

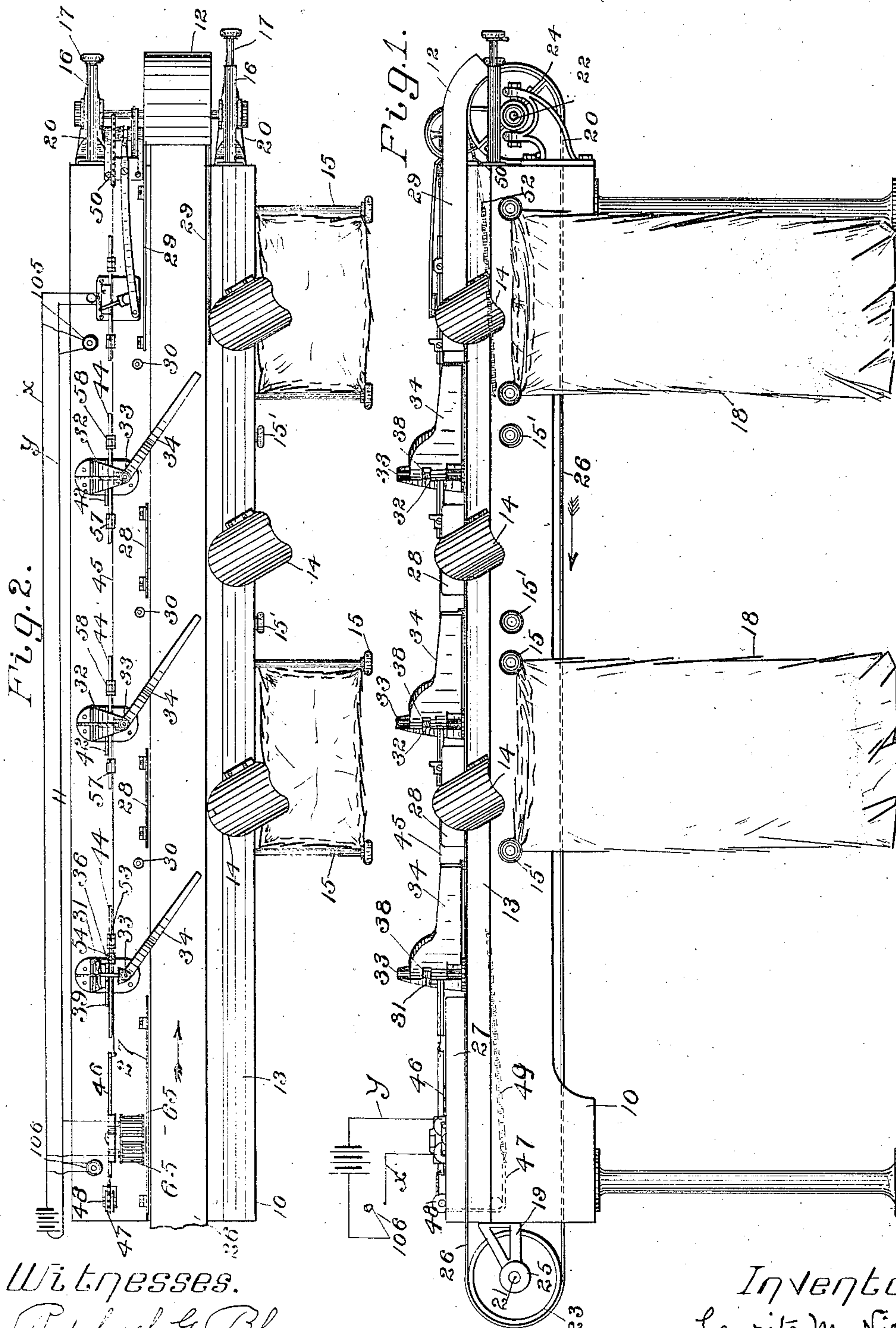
No. 869,725.

PATENTED OCT. 29 1907.

L. M. NIELSEN.
PACKAGE FEEDING MACHINE.

APPLICATION FILED APR. 24, 1906.

4 SHEETS—SHEET 1.



Witnesses.

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4 SHEETS—SHEET 2.

Fig. 3.

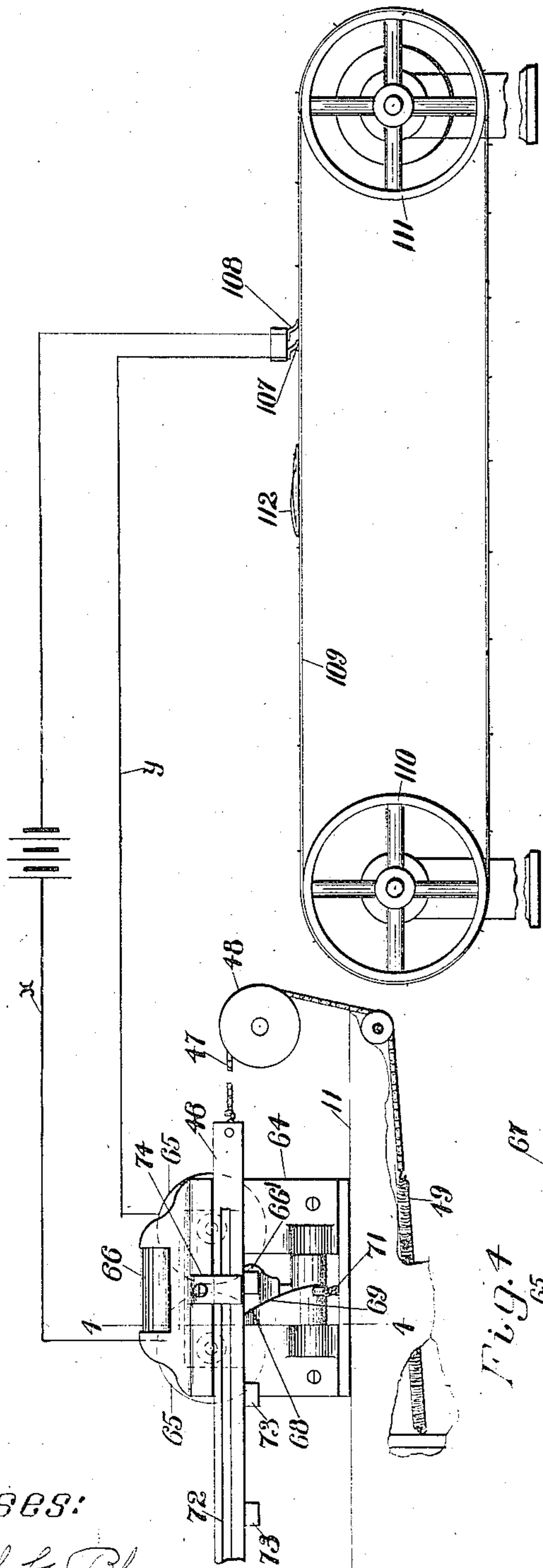
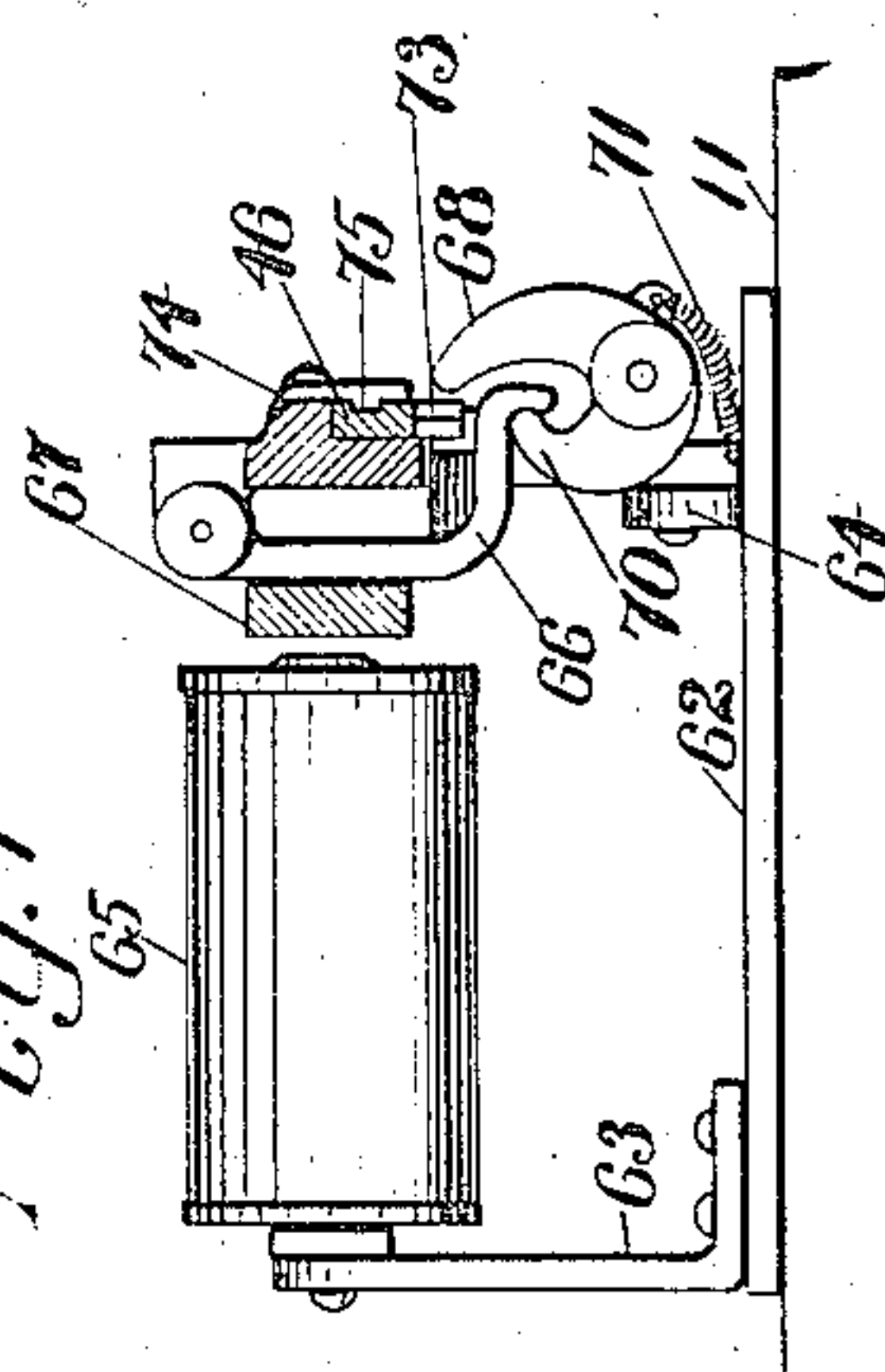


