereinafter described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side view of my improved form of stamp. Fig. 2 is a plan view thereof. Fig. 3 is a side view of the stamp, in which the casing is partially broken away, the parts disclosed being shown in section upon a line just within the side wall of the casing. Fig. 4 is a sectional plan view taken on line *x x* of Fig. 3. Fig. 5 is a cross-sectional elevation taken on the broken line *y y* of Fig. 3. Fig. 6 is a cross-sectional elevation taken on the broken line *z z* of Fig. 3. Fig. 7 is a face view of the standard which supports the printing-table, and is provided with bearings for the inner ends of the shafts upon which the type-wheels are mounted. Fig. 8 is a side view of the standard and its table. Fig. 9 is a plan view thereof. Fig. 10 is a perspective view illustrating the arrangement of the two webs upon which the impressions are made; and Fig. 11 is a view of one of the coupon-tickets as printed and delivered from the machine forming the subject-matter of this application.

The main body or case of the stamp, illustrated in the drawings above referred to, consists, preferably, of a casing forming the side walls 10, the bottom 11, a portion of the front wall, as shown at 12, and a portion of the upper wall, as shown at 13, a door or trap, 14, being mounted to close the rear of the casing, and arranged to be held in place by a turn-button, 15, said door being mounted upon pivot-screws or bolts 16, as is best shown in Figs. 1 and 4, while communication with the forward portion of the case is established by means of a door, 17, that is pivotally mounted between the side walls of the case at a point just above the bottom 11, this door also being

arranged to be held in place by a turn-button, 18.

Within the case, formed as above described, there is mounted a standard, 19, that is made integral with or rigidly connected to a table, 20, the construction and arrangement of which will be presently described. At the lower end of the standard 19 there are formed flanges 21, the under faces of which are concave, being curved to correspond with the convex face of a boss, 22, which is formed to extend upward from the bottom 11, a rubber cushion, 23, being interposed between the foot of the standard and the boss, the parts being held in the position in which they are shown in the drawings by a tap-bolt or screw, 24, which passes upward through an aperture formed in the boss to engage with a threaded socket that is formed in the standard, all as is clearly illustrated in Figs. 3 and 5.

At each side of the standard 19, I mount type-wheels, which said type-wheels are shown at 25 and 26, these wheels being supported by short shafts 27, the inner ends of which are supported in bearings 28, that are carried by the standard 19, while the outer ends of the shafts are supported in bearings formed in the side walls of the case, the shafts being formed with grooves, while the wheels are formed with feathers which enter said grooves.

In order that all danger of the lateral displacement of the shafts 27 may be avoided, I mount a collar, 29, upon each shaft, said collars being held to their shafts by set screws 30, the collars being arranged between the outer ends of the hubs of the wheels 25 and 26 and the bearings formed in the side walls of the case, rubber packing-rings 31 being preferably interposed between the collars and the outer bearings of the shafts.

The type-wheel 26 is provided with the names of the towns from which the tickets are to be sold, while the type-wheel 25 is provided with the names of the towns or places to which said tickets are sold, these names being in lines that are parallel with the axes of the wheels, while to the ends of each of the shafts 27 there are secured disks 32, in the peripheral faces of which there are formed recesses or notches 2, in connection with which re-

cesses there are printed in radial lines the names of the towns to and from which the tickets are to be sold, the names upon the disks and the names upon the wheels in connection with which the disks are arranged being in the same order and so placed that when any particular notch of the disk is in engagement with a spring-actuated catch, 33, the name of the town appearing in connection with the notch or recess will be at the highest point upon the type-wheel in connection with which the disk is arranged, the type-wheels being mounted so that their peripheral faces project upward to a plane parallel with that occupied by the top of the table 20, said table being formed with apertures 34, within which the faces of the wheels revolve, the arrangement being such that by bringing the spring-actuated catches 33 into engagement with the proper notches of the disks 32 the desired names may be brought in line above the surface of the table 20, the type proper projecting beyond the peripheral faces of the type-wheels.

The top of the table 20 may be formed with any desired set of words—such, for instance, as those shown in the drawings—and this table-top may also be provided with undercut grooves 36, within which type may be inserted to produce the matter which it is desired to print upon the tickets. The date at which the ticket is delivered and the conductor's name are preferably provided by this removable type.

At each side of the table 20, I mount rollers 37, that are provided with loosely-hanging guards 38. These rollers serve as supports for the inking-ribbons 3, the position of which ribbon may be changed by turning a handle-disk, 39, that is attached to the shaft of one of the rollers 37.

