

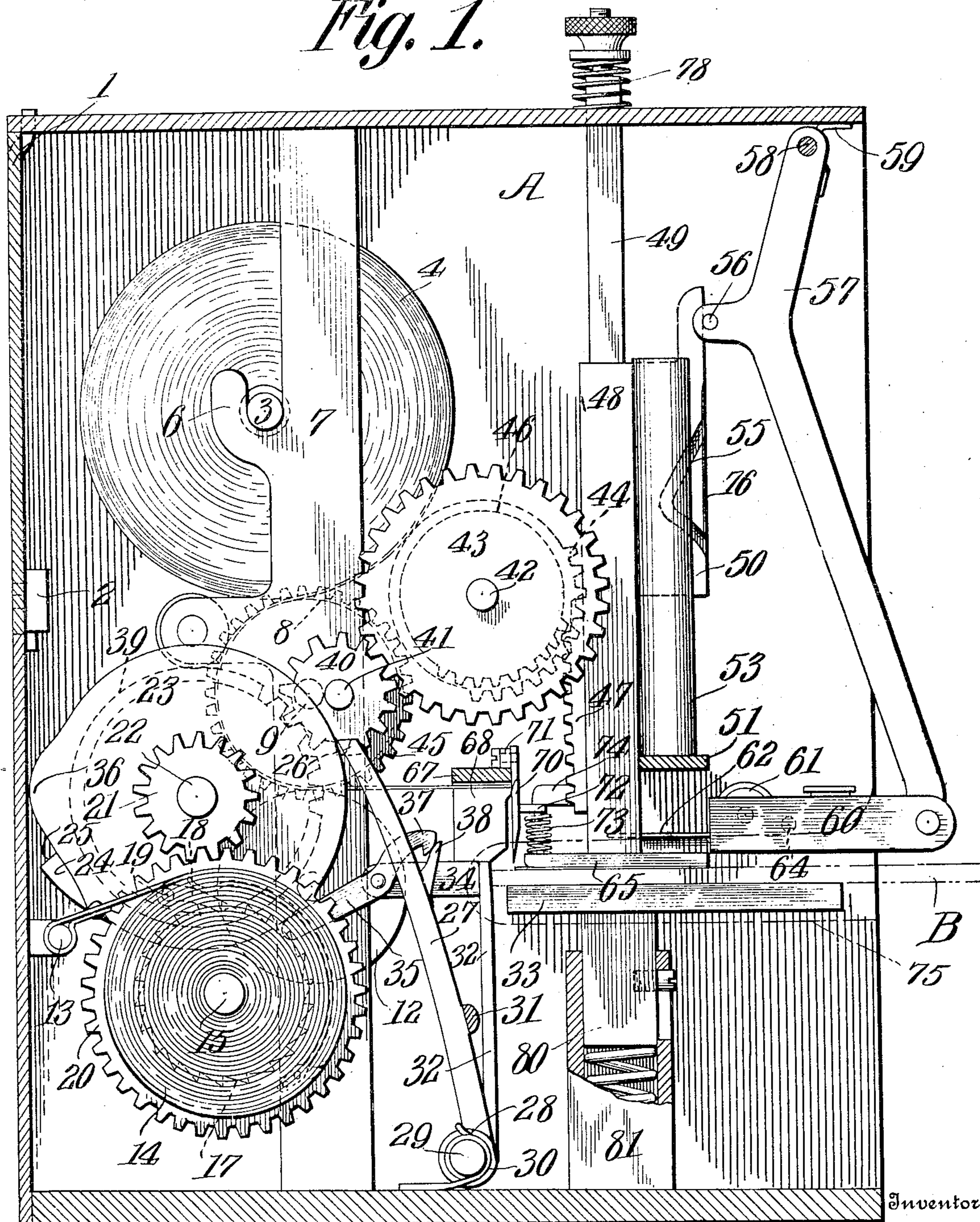
H. S. BREWINGTON.
 AUTOMATIC MACHINE FOR ATTACHING POSTAGE STAMPS.
 APPLICATION FILED AUG. 27, 1908.

938,820.

Patented Nov. 2, 1909.

4 SHEETS—SHEET 1.

Fig. 1.



Witnesses

Frank B. Woodew

William H. Schweizer

Henry F. Brewington.

By E. Walton Brewington.