Fig. 4.



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Fig. 5.

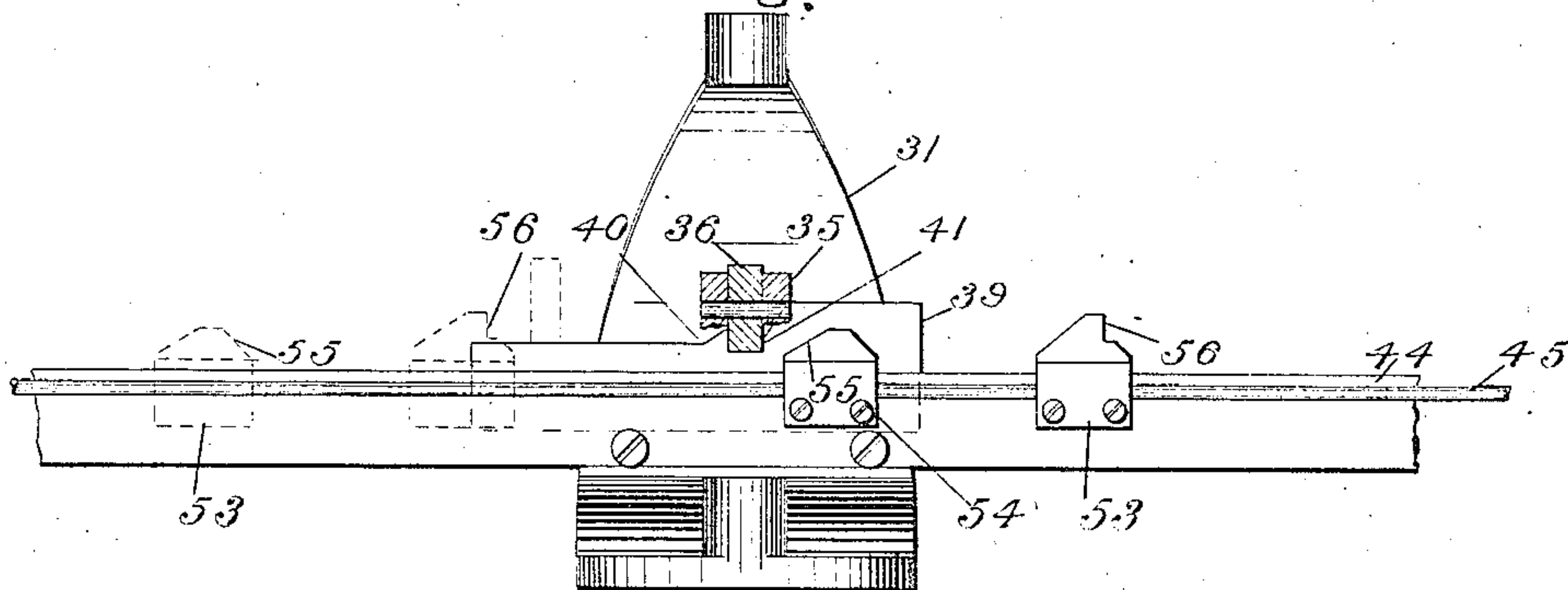


Fig. 6.

