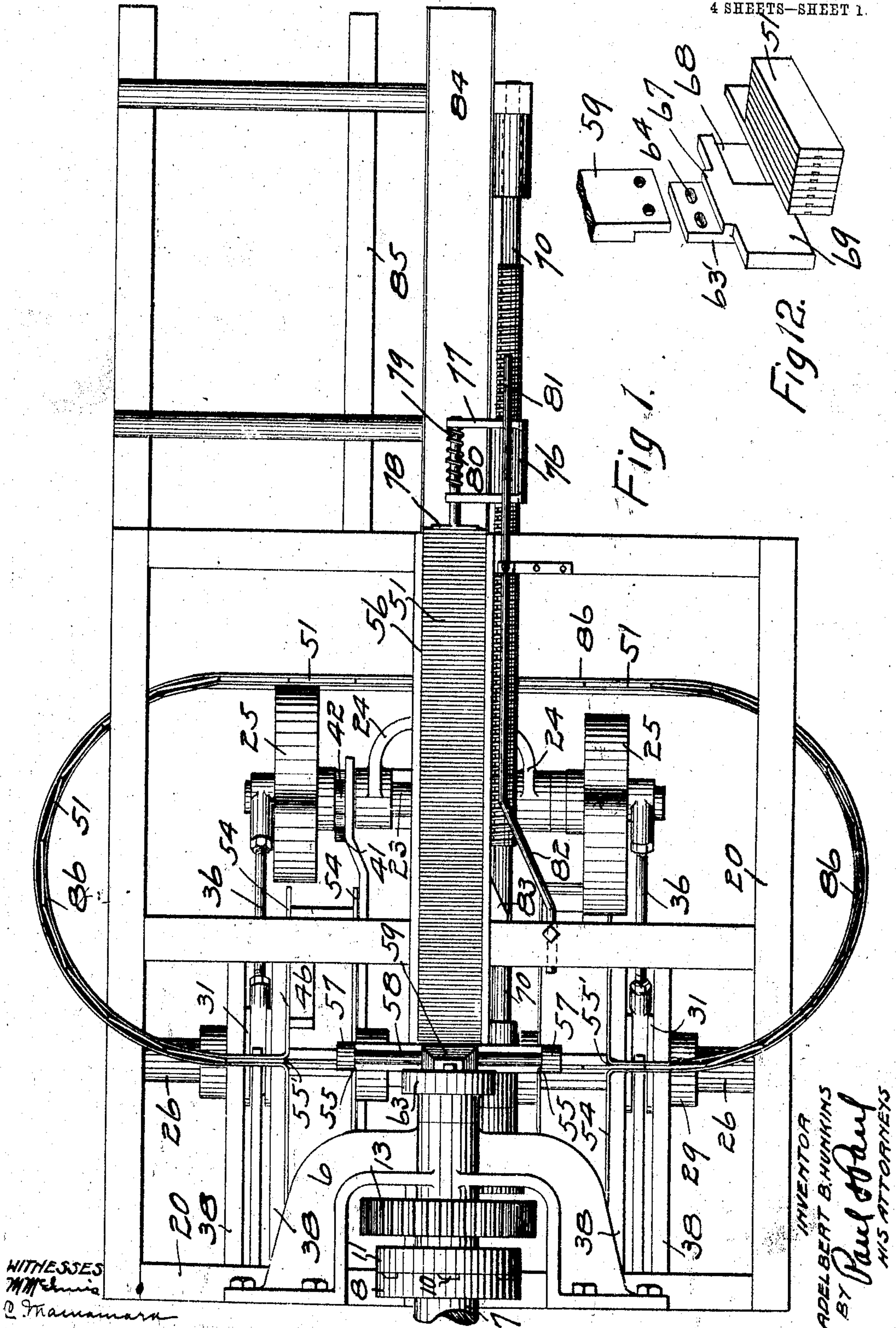


No. 815,832.

PATENTED MAR. 20, 1906.

A. B. HUNKINS.
ADDRESSING MACHINE.
APPLICATION FILED DEC. 9, 1904.

4 SHEETS—SHEET 1.

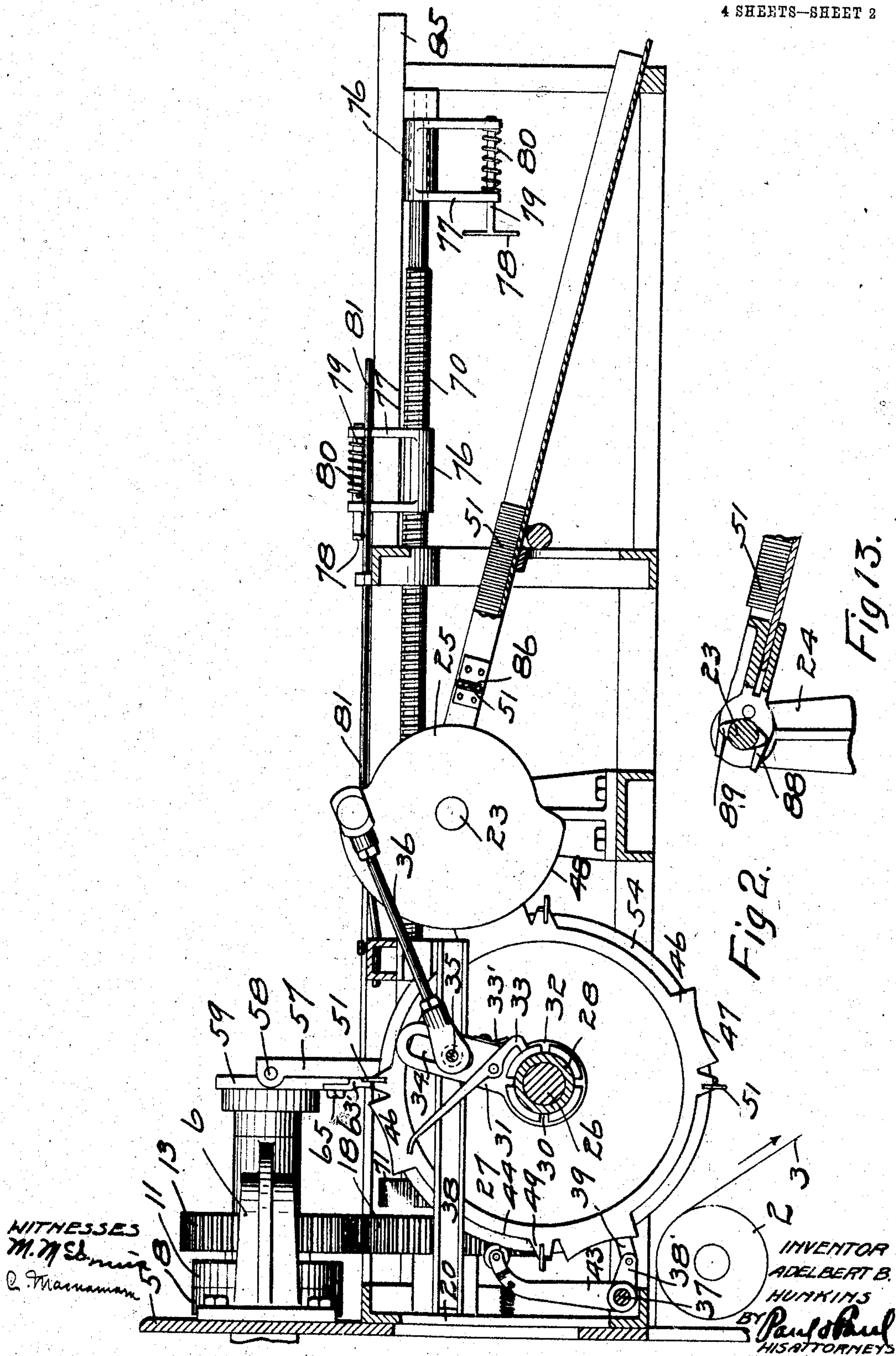


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4 SHEETS—SHEET 2



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4 SHEETS—SHEET 3.