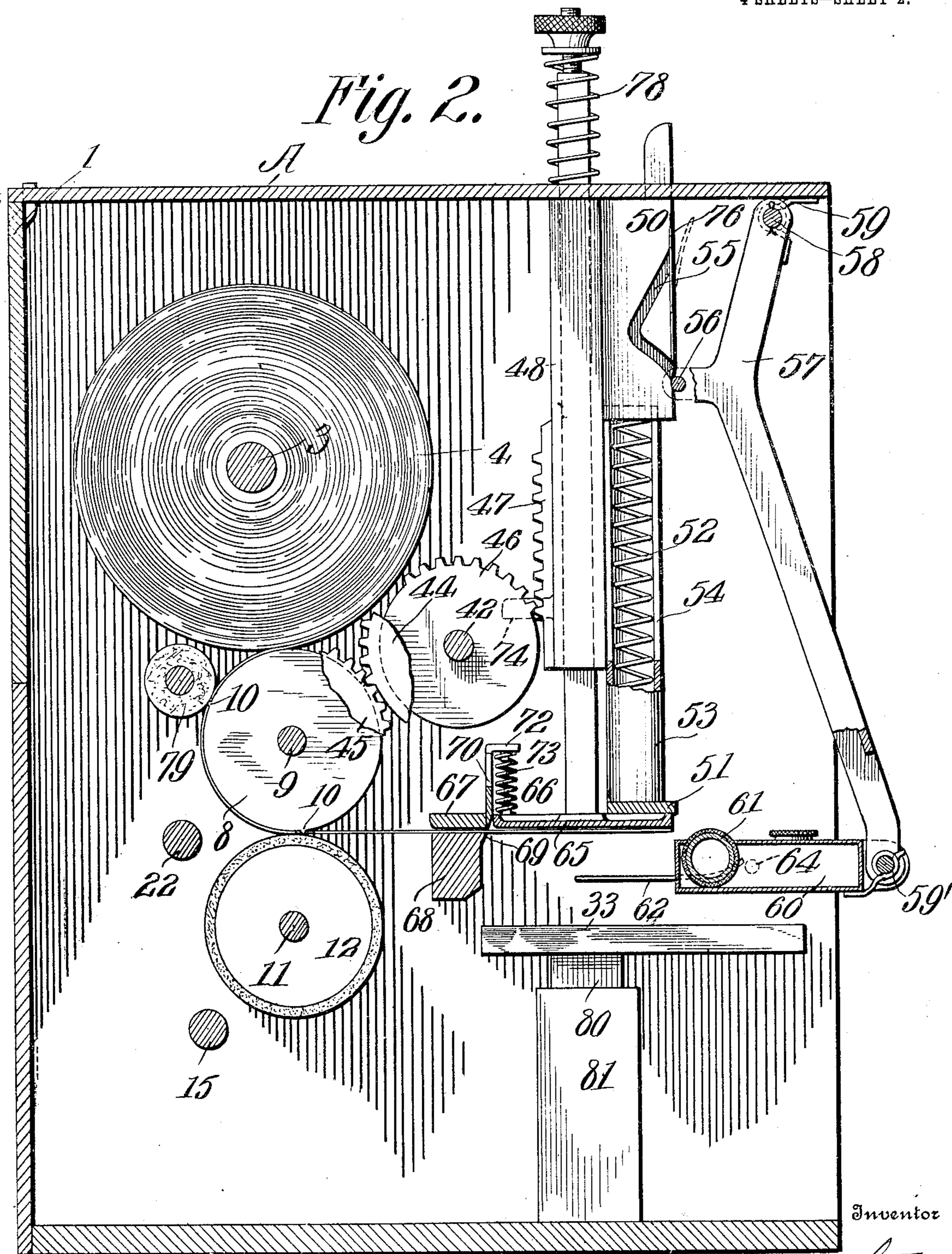
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4 SHEETS—SHEET 2.