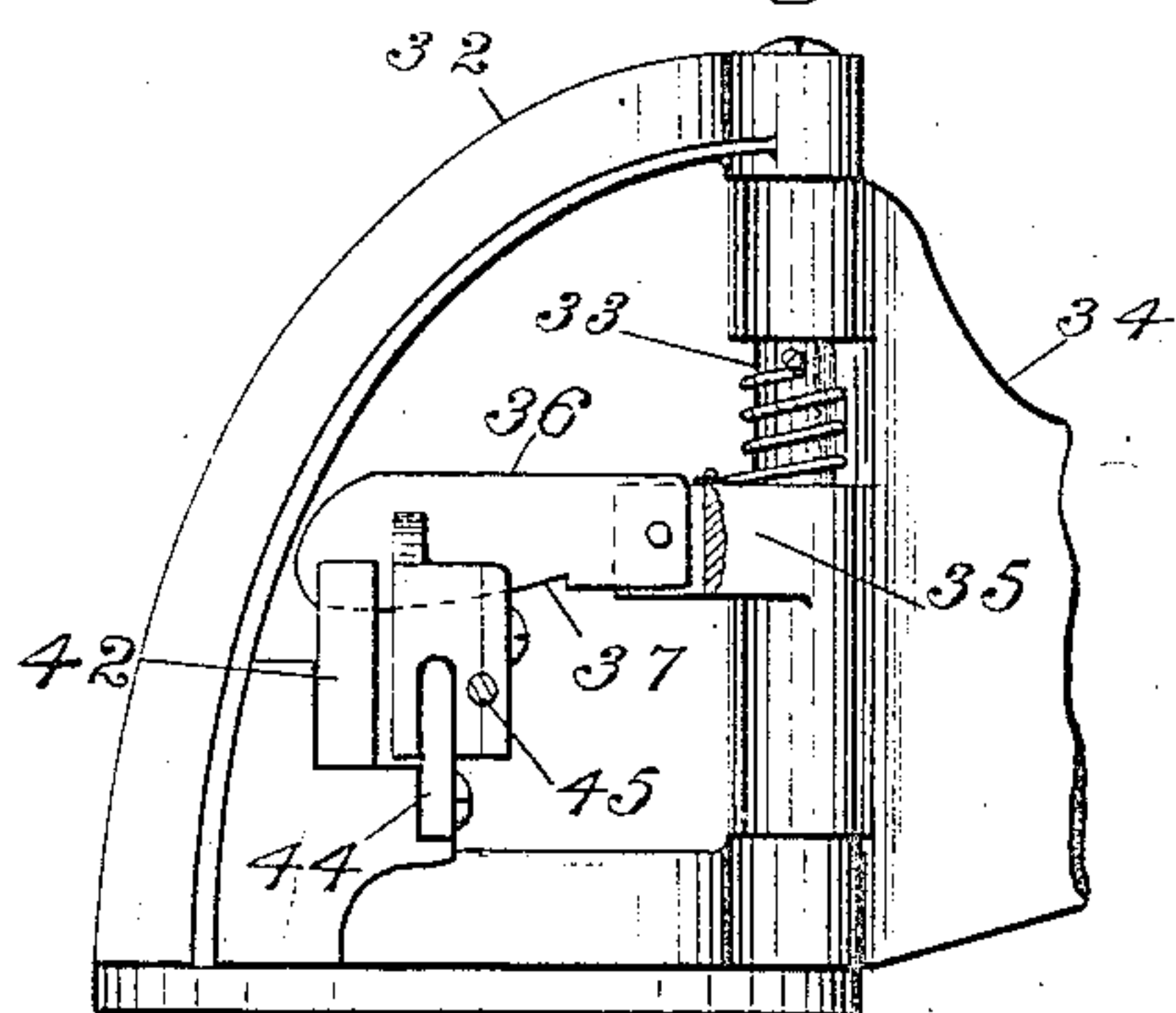


Fig. 7.

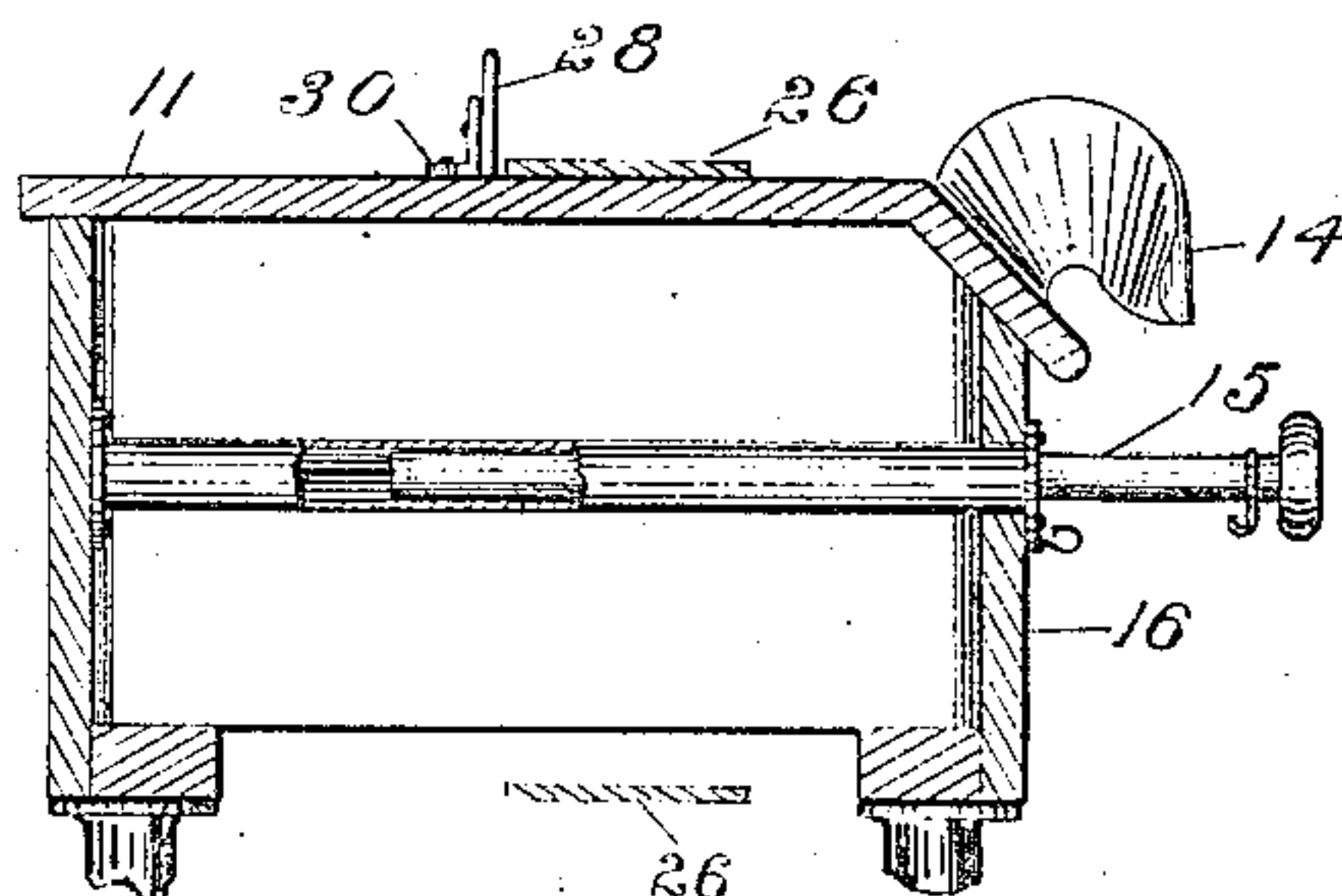
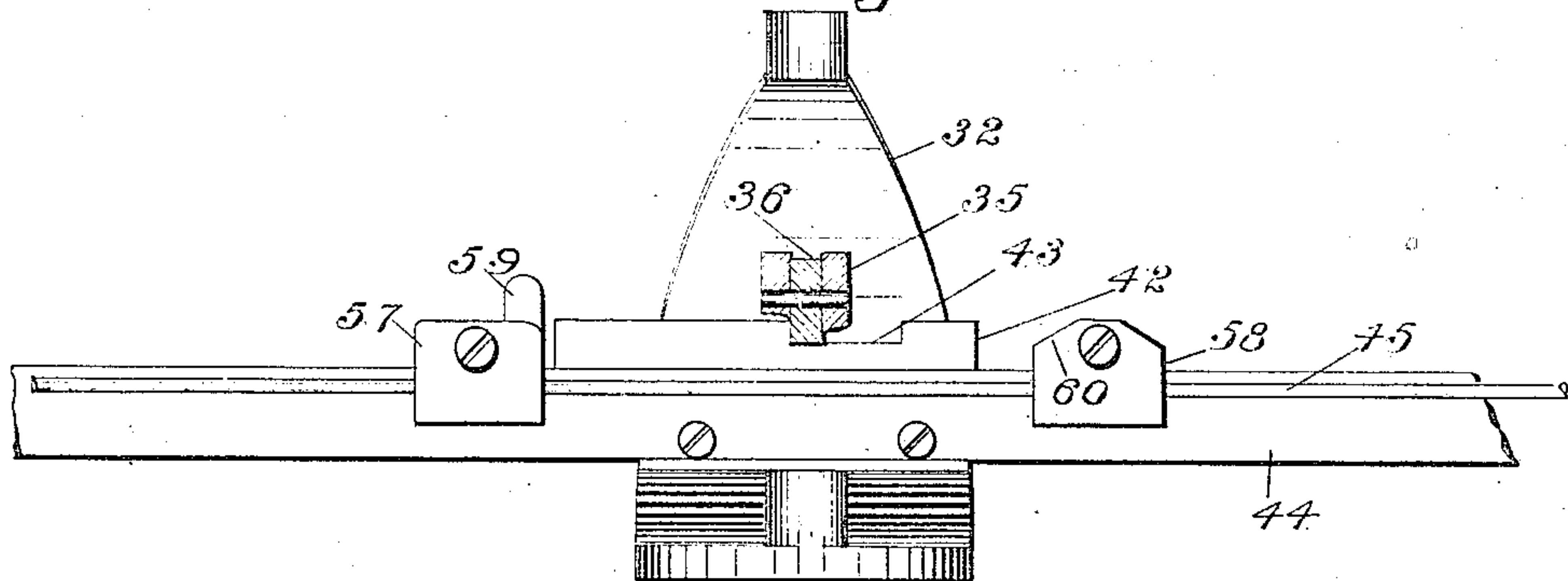