To the rear of the standard 19, I mount a feeding drum or roller, 40, the shaft of said roller being supported by bearings formed in the side walls, 10; and above this roller I mount a second roller, 41, the shaft of which rides in elongated slots 42, that are formed in the side walls of the case, the peripheral faces of the two rollers being held in contact by means of springs 43, that are fixed to the case and formed with hooked points that overlap the ends of the shaft of the roller 41, the arrangement being such that the roller 41 will always be held in frictional contact with the roller 40. The shafts of the rollers 40 and 41 are provided with intermeshing gears, 70 and 71, in order that the peripheral faces of the rollers may be made to move at the same rate of speed.

Upon the shaft 44 of the roller 40, I mount a ratchet-wheel, 45, which, as illustrated in the drawings, is formed with four teeth; but the number of teeth would depend upon the diameter of the roller 40 and upon the length of the web that it is desired to feed at each throw of the roller. Upon this shaft 44, I also

mount a crank-arm, 46, which arm carries a pawl, 47, that is held in engagement with the ratchet-wheel 45 by a spring, 48; and this crank-arm 46 is connected with a lever-arm, 49, by means of a curved link, 50, the lever-arm 49 being rigidly connected to a shaft, 51, that is mounted at the rear of the case, said shaft also carrying a hand-lever, 52, which is normally held in the position indicated in the drawings by a spring, 53. To the end of the lever 52, I fix a hand-pad, 54, and a platen, 55.

Beneath the roller 40, I mount a reel or drum, 56, of which the shaft 72 is formed with a squared head, 5, that fits within a correspondingly-shaped socket formed in the face of a pulley, 57, which said pulley is provided with a flanged hub, 7, that fits over a boss, 8, formed upon the inner face of one of the side walls of the case, the pulley being held to place by a set-screw, as best shown in Fig. 6. The other end of the shaft 72 is supported within a bearing, 9, formed in the inner face of the opposite side wall of the case, the shaft passing through a sleeve, 73, that is mounted upon the bearing, pins 74 projecting from the bearing and through slots formed in the sleeve, while within the sleeve there is arranged a spring, 75, which, when the reel or drum 56 is in the position in which it is shown in the drawings, will act to hold that end of the reel which is adjacent to the pulley 57 in close proximity with the side face of said pulley, the squared head 5 of the shaft 72 being at this time held within the socket formed for its reception, so that as the drum or reel 56 is turned a corresponding movement is imparted to the pulley.

When it is desired to remove the drum or reel, the back door, 14, of the case is opened. The drum is grasped and moved in the direction of the arrow shown in connection therewith in Fig. 6, being forced in said direction against the pressure of the spring 75 until the head 5 is released from engagement with its socket, after which the reel may be readily removed from the case for the purpose of being refilled, which will be readily understood.

A belt, 58, passes over the pulley 57, and this belt engages with a pulley, 59, carried by a forward drum or reel, 60, a proper tension upon the belt or band 58 being maintained by an elastic tightener, 61, that is arranged as best shown in Fig. 3.

A double web of paper is wound upon the reel 56, and the two lengths of the double web, which are shown at *a* and *b*, are led upward over the roller 40 and between said roller and the roller 41, thence downward, the web *a* passing beneath a dividing table, 64, that extends across the case to the rear of the table 20, while the web *b* passes above said dividing-table. From the table 64 the webs are carried forward, the lower web, *a*, passing beneath the lower length of the inking-ribbon 3, while the web *b* passes between the two lengths of said ribbon. From the inking-

ribbon the web *a* is carried downward to the reel 60, the end of the web being secured to said reel by a wedge strip or block, 65, that is fitted within a groove in the peripheral face of the axis of the reel.

Across the forward edge of the table 64, I form a groove, 4, and just to the rear of this groove I arrange a retaining-strip, 66. A perforating-blade, 76, is mounted above the groove 4, this blade being carried by a cross-bar, 77, that is supported by two rearwardly-extending lever-arms, 78, said arms being pivotally connected to the casing of the stamp, as is best shown in Figs. 1, 2, and 3. In the upper face of the cross-bar 77 there is arranged an eye, 79, that is entered by a spring, 80, carried by the platen 55.