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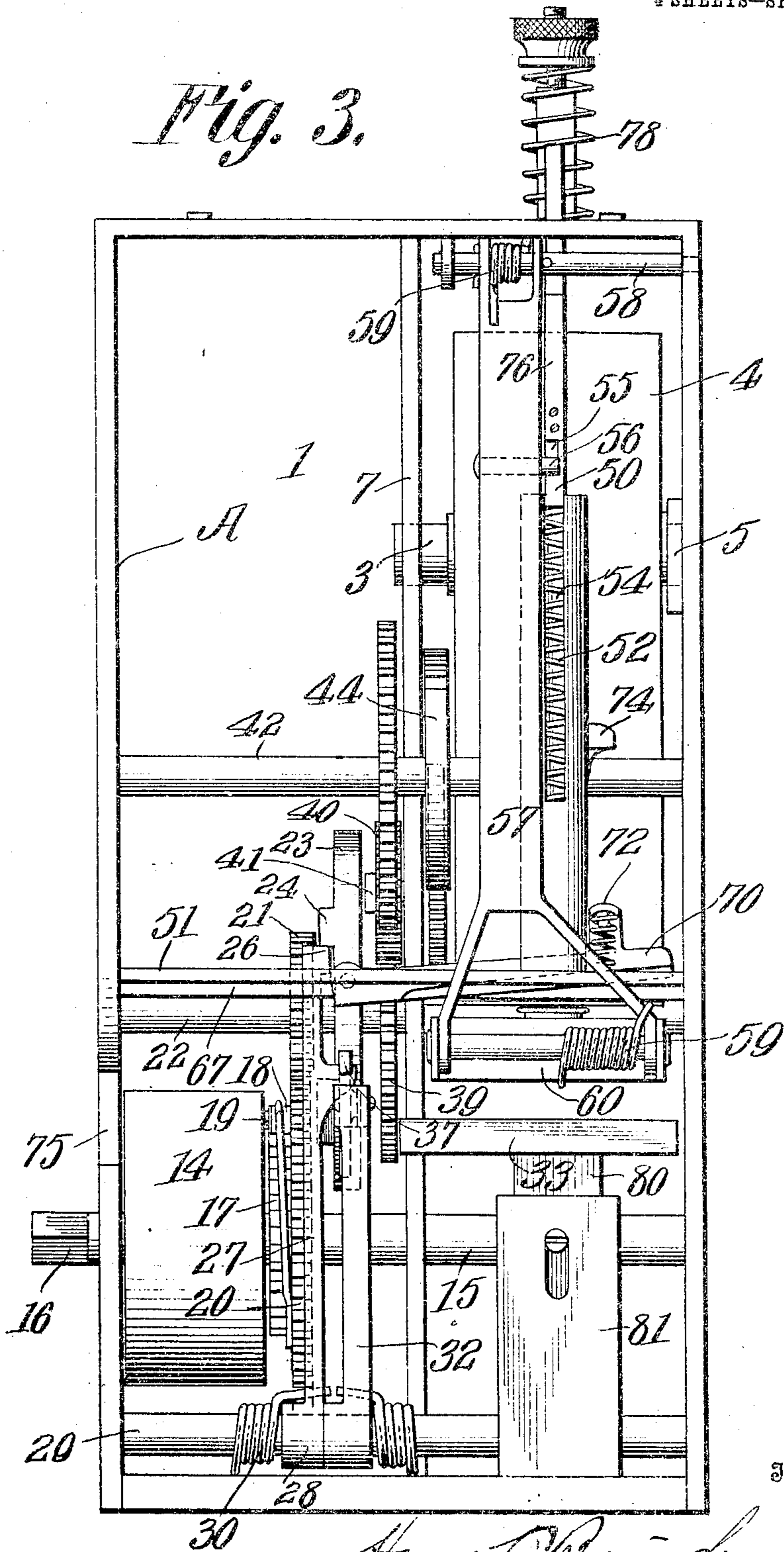
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4 SHEETS—SHEET 3.

Fig. 3.