Fig. 8.



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4 SHEETS—SHEET 4.

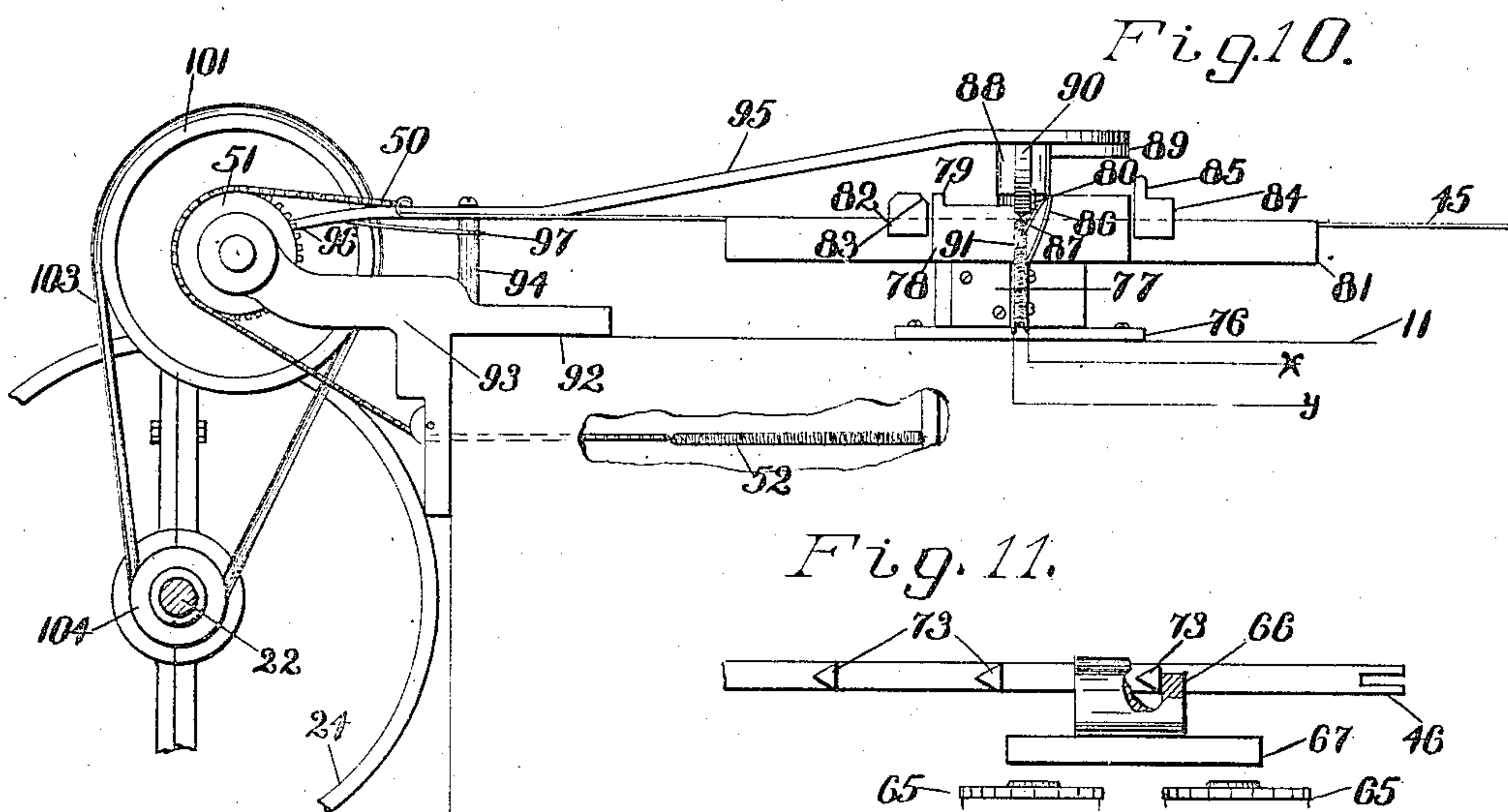
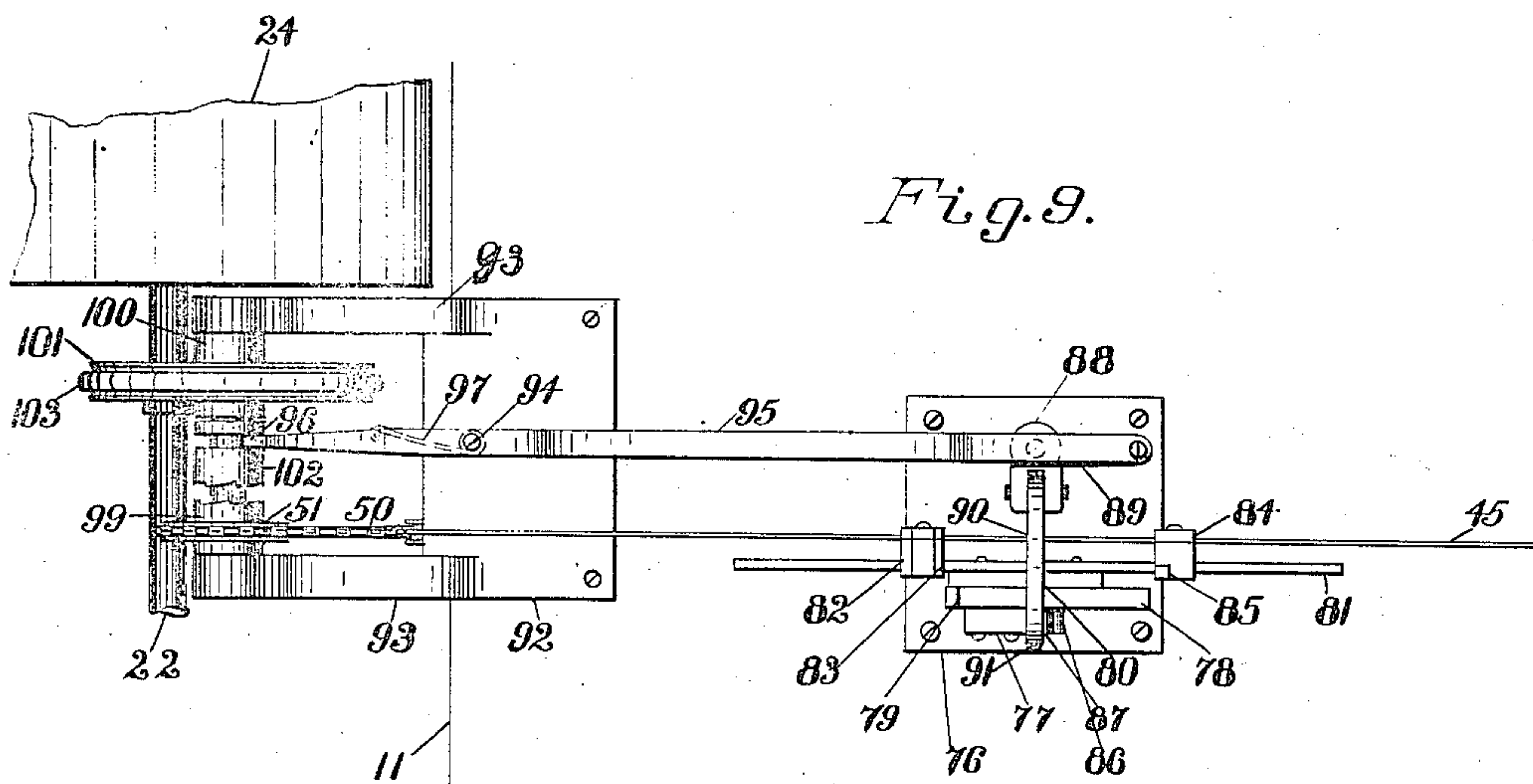
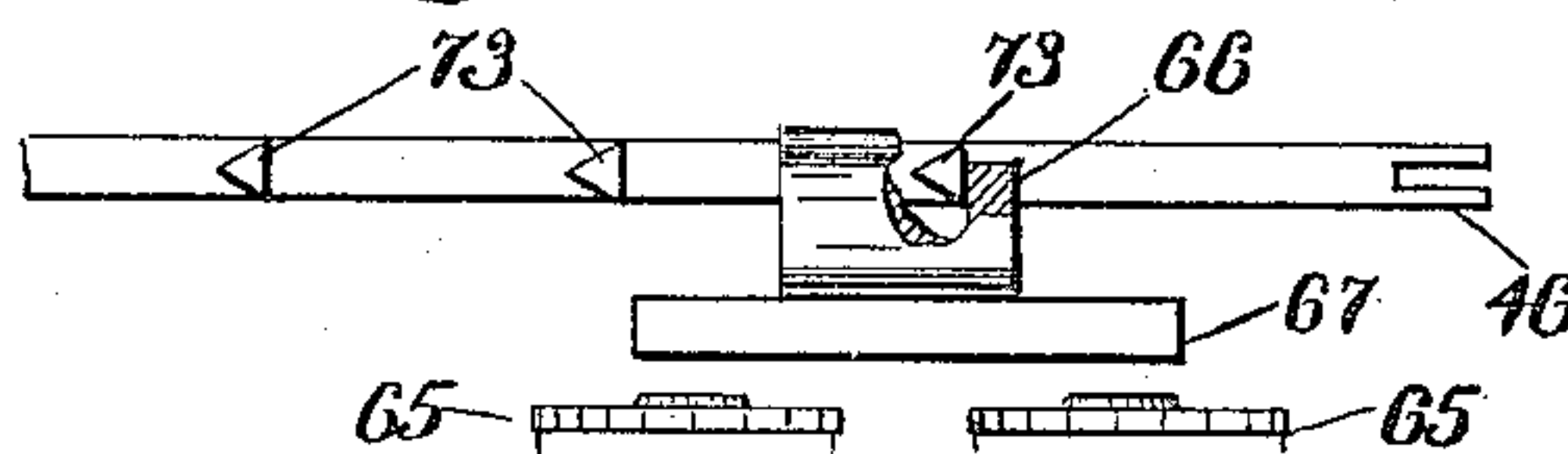