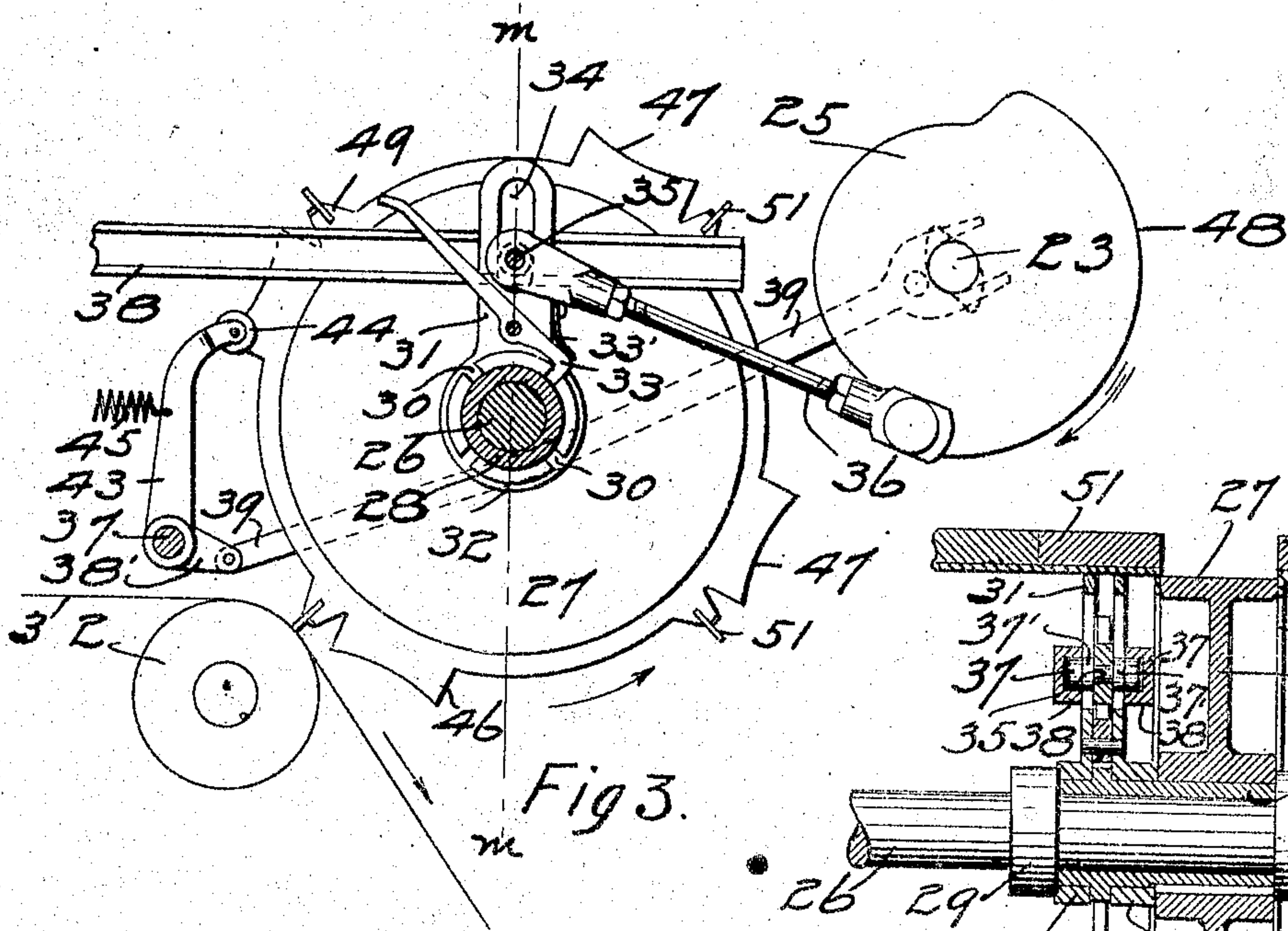


Fig. 3.

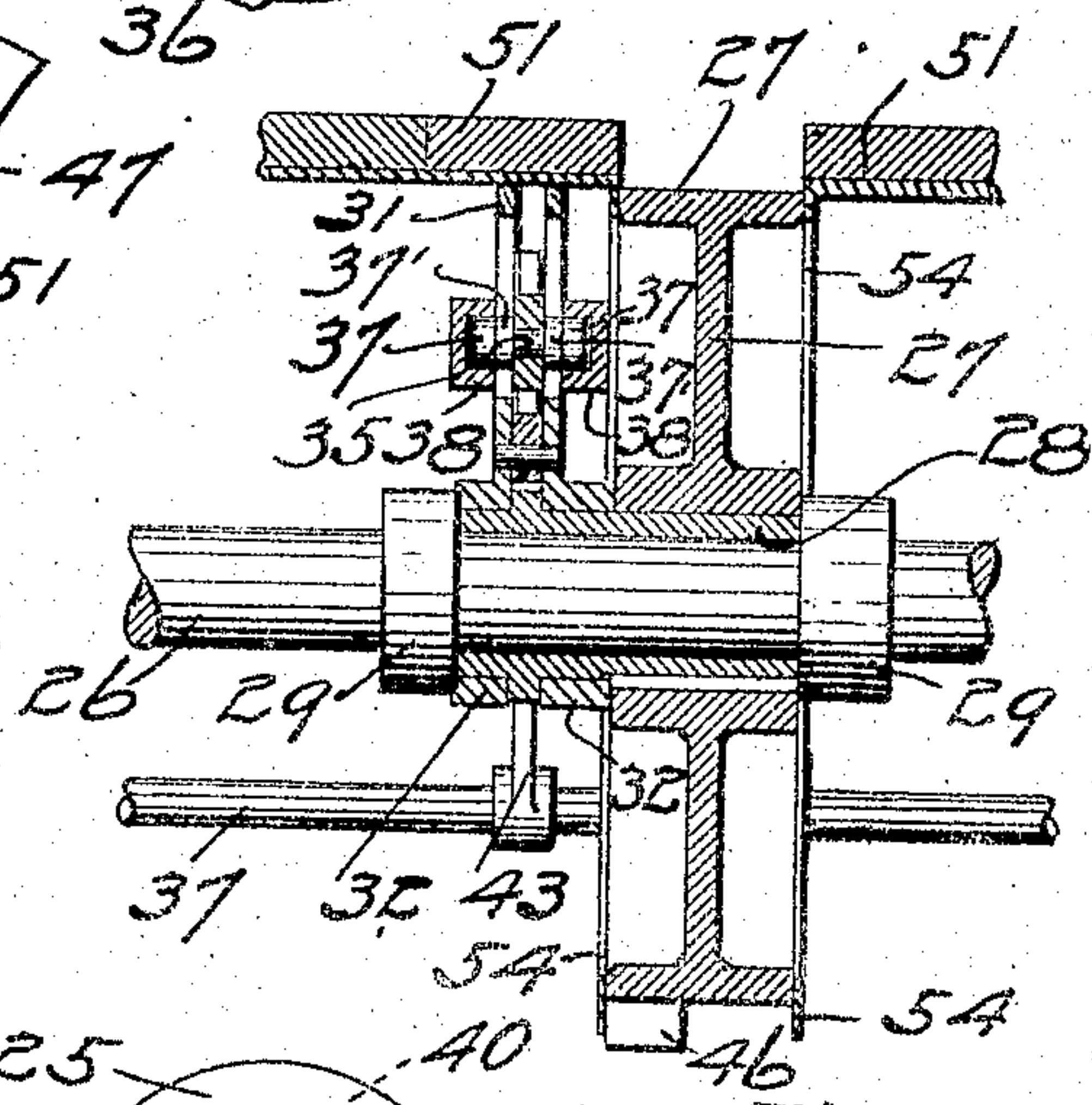


Fig. 5.