Inventor

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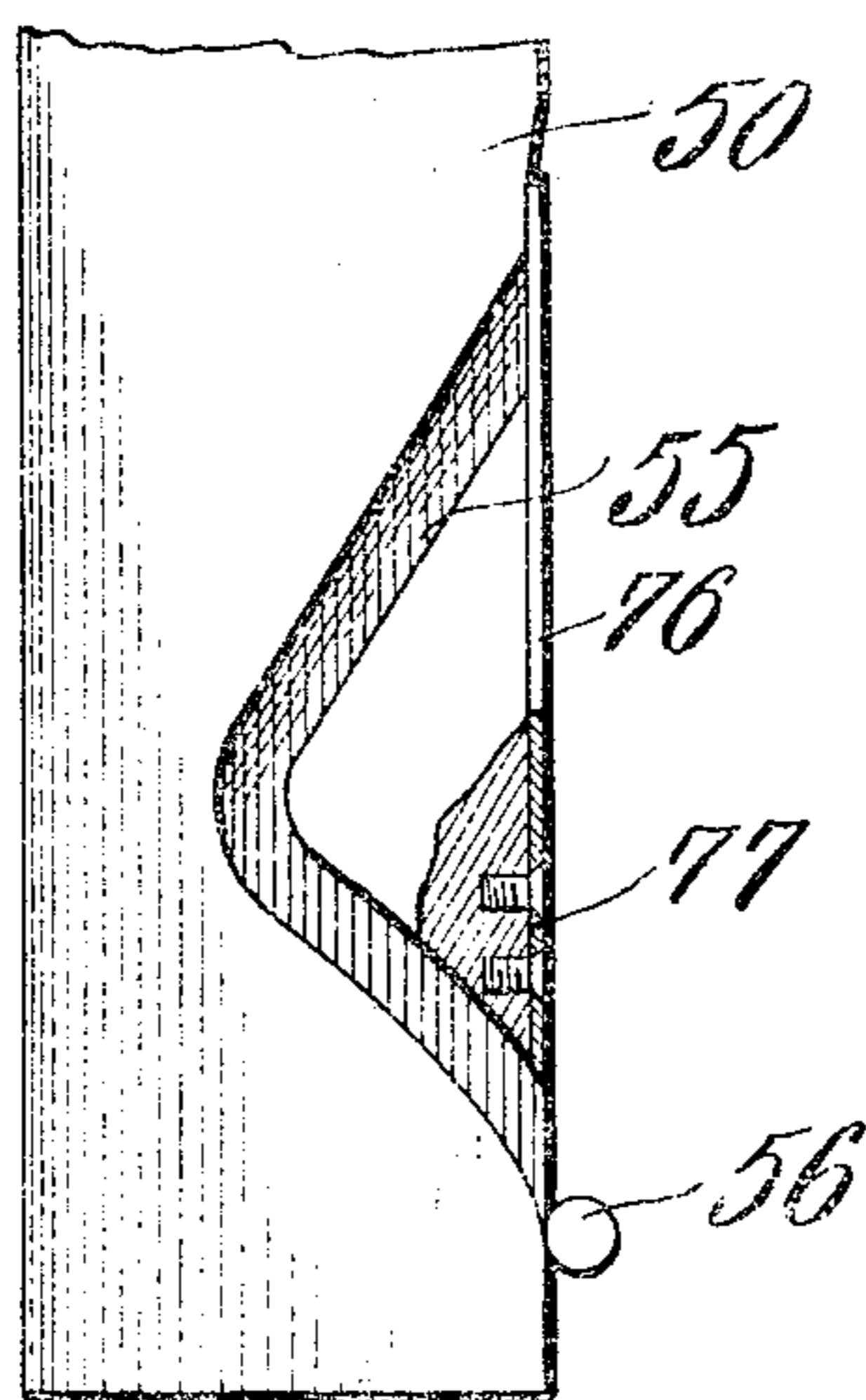
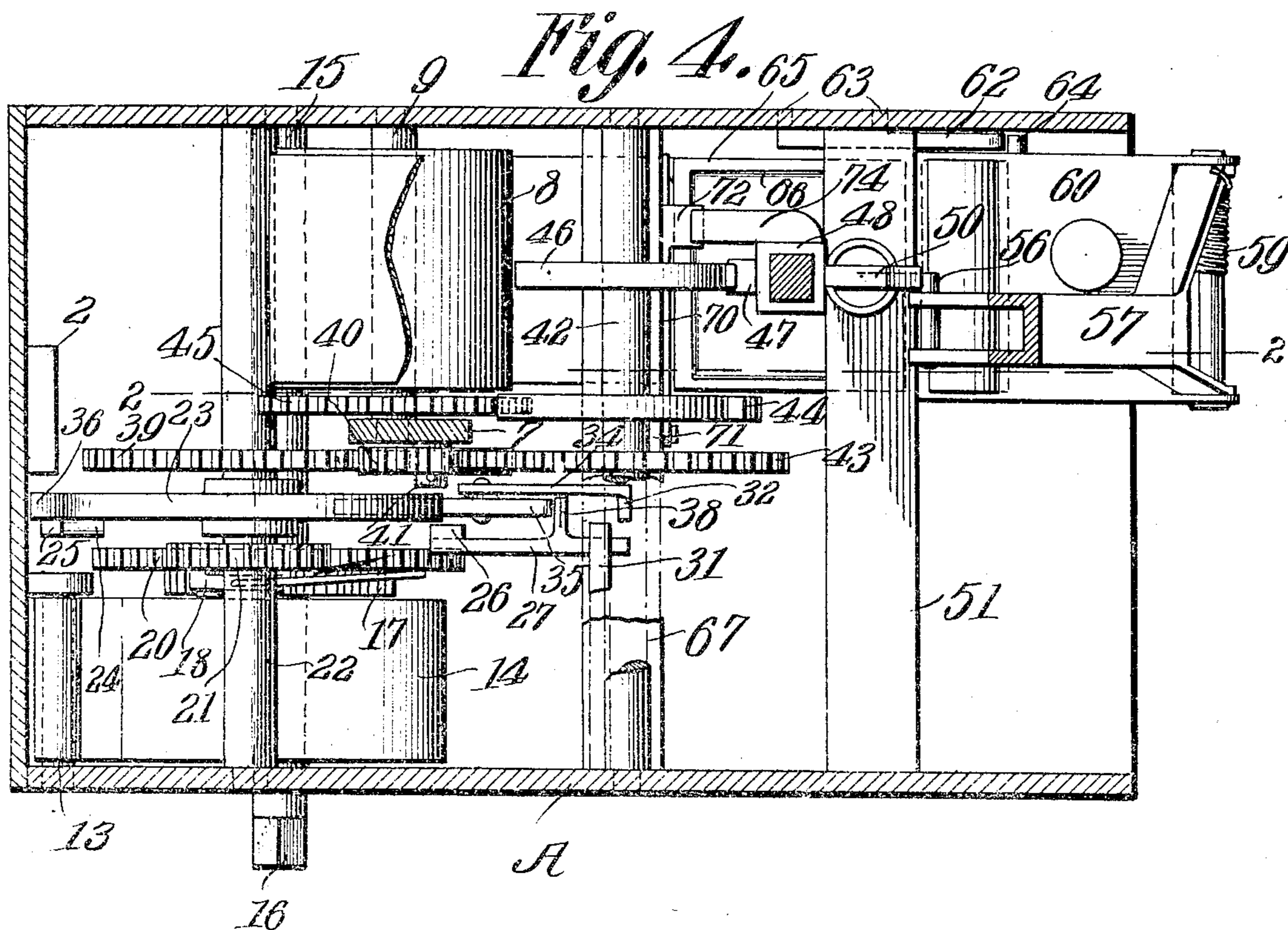