Fig. 11.



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UNITED STATES PATENT OFFICE.

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PACKAGE-FEEDING MACHINE.

No. 869,725.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed April 24, 1905. Serial No. 257,256.

To all whom it may concern:

Be it known that I, LAURITS M. NIELSEN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Package-Feeding Machines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in machines for feeding articles to receptacles therefor.

One object of the invention is to so construct a feeding machine, for packages and other articles, that the articles fed by the machine may be automatically assorted into groups, each group being delivered from the machine at a particular point or into a particular receptacle.

Another object of the invention is to control the assorting means at a point distant from the machine.

Another object of the invention is to so construct a feeding mechanism having a feed belt and a series of devices adapted to divert packages from said feed belt that said devices may be actuated at times from the feed belt driving mechanism.

Other objects of the invention will appear from the following description.

The invention consists in a feed belt, for moving forward articles placed thereon, combined with means for diverting such packages from said belt when desired.

The invention also consists in a feed belt, adapted to move forward packages placed thereon, combined with a series of devices movably mounted and adapted, at times, to be moved into position to intercept packages fed along by said belt to divert said packages from the path of the belt.

The invention also consists in the feeding means and the combination therewith of the assorting, or diverting, means, and in the mechanism for actuating said assorting means.

The invention also consists in a feed belt, adapted to carry forward packages placed thereon, in combination with a series of gates movably mounted with respect to the path of said feed belt, means for moving said gates across said path at times.

The invention also consists in such other novel features of construction and combination of parts whereby the objects of the invention are carried into effect as shall hereinafter be more fully described and pointed out in the claims.

Figure 1, represents a front elevation of the improved package feeding machine. Fig. 2, represents a plan view of parts of the same. Fig. 3, represents a side elevation of portions of the gate releasing mechanism illustrating a modified form of circuit closer whereby the gate releasing mechanism may be controlled at

a point distant from the feeding machine. Fig. 4, represents a cross sectional view taken on a line 4—4 Fig. 3. Fig. 5, represents a front elevation of the latching and latch releasing mechanism for the first gate. Fig. 6, represents a side elevation partly broken away, showing details of one of the gates and its mountings. Fig. 7, represents a cross sectional view of a portion of the frame to show one of the telescopic supports for the receptacles. Fig. 8, represents similar details of the succeeding gate latching devices. Fig. 9, represents a plan view of portions of the resetting means whereby motion may be applied to the gate resetting devices at times. Fig. 10, represents a side elevation of the same. Fig. 11, represents a bottom plan view of the main gate-latch-bar.

As shown in the drawings, in its preferred form, 10 designates a frame of any desirable length and suitably constructed, this frame being supported at a convenient height in any ordinary manner; this frame has the top 11 furnished with the chute 12 and the inclined surface 13 furnished with the deflectors 14—14; in the frame 10 are mounted, below the deflectors 14—14, the rods 15—15 which may be pushed back into said frame as at 15', the end of said frame 10 below the chute 12 being furnished with sockets 16—16 in which the rods 17—17 are slidably mounted. These rods 15—15 and 17—17 are designed to support receptacles 18—18 to receive packages fed forward by the machine.