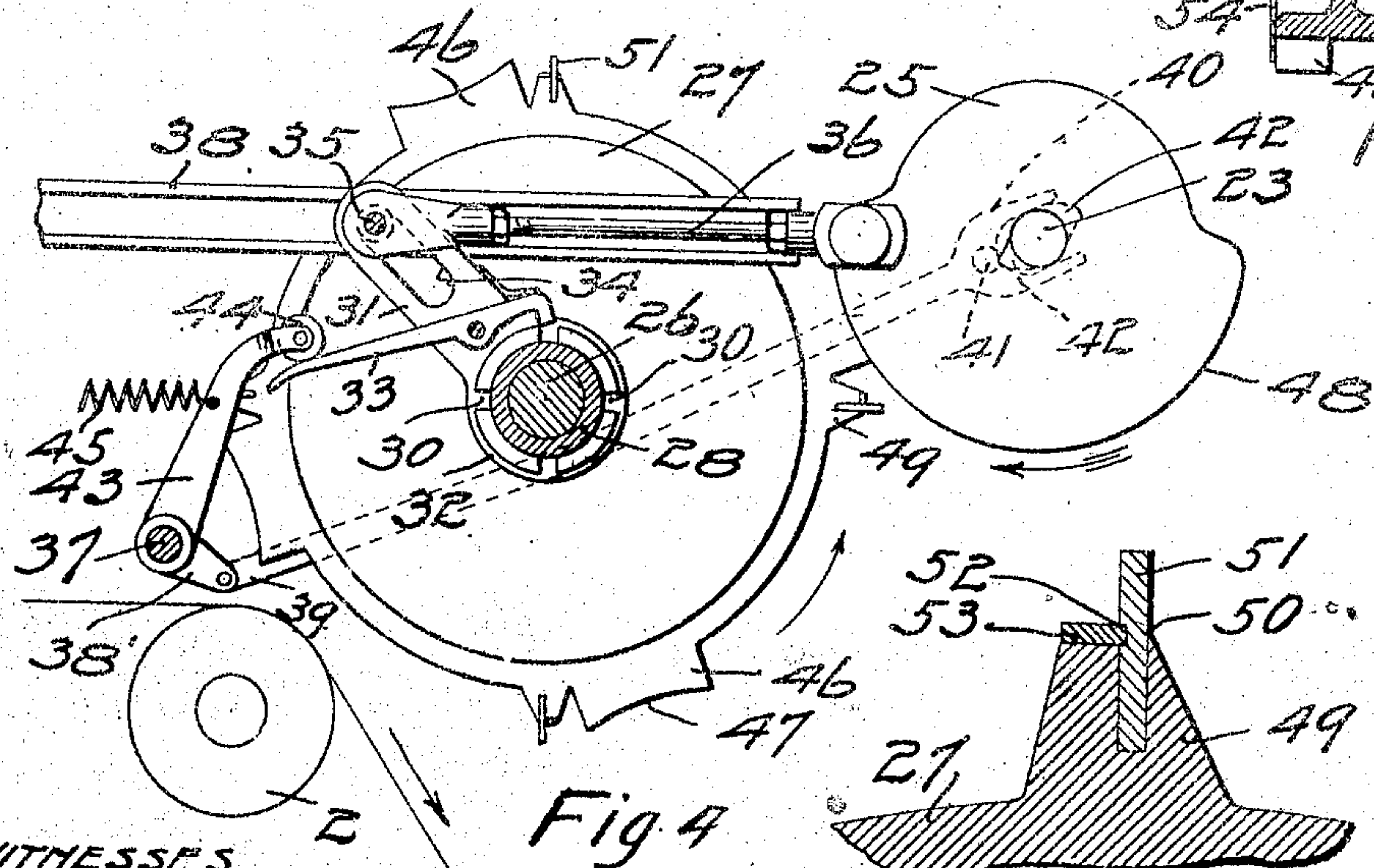


Fig. 4.

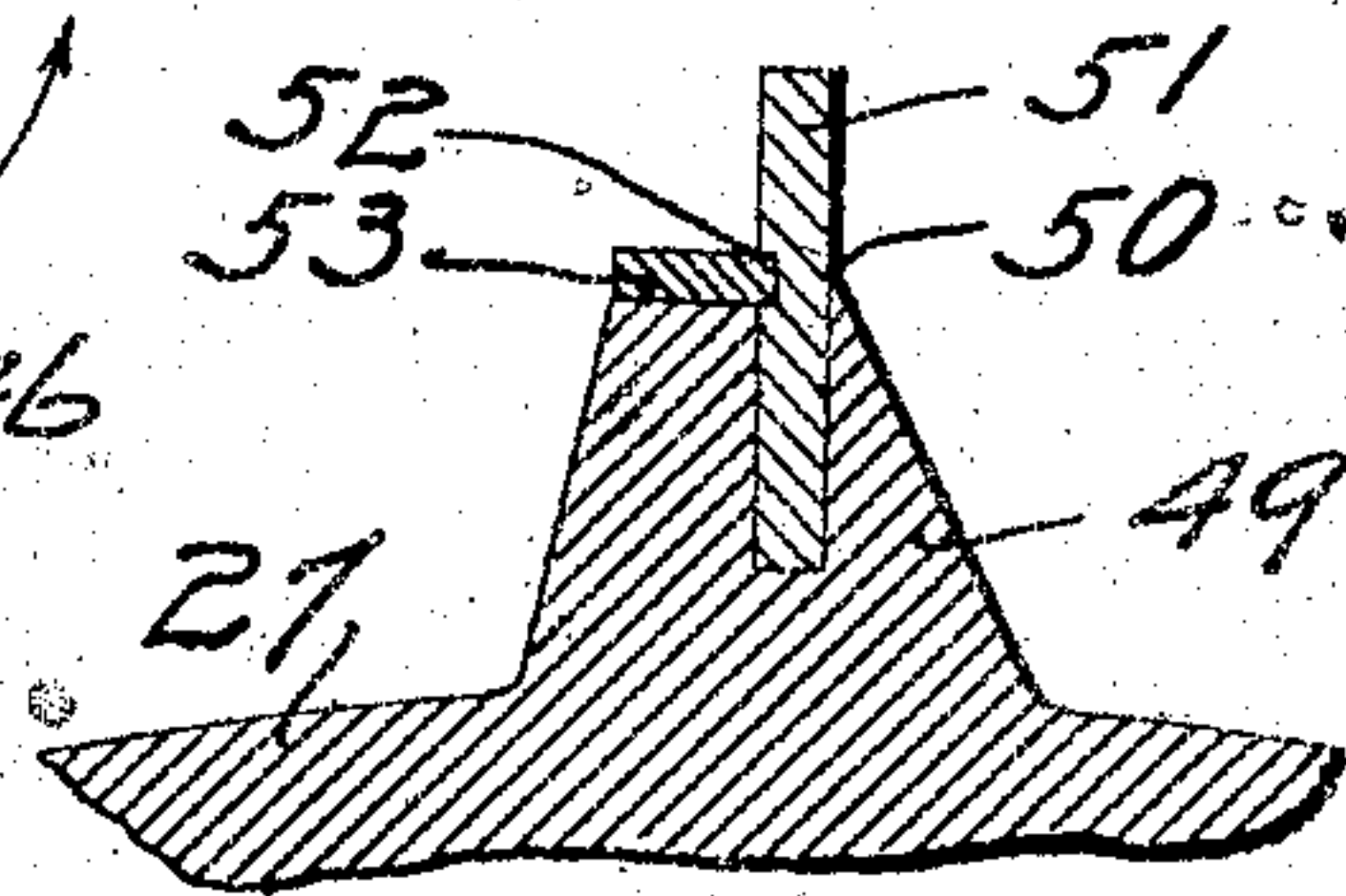


Fig. 6.