Such being the general construction of my improved form of duplex hand-stamp, the operation is as follows: A double web having been wound upon the drum or reel 56, and the two lengths of the web having been led upward and forward, as illustrated in Figs. 3 and 10, and as hereinbefore described, and a proper set of types having been introduced within the slots formed upon the table 20, and the disks 32 having been adjusted, so that the proper town names are brought into position above said table 20, it will be seen from an inspection of the drawings that, if the lever 52 is forced downward in the direction of the arrow shown in connection therewith in Fig. 1, the lever 49 will be thrown to the rear, the crank-arm 46 will be carried downward, and the pawl 47 will be brought into engagement with one of the lower teeth of the ratchet 45, so that as the pressure upon the lever 52 is released and the spring 53 allowed to return said lever to its normal position—that is, to the position in which it is shown in the drawings—the roller 40 will be carried forward in the direction of the arrow shown in connection therewith in Fig. 3, and the webs of paper passing over the roller 40 and between said roller and the roller 41 will be carried forward, the web *a* to be wound upon the reel 60, while the web *b* is carried forward so that its end may be torn from the main body of the web, and upon this end, and also upon the main body of the web *a*, there will have been impressed an imprint of the type extending above the surface of the table 20, and as the blade 76 is carried downward by the downward throw of the lever 52 the web *b* will be perforated so that the end of the web may be readily torn from the main body thereof, thus providing for the delivery of a coupon-ticket to the passenger, a record of said coupon being imprinted, as before stated, upon the web *a*, thus serving as a complete check upon the cash sales of the conductor. Now, although I have described my duplex hand-stamp as arranged for use as a conductor's stamp, it will of course be seen and understood that the stamp could be used as a check upon salesmen in any mercantile business, the main point of

the invention being to provide for the distribution of coupons to the purchaser and for the retaining of a record of the amounts paid for said coupons.

The type carried by the wheels 25 and 26 may be cast with the wheels, or the wheels may be formed with grooves in their peripheral faces, within which the type *c* may be inserted, this being the construction illustrated in Fig. 3. In order that the roller 40 may be held against any possible retrograde motion, I arrange a spring-catch, *d*, in connection with the ratchet 45 of said roller.

Although not positively essential to the proper working of my stamp, I prefer to form the stamp-case with inwardly-extending flanges *e*, upon which the table 20 rests, rubber packing-strips *f* being interposed, as is clearly shown in Figs. 3 and 5, the table being held from wobbling by vertical flanges *g*, which extend upward from the flange *e*.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the casing, the type-wheel, and means for locking it in position, of the double web-carrying reel, a dividing-table in rear of the upper surface of the type-wheel, and above and below which the webs pass to the type-wheel, a reel beyond the type-wheel to which the lower web passes, a movable blade above the upper face of the dividing-table for acting on the upper web only, the platen, and a lever carrying the same and actuating the said blade, substantially as set forth.

2. The combination, with the casing, the type-wheel, and means for locking it in position, of the double web-carrying reel, feed-rollers, a lever pivoted to the casing above the feed-rollers, a pawl-and-ratchet mechanism actuating the feed-rollers from said lever, a platen on the lever above the type-wheel, a web-dividing table between the feed-rollers and type-wheel, a movable perforating-blade above the driving-table for the upper web, a connection between said blade and the platen-lever, and a reel for the lower web in advance of the type-wheel, substantially as set forth.

3. The combination, with the casing, the lever on the top thereof, and the platen carried by said lever, of the type-wheel below the platen, the endless inking-ribbon extending across the upper surface of the type-wheel, the web-dividing table in rear of the type-wheel, the perforating-blade above said table to act on the upper web, and the double web-feeding mechanism, said webs passing above and below the dividing-table and above and below the lower part of the endless inking-ribbon, substantially as set forth.

4. The combination, with the casing 10, the vertical type-wheel journaled therein, the lever 52, pivoted to the rear end of the casing and having the platen at the forward end over the type-wheel, the lever 78, pivoted to the

upper side of the casing below the lever 52 and having the perforating-blade 76 at its forward end, and an eye, 79, and the spring 80, secured to the platen and entering said eye, 5 of the dividing-table 64 in rear of the type-wheel and under the perforating-blade, substantially as set forth.

5. The combination, with the casing and the bearings 8 9 on the inner sides thereof, of the 10 pulley 57, having a hub, 7, engaging the bearing 8 and having a squared socket, the reel 56, the shaft 72, having a squared head, 5, engaging said socket, the sleeve 73 through which the shaft passes, the spring 75 on the 15 shaft, pins 74, projecting from the bearing 9 through slots in said sleeve, and the belt connecting said pulleys, substantially as set forth.

6. The combination, with the casing and the platen, of the type-wheels 25 26, their shafts 27 27, journaled at their outer ends in 20 bearings in the sides of the case, the standard 19, secured to the bottom of the case and extending up between the type-wheels and having bearings 28 for the inner ends of shafts 27, and a table, 20, on its upper end, having 25 apertures 34 for the type-wheels and printing-surface between and beyond said openings, substantially as set forth.

ROBERT ROBINSON.

Witnesses:

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JAMES LAULER.