At the respective ends of the frame 10 are mounted brackets 19 and 20 in bearings of which are journaled the shafts 21 and 22 carrying the belt pulleys 23 and 24, the shaft 21 being also furnished with any usual drive pulley 25 to which motion is imparted by any ordinary drive mechanism to drive the pulley 23 and the feed belt 26 mounted on the pulleys 23 and 24, the upper reach of this feed belt traveling over the surface of the top 11, and this belt being constructed of material, as canvas, adapted to frictionally engage packages or articles fed thereto in any manner. At one side of the belt 26 are mounted, on the top 11, the guide plates 27 and 28—28 and, extending from the chute 12, the plates 29—29. Stops 30—30 being fixed on the top 11 near the plates 28—28.

On the top 11 is secured a series of brackets 31 and 32—32 each having a vertical pivot 33 on which is pivotally mounted a gate or barrier 34 suitably shaped to intercept articles fed along by the belt 26 when swung into position across the path of said articles; extending from the pivoted portion of each of these gates 34 is a member 35 to which is pivotally secured the pawl 36 cut away at its lower edge to furnish the cam edge 37. Each of the pivots 33 is supplied with a spring 38 the ends of which are secured respectively to the pivoted portion of the gate 34 and to a fixed part of the bracket whereby a pressure is constantly exerted by said spring

to swing the free end of the gate towards its associated stop 30, in which position the gates partially close the spaces between the plates 27—27 and 28—28.

At the inner portion of the bracket 31 is fixed the latch plate 39 having the cam edge 40 and the notch 41, see Fig. 5. Similarly secured to the brackets 32—32 are the plates 42—42 having the notches 43—43 in their upper edges, see Fig. 8. Adjacent said latch plates 39 and 42—42 are secured the guide plates 44—44 which are similar in all respects.

Extending through the brackets 31 and 32 is the rod or wire 45 which, at the feeding-in end of the machine, is connected with the rack bar 46, hereinafter more fully described; this bar in turn being connected by the chain 47, working over the pulley 48 mounted on the frame top 11, with the spring 49 which is secured to a fixed part of the machine. The wire 45, at the delivery end of the machine, is connected by the chain 50 working over the sprocket 51, see Fig. 10, hereafter more fully described, with the spring 52 which is secured at one end to a fixed part of the frame. The spring 49 is considerably stronger than the spring 52, whereby a constant strain is exerted by the spring 49 to draw the rack bar 46 and the wire 45 towards the pulley 48.

Secured to the wire 45 and adapted to slide on the guide plate 44 of the bracket 31 are the blocks 53 and 54, the block 54 having the inclined edge 55 adapted to ride under the pawl 36, associated therewith, to lift said pawl out of the notch 41, when the wire 45 is drawn towards the pulley 48, to permit the spring 38 of said gate to act, while the block 53 has the shoulder 56 designed to engage said pawl 36, on the return movement of the wire 45, to swing said pawl back towards the notch 41, in riding up the cam edge 40 of the block 39, the pawl 36 is raised sufficiently to lift it out of engagement with the shoulder 56 and to permit this block to ride under said pawl the block 54 also moving under said pawl to the position shown in full lines in Fig. 5. Blocks 57 and 58 are secured to the wire 45 at each side of the brackets 32—32 and are designed to slide on the plates 44—44. The blocks 57 have the upwardly extending fingers 59, while the blocks 58 have the cam surfaces 60, the latter being designed to ride under their associated pawls 36, when the wire 45 is drawn towards the pulley 48, to lift the pawl out of the notch 61 with which the plate 42 is provided; on the movement of the wire 45 towards the pulley 51 the finger 59 of the block 57 engages the pawl 36 and effects the swinging of said pawl back to the position where it can engage with the notch 61, at the same time the gate 34 is swung to the position shown in Fig. 2 of the drawing against the action of its spring 38.

The construction and arrangement of the rack bar 46 will be understood by referring to Figs. 3, 4 and 11 of the drawings. On the top 11 is secured the plate 62 on which are mounted the brackets 63 and 64, the bracket 63 being furnished with the electro magnet 65, while on the bracket 64 is pivotally mounted the hook-shaped member 66 having the stop 66' and the armature 67, adapted to be attracted by the poles of the magnet 65; at the lower part of the bracket 64 is rotatably mounted the detent 68 having the cam surface 69, Fig. 3, and the hook 70 which is engaged with the hook of the member 66, so that the swinging of the mem-

ber 66 effects the rocking of the detent 68, a spring 71 attached to the detent and to the bracket 64 exerting a retracting strain on the detent. The rack bar 46 has the longitudinal groove 72, in its back, and the depending teeth 73—73 the rear surfaces of which are inclined, as is shown in Fig. 11, this bar is supported by the plate 74, secured to the upper part of the bracket 64 and having the rib 75 which forms a guide on which the grooved portion of the rack bar may slide. By this construction the rack bar may be readily drawn towards the left, as shown in Fig. 3, as the inclined faces of the teeth 73 work over the cam surface 69 of the detent and crowd said detent outward, but, when drawn towards the right, in said figure, said teeth 73 are engaged by the flat face of the detent when said detent is swung in by the movement of the armature, and by the tooth 66' of the hook 66 when the detent is in the position shown in Fig. 4.

Adjacent to the end of the machine at which the sprocket 51 is located is the plate 76 having the bracket 77 on which is supported the latch plate 78 having a portion cut away to leave the stops 79 and 80; on this bracket 77 is also secured the guide plate 81 on which the block 82 having the cam surface 83, and the block 84 having the upwardly projecting finger 85, are free to slide these blocks being secured to the wire 45 to move therewith. Also mounted on the bracket 77 are the spring contacts 86 and 87, which form terminals of an electric circuit, the terminal 86 extending upward between the stops 79 and 80, but nearer the latter.

Pivotally mounted on the plate 76 is the member 88 having the arm 89 and on said member is pivoted the pawl 90 the free end of which is connected by the spring 91 with the plate 76. When this pawl 90 rests against the stop 80 of the plate 78 said pawl bears against the spring contact 86 and presses the same against the contact 87 to complete the electric circuit, of which these contacts are terminals, at this point, when however the contact 86 is relieved from the pressure of said pawl the contact 86 is free to move away from the contact 87 to open said circuit at this point. At this end of the top 11 is fixed the corner plate 92 having the arms 93—93 and the post 94 and on this post 94 is pivotally mounted the shipper lever 95 the long end of which is pivotally connected with the arm 89 of the member 88 while the short end is furnished with the yoke 96; the spring 97 carried by the post 94 and bearing against the short end of said lever tending constantly to swing the yoke 96 of said lever towards the sprocket 51.

In the arms 93—93 is secured the shaft 98 on which is rotatable the ratchet hub 99 of the sprocket 51. Also rotatable on this shaft 98 is the hub 100, of the pulley 101, furnished with the ratchet member 102 which is free to move towards and from the ratchet hub 99 of the sprocket 51 under the action of the yoke 96 of the lever 95, while maintaining its engagement with the hub of the pulley 101, in a slot in which the tongue of said ratchet member works. Motion is imparted to the pulley 101 by the belt 103 working over said pulley and over the pulley 104 on the shaft 22.

The electric contacts 86 and 87 are connected with the arms of an electric circuit which includes an electric battery, or other source of electrical energy; this circuit also including circuit closers 105 and 106 located at convenient points on the top 11; the circuit closer 106

being illustrated diagrammatically in Fig. 1 of the drawings.