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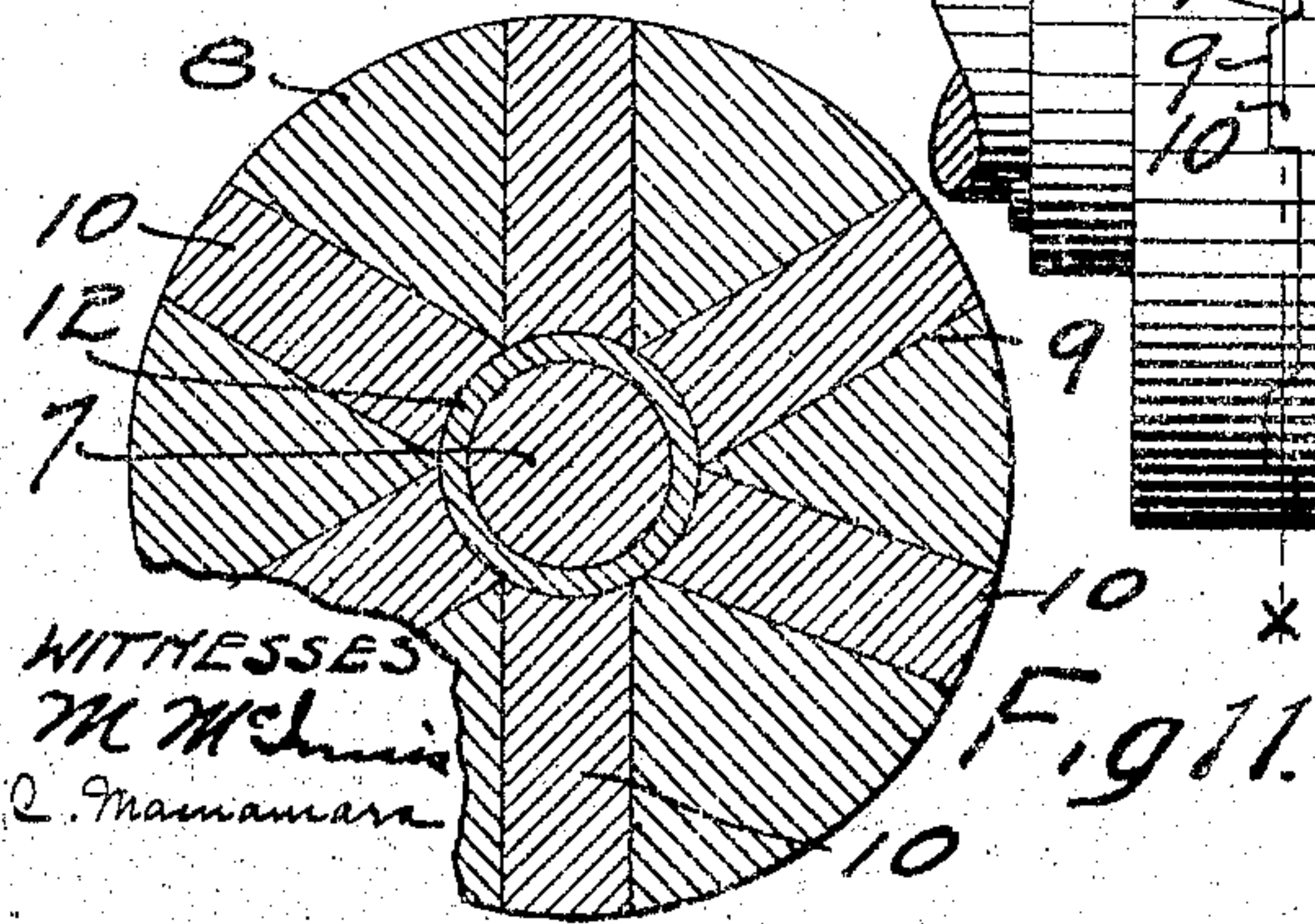
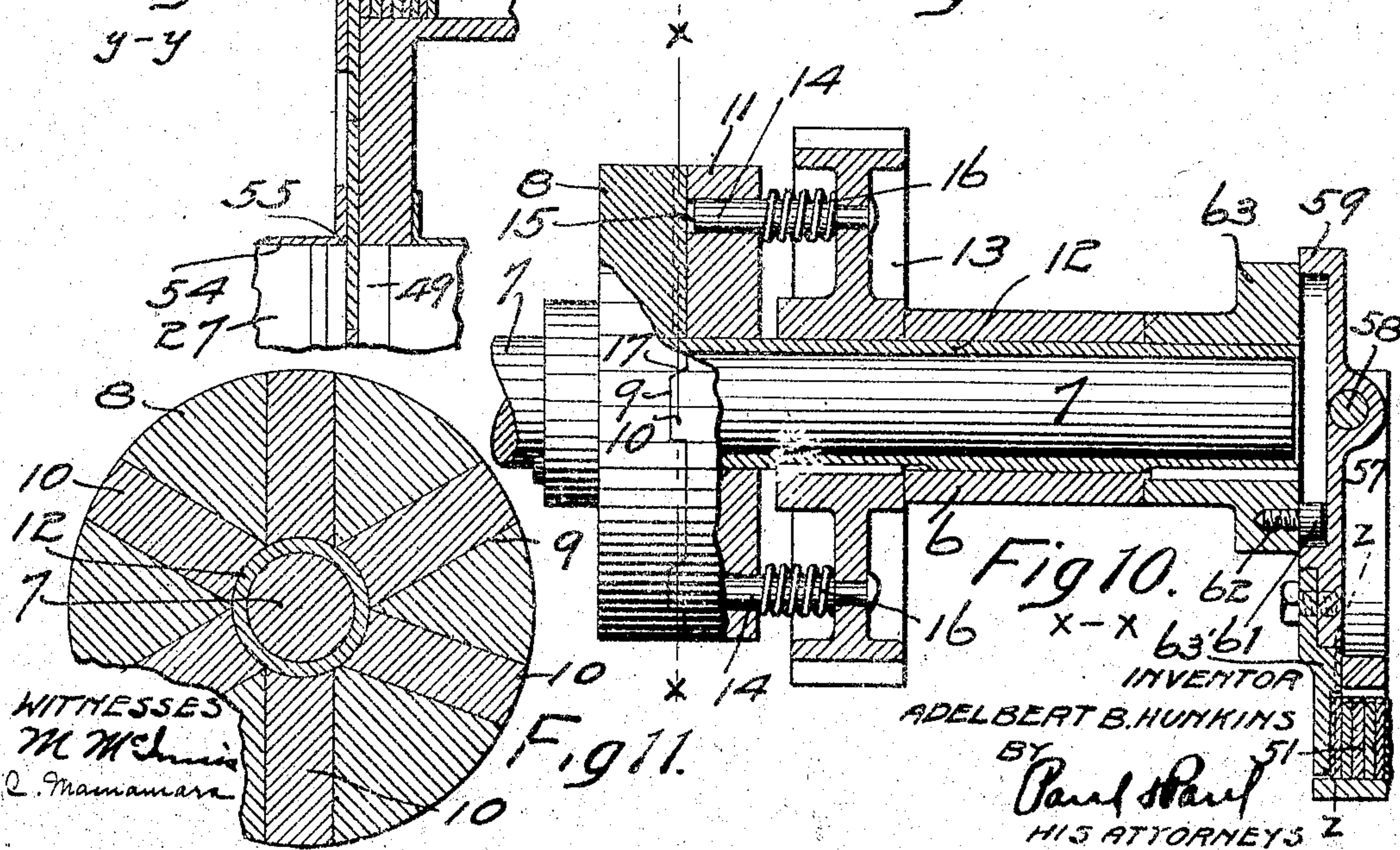
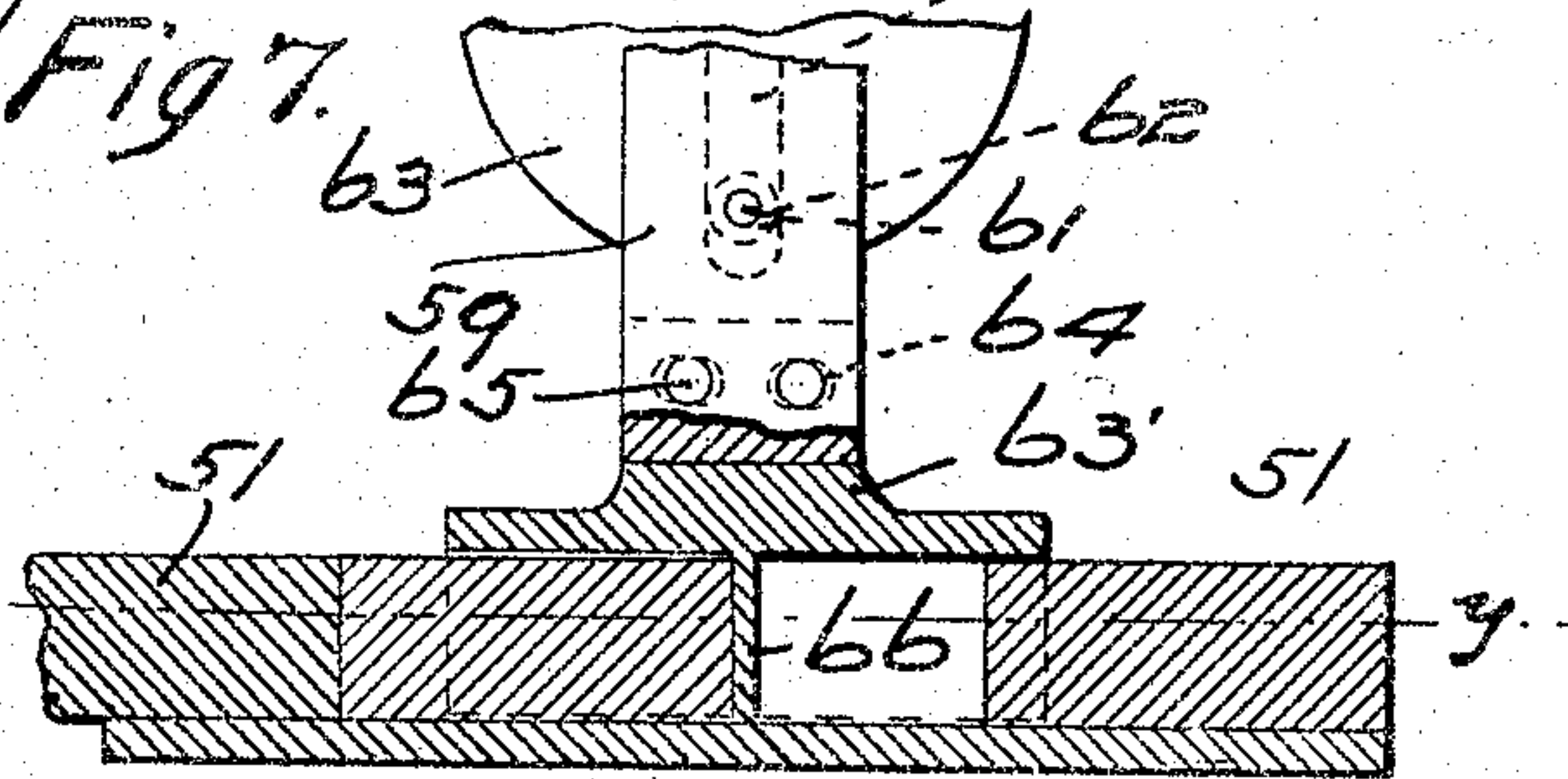
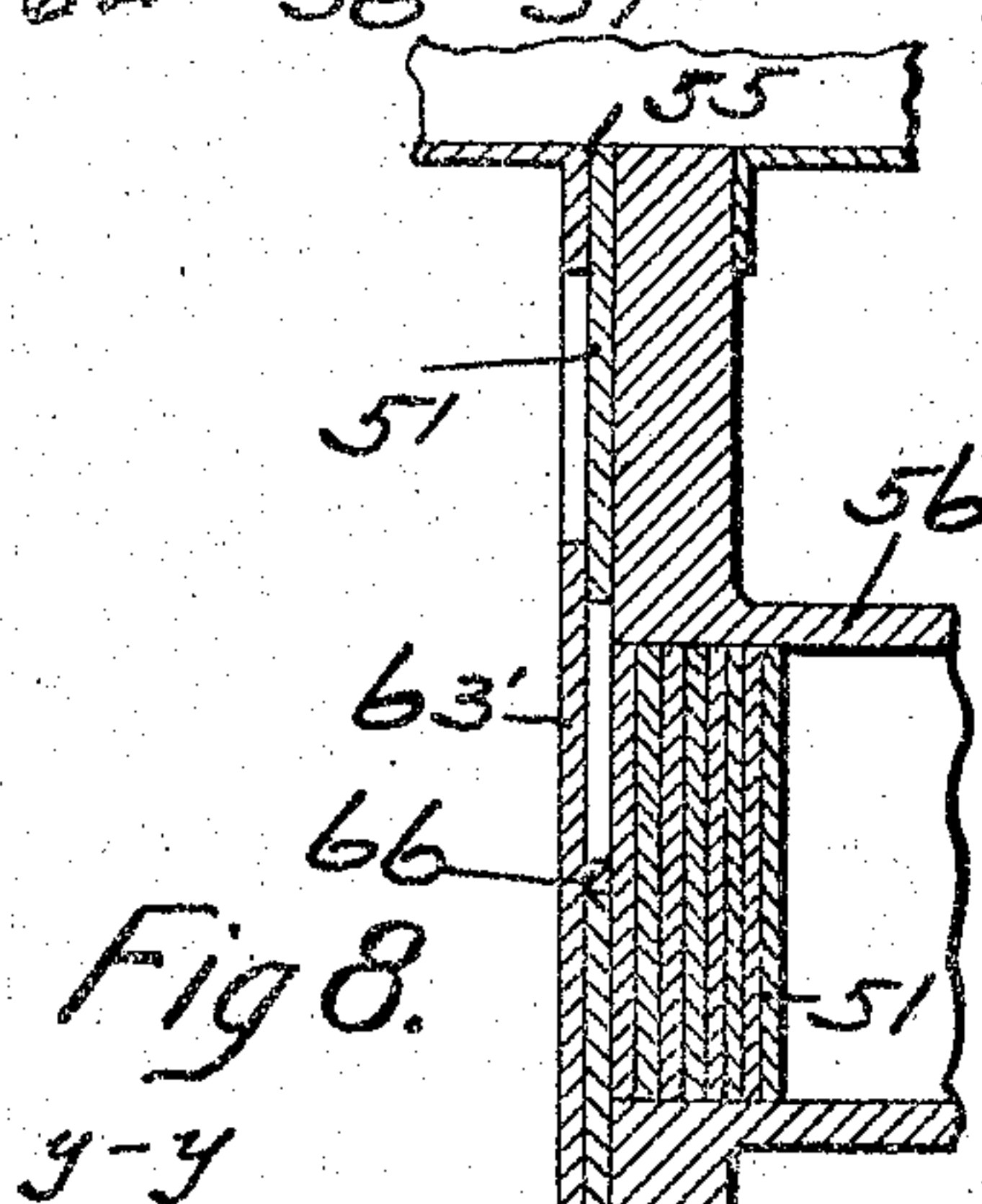
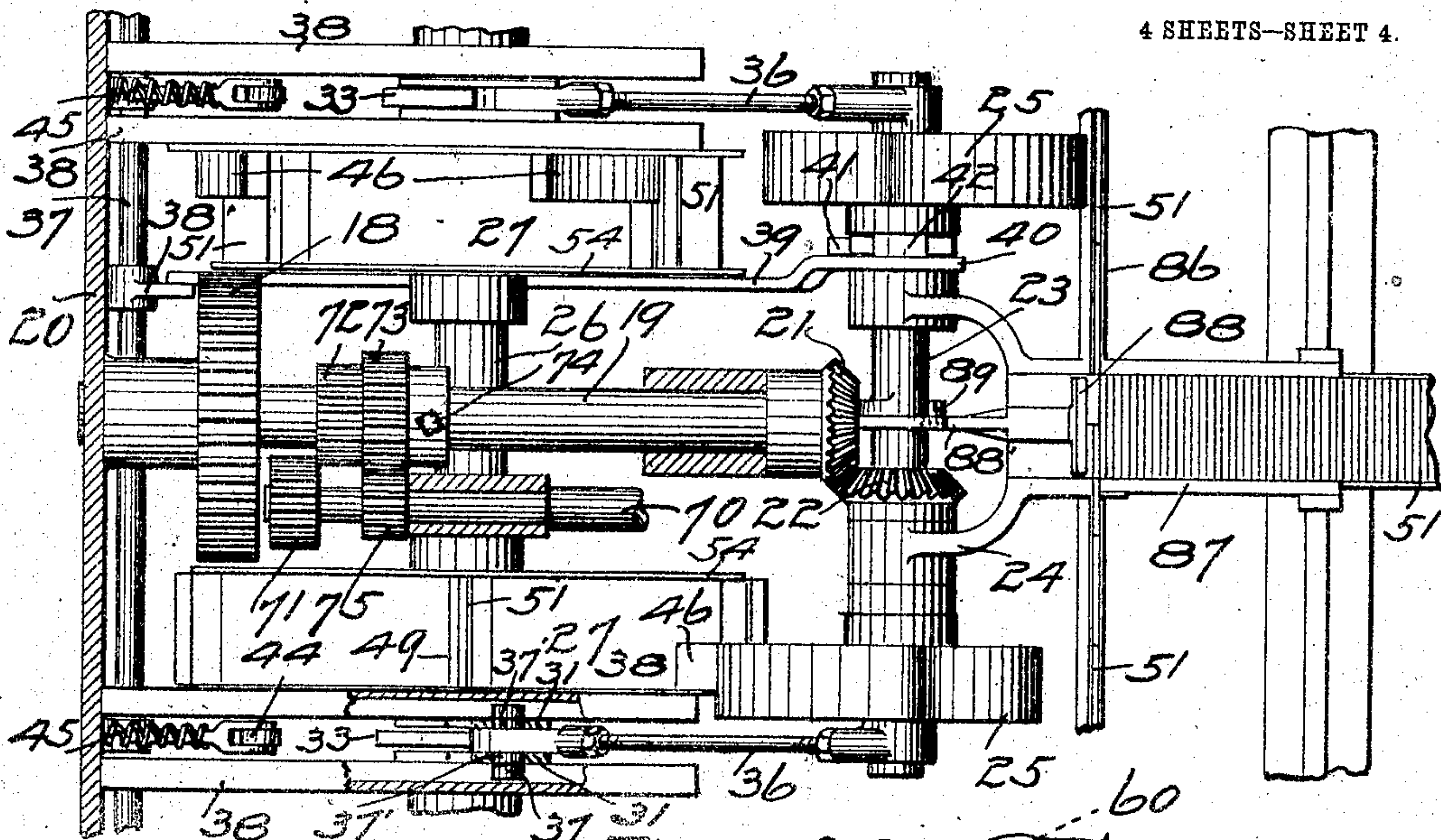
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4 SHEETS—SHEET 4.