In Fig. 3 of the drawings is illustrated a modified form of circuit closer in which the arms of the electric circuit $x-y$ are extended to a distance from the feeding machine above described and are connected with the electric terminals 107—108 suitably supported in any well known manner. Below said terminals, in the position shown, is a conveyer belt 109 which is mounted on pulleys 110 and 111 which are rotatably mounted and may form part of any suitable mechanism, motion being imparted to said pulleys in any well known manner to drive the belt 109. One office of this belt being to carry forward circuit closers as 112 removably placed thereon from time to time in any desired manner, the contact of said circuit closer with the terminals 107—108 effecting the closing of the circuit $x-y$ to supply electrical energy to the magnet coils 65—65, in the same manner as by the closing of said circuit by the closer 106.

The machine herein described is designed to feed forward packages in a finished state or partially finished state to receptacles, as shown in Figs. 1 and 2, or to other machines adapted to act on said packages in any desired manner. The particular machine herein shown is proportioned more especially for the feeding forward of comparatively light and small articles such as packages of cereal products, wrapped books and papers and other mail matter, and any other articles adapted to be carried forward on the belt 26, but said belt may be varied in its construction to carry forward other kinds of packages or material and the mechanism coöperating with said belt may also be varied.

Motion being imparted to the pulley 25, in any well known manner, to drive the belt 26 in the direction indicated by the arrows in Figs. 1 and 2, articles fed to this belt will be carried forward thereby. If the first gate 34 is in the position shown in Fig. 1 of the drawings the articles carried forward by the belt will be diverted from their forward path by the gate and will be directed towards the first receptacle 18, the deflector 14 preventing the throwing of the article past the receptacle.

When a sufficient number of the articles have been diverted by the first gate, from the path of the belt 26, the circuit $x-y$ is closed in any usual manner and at any desired point on the machine, or at a point distant from the machine, either by hand or automatically as shown in the drawings.

The closing of the circuit $x-y$ completes said circuit through the coils of magnets 65—65, the poles of which, being energized, attract the armature 67 which carries with it the hook 66 and its stop 66' thus releasing the first tooth 73 on the rack bar 46 and allowing said bar to slide longitudinally under the action of the spring 49, in order to limit this movement however the detent 68 is so shaped that, as the hook 66 swings towards the magnets 65, this detent is swung into the path of the teeth 73 of the rack bar and intercepts the same; when the armature 67 is released from the magnets, as by the opening of the circuit $x-y$, the detent 68 is permitted to swing out of the path of the teeth 73 while the stop 66' swings into said path and engages the approaching tooth 73.

During the first step in the movement of the rack bar 46 and the wire 45 under the action of the spring 49 the cam surface 54 of the block 53 effects the lifting of the

pawl 36 out of the notch 41 of the latch plate 39 and permitting the spring 38 of this first gate to swing said gate against its stop 30, in making the second part of said step in its movement, that is during the backward swinging of the hook 66, the shoulder 55 of the block 53 is carried under the pawl 36 and is in position to engage this pawl under a reverse movement of the wire 45, to effect the swinging of the pawl, and its gate, back to a position where the pawl may engage in the notch 41 of the plate 39 to lock the gate in the position shown in Fig. 1 of the drawings.

At the second longitudinal movement of the rack bar 46 under the action of the spring 49, permitted by a second action of the armature under the attraction of the magnet 65 as above described, the block 58 of the second gate controlling device is carried beneath its associated pawl 36 to disengage the same from the notch of its latch plate, and said second gate is swung out of the path of the packages on the belt 26, this process being continued from time to time as the desired number of packages are diverted by the gates 34—34 from the belt 26 until all the gates 34 are in the open position, resting against their respective stops 30, at which time the block 82 has been drawn close to its pawl 90.

During the final movement of the rack bar 46 under the action of the spring 49, effected by the closing of the electric circuit, the block 82 is drawn beneath the pawl 90 which, in riding up the cam surface 83, is raised sufficiently to disengage it from the stop 80 of the plate 78, this release of the pawl 90 permits the spring 97 to act on the lever 95 to swing the short end of said lever, and the clutch member 102, towards the clutch member 99 of the sprocket 51 thus effecting the engagement of these clutch members to bring the sprocket 51 into driving relation with the clutch member 102 and its driven pulley 101. When the pawl 90 thus swings away from the stop 80 it passes over the spring contacts 86 and 87 which, in recovering their positions, separate and open the circuit $x-y$.

Upon the engagement of the ratchet clutch member 102 with the similar member 99 of the sprocket 51 said sprocket is driven, by means of the pulleys 101—104 and belt 103, to take up the chain 50 and to draw the wire 45, with its blocks 53—57—58—84 and 82, and the rack bar 46 towards said sprocket against the action of the spring 49.

As the block 53 is located nearest its associated pawl 36 the first action of this reverse movement of the wire 45 is to bring the shoulder 55 into engagement with its pawl 36 to swing said pawl to a point where it may drop into the notch 41 of the plate 51 as the shoulder 56 passes beneath said pawl, this pawl being raised sufficiently to permit of this passage by riding up the inclined edge 40 of said plate 39. When this pawl is engaged in the notch 41 of the plate 39 the first gate 34 has been swung to position to intercept packages, fed along by the belt 26, and direct them towards an empty receptacle which has been substituted for the receptacle previously filled, or to an equivalent mechanism adapted to act in some manner on said packages.

Slightly subsequent to the closing of the first gate the projections 59—59 of the blocks 57—57, either simultaneously or successively, act on their associated pawls 36 to swing said pawls and their related gates 34 back to the closed position, the pawls 36 being brought into en-

gagement with the locking notches of their respective latch plates.

The drawing of the rack bar 46 towards the sprocket 51 is continued until all the teeth 73 on said bar are drawn past the stop 66' of the hook 66 so that the first tooth 73 on said bar may be engaged by said stop 66' when said bar is again drawn towards the pulley 48 by the spring 49.

The block 84 is so spaced on the wire 45 that, in its movement towards the sprocket 51, its finger 85 does not engage with the pawl 90 until the pawl 36 of the first gate has been engaged with its notch in the associated latch plate 44, and the action of this finger 85 on said pawl 90 is preferably delayed until all of the gates 34 have been closed as described above.

When, in said reverse movement of the wire 45, the finger 85 engages the pawl 90 this pawl is swung towards the stop 79 of the plate 78 until the pawl is moved past the stop 80 and the spring contact 86, this movement of the pawl being assisted by the action of the spring 91; at the same time the member 88 is swung on its pivot to bring its arm 89 and the long end of the shipper lever 95 approximately in line, to the position shown in Fig. 9 of the drawings, thereby causing the swinging of the yoke 96 of said shipper lever towards the pulley 101 and effecting the disengagement of the clutch member 102 from the clutch member 99, whereupon the further driving of the sprocket is prevented and the chain 50 and wire 51 are simply held under tension by the spring 52.

In assuming its normal position the pawl 90 again bears against the spring contact 86 and presses the same against the contact 87 to close the circuit $x-y$.

By the use of the telescoping arms 15-15' receptacles 18 of different diameters may be sustained and distended to receive packages fed from the machine.

This machine is particularly useful in dividing large quantities of packages in comparatively small lots which are delivered at several points to be packed in boxes or other receptacles, or to be further manipulated.

It is not my intention to limit this invention to any specific features of construction or combination of parts herein described, but only as herein claimed.

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

1. A package feeding machine comprising means for feeding forward packages, a receiver located at the end of the path in which the packages are fed forward, a series of movable means adapted to intercept said packages before they reach said receiver, and means for moving said intercepting devices in succession out of the path of the packages to permit them to pass to said receiver.