WITNESSES
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ADELBERT B. HUNKINS, OF AUSTIN, MINNESOTA.

ADDRESSING-MACHINE.

No. 815,832.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed December 9, 1904. Serial No. 236,080.

To all whom it may concern:

Be it known that I, ADELBERT B. HUNKINS, of Austin, Mower county, Minnesota, have invented certain new and useful Improvements in Addressing-Machines, of which the following is a specification.

My invention relates to machines for addressing newspapers on the press; and the object of the invention is to improve, simplify, and increase the capacity of the addressing-machine shown and described in Letters Patent of the United States issued to me November 17, 1903, No. 744,347.

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

The invention consists generally in providing means for impressing the address on the newspaper during the printing operation while the paper is in motion and before it is folded.

Further, the invention consists in providing an addressing-machine capable of addressing a certain number of papers in a given time or twice that number in the same time, depending upon the size of the paper that is being run on the press, without changing the speed of the machine.

Further, the invention consists in an improved type-feed.

Further, the invention consists in an improved type-holder.

Further, the invention consists in improved means for conducting the type from the holder back to the storage-galley.

Further, the invention consists in an improved safety stop and lock device for the type-wheels.

Further, the invention consists in an improved tripping mechanism in connection with the type-wheels.

Further, the invention consists in an automatic friction-clutch device in connection with the drive-shaft; and, further, the invention consists in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of an addressing-machine embodying my invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a similar sectional view showing one of the type-carriers in position for printing the address on the paper. Fig. 4 is a view corresponding to Fig. 3, showing the type-carrier in position to discharge one type and receive another. Fig.

5 is a sectional view through one of the type-carriers on the line *m m* of Fig. 3. Fig. 6 is a detail showing a cross-section of one of the type-holders and the type therein. Fig. 7 is a plan view of the lower portion of an addressing-machine, showing the mechanism for operating the type-holders. Fig. 8 is a sectional view on the line *y y* of Fig. 9, showing the device for feeding the type into the holders. Fig. 9 is a sectional view on the line *z z* of Fig. 10. Fig. 10 is a sectional view of the friction-clutch mechanism, showing the connection of the drive-shaft with the pusher-block. Fig. 11 is a sectional view on the line *x x* of Fig. 10. Fig. 12 is a perspective detail view of the adjustable feed-plate and the lower end of the pusher-block. Fig. 13 is a sectional view illustrating the kicker device that discharges the type that has been used out of the typeway into the storage-galley.

In the drawings, 2 represents a printing-press roll over which a web of paper 3 passes from the press (not shown) to the folding mechanism. The paper passing over the roll 2 has been printed, and at this time I provide means for impressing the address thereon. The roll 2 may be of any suitable size and may have a yielding surface or in other ways adapted for the particular purpose to which it is applied, the essential feature being to provide a suitable roll or impression-surface at this point to cooperate with the addressing-machine to place the address on the paper before it enters the folder.

5 represents a portion of one end of a printing-press of any type and size whereon the addressing-machine is placed. A yoke 6 is bolted to said frame and has a bearing for a drive-shaft 7, that is driven from the press or from any other suitable source of power.

It is desirable to provide some means in connection with the drive-shaft to automatically disconnect it and prevent breakage of the machine in case it should become clogged or the parts disarranged when operated from a press, and I therefore provide a friction-clutch member 8, keyed on the said drive-shaft and having a series of radial grooves 9, adapted to receive a corresponding number of radial ribs 10, on the other clutch member 11, that is slidably supported on a sleeve 12, loosely mounted on said shaft. As shown in Fig. 11, one of the grooves 9 is out of line with the corresponding one on the other side of the member, and consequently the two members can only fit together or coincide at one point,

and they will therefore have the same relation and the parts will be in the same relative position when brought together as they were before separation. A gear-wheel 13 is
 5 keyed on said sleeve and provided with a series of pins 14, that fit loosely within holes 15 in the clutch member 11, and are provided with springs 16, that tend to press the clutch member 11 away from the wheel 13 and hold
 10 it in yielding engagement with the clutch member 8, as indicated in Fig. 10. The ribs 10 on the clutch member 11 have beveled faces 17 on one side to fit corresponding faces in the grooves, and should there be an unusual
 15 amount of resistance to the revolution of the gear 13, arising from the breaking or clogging of the machine, the clutch member 8 will slip over the beveled faces 17 and allow the drive-shaft to revolve in the sleeve without operat-
 20 ing the addressing-machine. The gear 13 meshes with a similar gear 18, secured on a counter-shaft 19, having bearings in the frame 20 of the addressing-machine. A beveled pinion 21, secured on the shaft 19, meshes
 25 with a similar pinion 22 on a transversely-arranged crank-shaft 23, that has bearings in the frame of the machine, particularly a yoke 24, and is provided on each end with cam or crank disks 25, from which the type-holders
 30 are operated. These cam-disks correspond substantially in their functions to the continuously-operating crank of my patent above referred to and in addition have a further function of locking the type-carriers during the
 35 operation of discharging and inserting the type, as will hereinafter appear.

26 is the type-carrier shaft, supported in the frame parallel with the shaft 23. Upon
 40 each end of this shaft I arrange an intermittently-operating type-carrier, preferably in the form of a wheel or drum, and as they are similar in construction and operation, though operating alternately, I will describe one of
 45 them and the mechanism for operating it in detail, designating it by a suitable reference-numeral and using the same numeral for the other carrier and operating mechanism, with the addition of the "A" exponent.

27 is one of the type-carriers, keyed upon a
 50 sleeve 28, that is loosely mounted on the shaft 26 between collars 29. The sleeve 28 extends beyond the hub of the wheel on one side and is provided with a series, preferably four, of notches 30. An arm 31 has a hub 32
 55 loosely mounted on said sleeve and carrying a dog 33, actuated by a spring 33', to drop into one of the notches 30 and temporarily lock the arm and sleeve together. The type-carrier being fixed on the sleeve will be re-
 60 volved when power is applied to operate the arm. The outer end of the arm 31 has a longitudinal slot 34 to receive a hardened pin 35, carried by one end of an adjustable pitman or connecting rod 36, whose opposite end is at-
 65 tached to the contiguous cam-disk in the

usual way. The pin 35 is provided with two
 antifriction-rollers 37 and 37' on each end. The two inner rollers run in the slot 34, and the two outer ones slide in horizontal guides
 38, provided on each side of said slotted arm. 70 In the position shown in Fig. 2 the type-carrier is discharging and receiving a type or slug and the carrier is stationary. The dog is out of engagement with the notches, and the movement of the cam-disk will swing the
 75 arm 31 without moving the carrier. This movement will continue until the dog drops into the contiguous notch, at which time the pitman-rod will have passed the center and during the second half of its stroke will re-
 80 solve the type-carrier to the printing position, as shown in Fig. 3, and swing the arm 31 to the position shown in Fig. 4 and again set the carrier to discharge and receive a type. The carrier will remain stationary
 85 during the first half of the next stroke of the pitman, and on the last half the operation described will be repeated. The slot in the end of the arm will allow the pitman-rod to follow the parallel guides and accommodate
 90 itself to the different positions of the arm. To provide means for tripping the dog and releasing the arm 31 when the pitman-rod reaches the end of its stroke and preparatory to its beginning another, I provide a shaft 37,
 95 having a crank 38', pivotally connected to a rod 39, that has a forked end 40 to straddle the shaft 26 and provided with a lug 41, that is engaged by a cam 42 on said shaft. An arm 43 is
 100 mounted on the shaft 37 and curved inwardly toward the type-carrier and provided with an antifriction-roller 44, that engages the end of the dog 33 and trips it against the tension of its spring and disengages it from one of the
 105 notches 30 to allow the arm 31 to be swung back to the beginning of its stroke without affecting the type-carrier. A spring 45 normally holds the arm 43 out of the path of the dog 33, and the cam 42 is so arranged on its
 110 shaft that when the pitman-rod reaches the end of its stroke the arm 43 will be swung forward to trip the dog and release the type-carrier. It is desirable in a machine of this kind to provide means for temporarily locking the
 115 type-carrier during the operation of discharging one type and substituting another and also to insure the stopping of the carrier at the proper time should the ratchet mechanism fail to perform its functions. I therefore provide a series of blocks 46, having con-
 120 cave faces 47 on the periphery of the carrier. There are preferably four of these blocks integral with the carrier or not, as preferred, and adapted to be engaged by a cam-face 48 on one side of the disk 25. The operations of
 125 the disk and the carrier are so timed that the cam-face will engage one of the concave-faced blocks every quarter-revolution of the carrier and between such engagements move
 130 away from the blocks and allow the carrier

to be moved one step. The carrier will thus be held firmly during the time a type is being discharged from the holder and another one inserted, and should the ratchet fail to perform its duty the cam will nevertheless engage the contiguous block and arrest motion of the carrier. The type-holders on this carrier are preferably four in number and may be integral or not with the carrier, as preferred, and consist in this case of tapered projections or studs 49, having transverse vertical slots 50, with open ends to receive the type-slugs 51, bearing the address that it is desired to impress on the paper. The slug projects beyond the end of the lug 49 and has a longitudinal groove 52 to receive a locking-plate 53, provided on said lug. This plate allows endwise movement of the type-slug, but locks it securely against outward movement, and sidewise or lateral movement is prevented by the walls of the type-holder. The slug is held in place during the revolution of the carrier by curved stationary plates 54, that are secured to the machine-frame upon each side of the carrier close to its periphery, guide-ways 55 and 55' being formed in said plates on each side of the carrier, through which the slug is fed into and discharged from the holder. This type-carrier, as heretofore described, is similar to the one shown in my prior patent above referred to, being intermittent in its movement and arranged to operate at the same peripheral speed as the roller over which the paper passes, so that a clear sharp impression will be made of the address upon the paper. The mechanism for operating the type-carrier is similar to that shown in my patent, except in respect to the locking means. In this case, however, I employ two type-carriers instead of one and operate them alternately and am thereby able to easily and quickly adapt the machine for addressing a paper of a certain size in a given time or twice as many papers in the same time without altering the speed of the machine.

In providing means for feeding type to the carriers I arrange an upper stationary galley 56 between the type-carriers, and above the discharge end of said galley I arrange arms 57, connected by a horizontal rod 58, whereon a pusher-block 59 is slidable. This block is provided on one side with a vertical slot 60, that receives an antifriction-roller 61 on a pin 62, that is carried by a hub 63, secured on the sleeve 12. The revolution of the drive-shaft will cause the pin 62 to slide up and down in the slot 60 and move the pusher-block back and forth from one end to the other of the rod 58. Upon the lower end of the pusher-block I provide a feed-plate 63', that is adjustable on said block by means of slots 64 and screws 65 and has a centrally-arranged vertical rib 66, that is adapted to engage one end of the type-slug and feed it forward into the holder.

The position of the feed-plate with respect to the holder and upper stationary galley is shown clearly in Fig. 8, where the plate is indicated in engagement with one end of a slug and feeding it toward one of the carriers. After the rib passes by the end of the galley another slug will be moved forward and on the return stroke of the plate will be engaged and forced out of the opposite side of the galley into the other carrier. In this way I am able to utilize each movement of the feed device to advance a type-slug into one of the carriers and discharge the one that has been previously inserted. The ends of the feed-plate extend a sufficient distance on each side of the rib 66 to act as guards for the type-slugs as they are fed forward in the stationary galley and hold them in the path of the rib.

By using either one or both of the carriers in my machine and changing the feed of the type accordingly I am able to adapt my addressing-machine to two of the principal requirements of a perfecting newspaper-press—that is, making the addressing-machine capable of addressing a certain number of papers in a given time or double that number in the same time, according to whether the press is running a complete paper of a certain size at one operation or two papers of one-half the size in the same time. By using both carriers I am able to address the larger number of papers run in a given time, and by detaching one side of the machine I can adapt it for addressing the smaller number without altering the speed of the machine. It is a simple matter to adapt the machine for single or double addressing. Only a few moments are required to change its capacity to correspond to the requirements of the press. For instance, by disconnecting one of the pitman or connecting rods one type-carrier will be thrown out of operation. By changing the gears the feed-screw can be easily made to feed single instead of double, and by substituting another feed-plate on the pusher-block only one type will be fed with each complete stroke of the block instead of two.

To adapt the feed device for use with one carrier, I provide a plate 67, mounted on the lower end of the pusher-block in the same manner as the plate 63 and having a recess 68 in one end to receive the type-slug when the pusher-block is moved in one direction and a flattened surface 69 at the other end, that slips past the slugs without moving them when the pusher is on its return stroke. The surface 69 is extended sufficiently to hold the type-slugs in the galley upright while the foremost one is being fed into the carrier. To feed the type-slugs forward into the path of the plate, I provide a threaded shaft 70, mounted in bearings parallel with the shaft 19 and having a gear 71, that meshes with a gear 72 of the same size, slidably mounted on

the shaft 19. A gear 73, also mounted on said shaft and adjustable by means of a set-screw 74, engages a pinion 75 of one-half its size on the shaft 70. This arrangement of
 5 gearing allows me to drive the shaft 70 at the same speed as the shaft 19 or twice as fast, according to whether both type-carriers or only one is in use. If only one carrier is being operated, then the gears 71 and 72 will be
 10 put in mesh, and with every complete stroke of the pusher-block a type-slug will be fed forward. If both carriers are used, then the two-to-one gear will be employed, and with every complete stroke of the pusher-block
 15 two slugs will be advanced, one to be fed into the carrier as the pusher moves in one direction and the other to be delivered to the other carrier as the pusher moves in that direction.

20 The device for engaging and advancing the slugs in the galley consists, preferably, of an interiorly-threaded sleeve 76, mounted on the shaft 70 and having arms 77, that overhang the stationary galley and carrying a
 25 plate 78, that is mounted upon one end of a pin 79, slidably supported in the arms 77 and held forward against the slugs by a spring 80. A guide-rod 81 prevents the arms 77 from raising up away from the type until a point
 30 near the feed device is reached, where the guide-rod is provided with an outwardly-extending offset 82, and a cam 33 is mounted on the side of the galley to engage the arms and lift them and the plate 78 away from the
 35 type. This is a similar device to that shown and described in my patent above referred to.

The type-slugs for use in the addressing-machine are of the same kind and arranged in substantially the same way in the galleys
 40 as described in detail in my patent, a series of movable storage - galleys 84 being provided, whereto the slugs are delivered after leaving the machine and from which they are fed into the stationary feed - galley in the
 45 manner just described, the open end of the movable galley being arranged to coincide with the receiving end of the stationary galley. The movable galley is supported on a
 50 suitable frame 85, that is capable of supporting a series of them arranged side by side, where they may be left until the type is required for use in the machine.

To return the type-slugs to the storage-galley in the same relative position they occupied when taken from the feeding-galley,
 55 it is necessary to turn each slug around end for end. To accomplish this, I employ a curved guideway 86 in connection with each carrier, one end of said way coinciding with
 60 the guideway at the discharge end of the type-holder during the stationary period of the carrier and the other end being open and leading into the receiving end of a lower stationary galley 87. A pusher-plate 88 is provided in said lower galley and operated by

means of a forked arm 88', that is engaged by a cam 89 on the shaft 23. This pusher-plate engages the type-slugs as they are discharged from the curved ways and kicks
 70 them down into the storage-galley 84, that is arranged beneath the shelf upon which the galleys are arranged when the type is fed forward into the upper stationary galley.

The following is a brief description of the operation of the machine. The press being in
 75 motion and the printed paper passing over the roll beneath the type-carriers, the galley containing the type bearing the addresses the operator wishes to impress on the paper is placed in position to deliver the slugs to the
 80 stationary galley. The type-carriers are set in motion, assuming that it is desired to use both of them, and as the pusher-block reciprocates the type will be alternately fed to the right and to the left into the type-holders. 85
 The revolution of the carriers will bring the type into contact with the paper, one carrier operating alternately with respect to the other one, and as fast as one address is printed and the type brought around to the starting-point it is discharged into the curved
 90 ways and returned to the storage-galley. The paper after being printed will pass into the folding mechanism and when discharged from the press will be ready to be mailed. 95

I claim as my invention—

1. The combination, with a roll over which a web of paper passes, of type-carriers operating to impress addresses upon the paper as it passes over said surface, and mechanism
 100 arranged to operate said carriers to print a certain number of addresses in a given time or double that number in the same time, substantially as described.