2. A package feeding machine comprising means for feeding forward packages, a series of deflectors located at one side of the path in which the packages are fed forward, and movable means adapted to be brought into the path of the packages to direct said packages successively towards such deflectors and means for successively moving said directing means out of said path.

3. A package feeding machine comprising means for feeding forward packages, a chute at the end of said path, and a series of independent package intercepting devices located at intervals along said path and movable with respect to such path, means for successively releasing said devices and mechanism for actuating said devices simultaneously in one direction.

4. A package feeding machine comprising means for feeding forward packages, gates pivotally mounted to swing into the path of the packages, springs tending to

swing said gates out of said path, and mechanical means for simultaneously swinging the gates into said path against the action of the springs.

5. A package feeding machine comprising means for feeding forward packages, driving means therefor, a gate pivotally mounted to swing into the path of the packages, mechanical means for swinging the gate, and means for connecting the gate swinging means with the driving means at times to effect the resetting of the gate in the intercepting position.

6. A package feeding machine comprising means for feeding forward packages, a gate pivotally mounted to swing across the path of said packages, a latch for holding said gate from movement and means for releasing the latch.

7. A package feeding machine comprising means for feeding forward packages, a gate pivotally mounted, a spring adapted to exert an opening pressure on said gate, a latch pawl pivoted on said gate, fixed means for engaging the latch pawl, and means for releasing said pawl from such engaging means.

8. A package feeding machine comprising means for feeding forward packages, a gate pivotally mounted at the side of said feeding means and having a latch member, a spring for moving said gate in one direction, fixed means for engaging the latch member against the action of said spring, means for releasing said latch member from engagement with the fixed means, and movable means adapted to swing said gate back to the latching position.

9. A package feeding machine comprising means for feeding forward packages, a gate pivotally mounted at one side of said feeding means and having a movable latch pawl, a plate fixed with reference to said pawl and having means for engaging said pawl and means for lifting said pawl as it is moved towards such engaging means, a spring adapted to swing the gate in one direction, and means for lifting the pawl from said engaging means.

10. A package feeding machine comprising means for feeding forward packages, a bracket mounted at one side of said feeding means, a gate, spring actuated in one direction, pivotally mounted in said bracket and having a pivoted pawl, a plate fixed in said bracket and having means for engaging such pawl, a cam mounted to slide beneath said pawl to lift the same from said engaging means, a device connected with said cam for engaging the pawl, and means for effecting the sliding of the cam.

11. A package feeding machine comprising a table, a package feed belt mounted to travel over said table, a series of telescopic supports mounted in the table and adapted to support receptacles, a series of package diverting means movably mounted on the table and normally in position above said belt, and means for successively swinging said diverting means from their normal position.

12. A package feeding machine comprising a table, a package feed belt mounted to travel over said table, means for driving said belt, a series of gates pivotally mounted on the table at one side of said belt, sliding means adapted to engage said gates to move them, and means adapted to be connected with the belt driving means at times to effect the swinging of the gates.

13. A package feeding machine comprising a table, a package feed belt mounted to travel over said table, a series of gates pivotally mounted on said table to swing over said belt, means for retaining the gates in said position, and step by step actuated means for successively releasing said gates from their retaining means.

14. A package feeding machine comprising a table, a package feed belt mounted to travel over such table, a series of brackets mounted at the side of said belt and each having a latch member, a spring actuated gate pivotally mounted in each of said brackets and having a pivoted latch pawl adapted to be engaged by the latch member of said bracket, a longitudinally movable member supported on said table, a spring adapted to move said member in one direction, a step by step controlling device for controlling the movement of said movable member, and a series of cams mounted on said movable member and adapted to lift the gate latch pawls from engagement with their latch members at times.

15. A package feeding machine comprising a table, a

feed belt mounted to travel thereover, a series of gates pivotally mounted on the table and furnished with pivoted pawls, a series of latch plates with which said pawls are adapted to engage, slidable means for disengaging the
 5 pawls from their latch plates, means for controlling the movement of said slidable means step by step, and a magnet for effecting the release of the controlling means.

16. A package feeding machine comprising a table, a feed belt mounted to travel on the table, a series of gates
 10 pivotally mounted on the table and having pivoted pawls, a series of latch plates with which said pawls engage, a series of cams slidably mounted with respect to such pawls, a connection between said cams, a spring exerting a tension to draw said connection longitudinally, a rack included in said connection, a magnet furnished with an
 15 armature having means for alternately engaging the teeth of said rack to control the movement of such connection.

17. A package feeding machine comprising a table, a feed belt mounted to travel over said table, driving means
 20 for such belt, a series of gates pivotally mounted on the table and having pivoted pawls, latch plates on said table with which such pawls may engage, a series of fingers slidably mounted on the table and adapted to engage said pawls to swing them towards said latch plates, a connection between said pawls and having a chain, a sprocket
 25 over which said chain works, and means for connecting said sprocket with the feed belt driving mechanism.

18. A package feeding machine comprising a feed belt, driving means therefor, a series of gates movably mounted,
 30 means for locking the gates in the operative position, means for releasing said locking means successively, means adapted to act upon the gates to move them to the operative position, a connection between the gate moving means and the feed driving mechanism, a controlling device for said connection adapted to be released subsequent
 35 to the release of the last gate, and means for resetting said controlling means.

19. A package feeding machine comprising, means for feeding forward packages, movably mounted package diverting means, locking means whereby said diverting
 40 means are held in the operative positions, means for releasing said locking means, magnetically actuated controlling means for said releasing means, an electric circuit for said magnet having terminals, and a circuit closer
 45 adapted to be brought into electrical contact with such terminals.

20. In a package feeding machine, furnished with a series of package intercepting gates, the combination with said gates, devices for engaging said gates to move them
 50 to the operative positions, a connection for all of said devices, a chain secured to said connection, and a sprocket with which said chain is engaged, of a drive gear furnished with a clutch for connecting the same with said sprocket, a pivoted lever for moving said clutch, and means controlled by the movement of the gate actuating connection
 55 for effecting the swinging of said lever.

21. In a package feeding machine the combination with a sprocket rotatably mounted, a chain engaging said clutch, a wire connected with such chain, a spring for exerting a tension on said wire, a cam member and a
 60 projecting member secured to said wire, and a guide on which said members are adapted to slide, of a drive gear furnished with a clutch member adapted to connect with said sprocket, a pivoted lever for moving such clutch member, a pivoted member having an arm pivotally connected
 65 with said lever, a pawl pivotally mounted on said pivoted member, and a latch plate having a stop with which said pawl may engage, and from which said pawl may be released by movement of the cam member, as and for the purpose described.
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22. A package feeding machine comprising package feeding means, a series of gates mounted to swing across said feeding means and furnished with latching devices, of a series of latch releasing mechanisms, a connection therefor
 75 having a rack bar furnished with teeth, a spring for exerting a tension on said rack bar to draw the same in one direction, a magnet furnished with an armature having a stop adapted to engage the teeth of the rack bar at times, a pawl pivotally mounted and connected with said armature adapted to be swung into the path of the rack teeth
 80 when the armature stop is moved out of such path, said rack teeth and pawl being shaped to permit the passage of the rack in one direction, and an electric circuit having terminals adapted to be connected by a circuit closer, as and for the purpose described.
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In testimony whereof I affix my signature in presence of two witnesses.

LAURITS M. NIELSEN.

Witnesses:

LOUISE C. CLEARY,

H. J. MILLER.