2. The combination, with a roll over which
 105 a web of paper passes, of type-carriers operating alternately and intermittently to impress addresses upon the paper as it passes over said roll, means for operating both of
 110 said carriers step by step or one of them independently of the other, substantially as described.

3. The combination, with a roll over which a web of printed paper passes, of type-carriers operating to impress addresses upon the
 115 paper as it passes over the roll, means for operating said carriers, and a feed device arranged to deliver type to said carriers alternately.

4. The combination, with a roll over which
 120 a web of paper passes, of two revolving type-carriers provided on their peripheries with transversely - arranged type-holders having open ends, means for intermittently operating said carriers, and a feed mechanism disposed between said carriers and arranged to
 125 deliver type to their holders alternately, substantially as described.

5. The combination, with two revolving
 130 type-carriers provided on their peripheries

with transversely-arranged type-holders having open ends, of a reciprocating pusher-block arranged between said carriers, a feed-plate mounted on said block, a galley, and means for feeding the type-slugs into the path of said feed-plate, substantially as described.

6. In an addressing-machine, the combination, with revolving type-carriers and means for temporarily operating the same, of type-holders transversely arranged on the periphery of said carriers and having open ends, a sliding pusher-block provided between said carriers, a drive-shaft operatively connected therewith, a feed-plate adjustably mounted on the lower end of said block, and a galley arranged to deliver type into the path of said feed-plate, substantially as described.

7. The combination, with two revolving type-carriers having an intermittent step-by-step movement and provided at intervals on their peripheries with transversely-arranged type-holders having open ends, of a feed-galley provided between said carriers, guideways leading from the discharge end of said galley to said holders, and means operating between said carriers for alternately feeding type to said holders, substantially as described.

8. The combination, in an addressing-machine, with revolving type-carriers provided on their peripheries with transverse type-holders having open ends, of a reciprocating feed device operating between said carriers to alternately feed the type to said holders, means for imparting an intermittent step-by-step movement to said carriers, and means for locking them during their stationary periods.

9. The combination, with a revolving type-carrier having peripheral type-holders and blocks with concave faces, of means for operating said carrier step by step, and a cam-disk arranged to engage said blocks during the stationary periods of said carrier, for the purpose specified.

10. The combination, with a revolving type-carrier having peripheral type-holders, of a continuously-operating shaft, a connecting-rod thereon, a loosely-mounted arm connected to said rod and having a ratchet connection with said carrier to intermittently operate the same, and means for tripping said ratchet mechanism to release said arm and allow said carrier to remain stationary at predetermined intervals, substantially as described.

11. The combination, with a revolving type-carrier having peripheral type-holders, a continuously-operating mechanism, a ratchet and dog for temporarily locking said type-carrier and said continuously-moving mechanism together, and an oscillating tripping-arm provided in the path of said dog to disengage it from said ratchet and release said

carrier at predetermined intervals, substantially as described.

12. In an addressing-machine, a revolving type-carrier having a peripheral type-holder provided with a transverse groove open at each end to allow the insertion and discharge of a type, and a plate mounted on the periphery of said holder and overhanging said groove to enter a longitudinal groove or depression in the type, substantially as described.

13. The combination, with a carrier provided with peripheral type-holders open at each end extending transversely of said carrier in a plane substantially parallel with the radius of said holder, of stationary guard-plates provided on each side of said carrier to prevent the premature endwise movement of the type in said holders, and said plates having guideways through which said type is inserted and discharged from said holder, substantially as described.

14. In an addressing-machine, the combination, with a revolving intermittently-operating type-carrier provided on its periphery with transverse type-holders having open ends, of means for feeding type into one end of said holders, each type entering a holder ejecting the preceding one through the opposite end of the holder, a substantially semicircular way having open ends, its receiving end coinciding with the discharge end of a holder during the stationary period of the carrier, and a storage-galley provided at the discharge end of said curved way.

15. In an addressing-machine, the combination, with two revolving intermittently-operating type-carriers provided on their peripheries with transverse type-holders having open ends, of a feed device operating to feed type endwise into said holders, each type as it enters a holder ejecting the preceding one through the open discharge end of the holder, and substantially semicircular guideways having open ends arranged with their receiving ends to receive the type discharged from said holders, a storage-galley between the open discharge ends of said ways, and a kicker device operating in said galley between said ways, substantially as described.

16. In an addressing-machine, the combination, with a revolving intermittently-operating type-carrier provided on its periphery with transverse type-holders having open ends, of means for feeding type into one end of said holders, each type as it enters a holder ejecting the preceding one, a storage-galley and a typeway arranged to receive the type from the discharge ends of said holders during the stationary periods of said carrier and deliver them in a reverse position to said storage-galley, substantially as described.

17. In an addressing-machine, the combination with a revolving intermittently-operating type-carrier provided with peripheral

type-holders, of means for feeding type to said holders, a storage-galley and a substantially semicircular guideway having its receiving end arranged to receive type from said holders and its discharge end arranged to deliver the type with their ends reversed to said storage-galley, substantially as described.

18. The combination, with an impression-surface over which a web of printed paper passes from the printing-press cylinders to the folding mechanism, of type-carriers provided with peripheral type-holders operating to impress addresses upon the paper as it passes over said surface, mechanism for moving said carriers intermittently the addresses being impressed on the paper while the carriers are in motion, mechanism for filling said type-holders with type during the stationary periods of said carriers and one of said carriers performing its printing operation while another is receiving and discharging type, substantially as described.

19. The combination, with an impression-surface over which a web of paper passes, of type-carriers operating to impress addresses upon the paper as it passes over said surface, and mechanism arranged to operate said carriers to print a certain number of addresses in a given time or double that number in the same time according to the number of papers running on the press during that time without altering the speed of said carriers.

20. The combination, with an impression-surface over which a web of paper passes, of type-carriers operating to impress addresses upon the paper as it passes over said surface, and a feed device arranged to deliver type to said carriers alternately.

21. The combination, with an impression-surface over which a web of paper passes, of type-carriers operating intermittently to impress addresses upon the paper as it passes over said surface, means for alternately operating said carriers, and a feed device arranged to deliver type to said carriers during their stationary periods, substantially as described.

22. The combination, with an impression-surface over which a web of paper passes, of type-carriers operating to impress addresses upon the paper as it passes over said surface, a feed device operating between said carriers and arranged to deliver type to said carriers, and means for operating said carriers step by step, substantially as described.

23. The combination, in an addressing-machine, with a revolving type-carrier provided with a series of type-holders, of a feed device operating to deliver type to said holders and discharge the same therefrom, a

curved way arranged to receive type from said holders, each type pushing the preceding one ahead of it through said way and the type being reversed in passing from one end of said way to the other, a storage-galley, and a kicker device provided in connection with said galley.

24. The combination, in an addressing-machine, with revolving type-carriers provided with type-holders, of a feed device operating between said carriers to deliver type to said holders, means for imparting a step-by-step movement to said carriers, and means for locking them during their stationary periods.

25. The combination, with an impression-surface over which a web of paper passes, of type-carriers operating to impress addresses upon the paper as it passes over said surface, a feed device operating between said carriers and arranged to deliver type to said carriers, each type as it is delivered to a carrier ejecting the preceding type.

26. The combination, with revolving type-carriers, of type-holders mounted thereon, a feed device operating between said carriers and comprising a reciprocating support and a feed-plate adjustably mounted thereon, and a galley having its discharge end in the path of said feed-plate.

27. The combination, with the revolving intermittently-operating type-carriers provided with type-holders, of a reciprocating feed device operating between said carriers to deliver type to said holders, said feed device comprising a pusher-block and an adjustable feed-plate having a centrally-arranged vertical rib to engage and advance the type with each movement of said block, substantially as described.

28. The combination, with an impression-surface over which a web of printed paper passes from the printing-press cylinders, of a type-carrier provided with type-holders operating to impress addresses upon the paper as it passes over said surface, mechanism for moving said carrier intermittently means engaging the periphery of said carrier to lock it during its stationary periods, the addresses being impressed on the paper while the carrier is in motion, and mechanism for filling said type-holders with type during the stationary periods of said carrier, substantially as described.

In witness whereof I have hereunto set my hand this 1st day of December, 1904.

ADELBERT B. HUNKINS.

Witnesses:

LOTTIE J. HUNKINS,
H. J. DROST.