Fig. 5.

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UNITED STATES PATENT OFFICE.

HENRY S. BREWINGTON, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO
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AUTOMATIC MACHINE FOR ATTACHING POSTAGE-STAMPS.

938,820.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed August 27, 1908. Serial No. 450,457.

To all whom it may concern:

Be it known that I, HENRY S. BREWINGTON, a citizen of the United States, residing at Baltimore city, State of Maryland, have
5 invented certain new and useful Improvements in Automatic Machines for Attaching Postage-Stamps, of which the following is a specification.

This invention refers to machines for placing postage stamps on envelopes or the like,
10 and has for its object the production of a machine in which the stamps are fed from a roll of stamps of single width, between a pair of feed rollers, one of which is provided
15 with projections engaging the perforations between the stamps, thus presenting consecutively the stamps properly spaced under a presser foot where each stamp is moistened, then cut from the strip, and pressed on the
20 envelop, the complete operation being automatic, and the mechanism producing the same being started by the insertion of the envelop into the machine. Provision is made whereby a stamp is not moistened until after
25 the insertion of the envelop for which the stamp is intended, and also for letters or packages of different thicknesses.

With these and other objects in view, the invention consists of certain novel features
30 of construction and combination of parts as hereinafter described and particularly pointed out in the appended claims, it being clearly understood that changes in the structure disclosed may be made within the scope
35 of the claims without departing from the spirit of the invention or sacrificing any of its advantages.

In the drawings similar characters designate like parts in the several figures.

40 Figure 1, is a side elevation of the invention with the side of the casing removed, the mechanism being in the position assumed as the stamp is applied to the envelop. Fig. 2, is a vertical sectional view on the line 2—2
45 of Fig. 4, there being parts broken away and parts in section, the mechanism shown being in the normal position. Fig. 3, is a front elevation with the mechanism in the position shown in Fig. 2. Fig. 4, is a plan view
50 with parts in section, and with the stamp roll removed, the mechanism being in the

position shown in Fig. 1, and Fig. 5, is a detail of the cam plate.

A, indicates the casing of the device which is closed on the two sides and back, as at 55 the top, and a suitable bottom is provided. The front of the machine is open and the rear is provided with a removable section 1 having a lock as indicated at 2.

Mounted on a shaft 3 is a roll of stamps 60 4, the same being a continuous tape of single stamps. The shaft 3 is mounted at one end in a bearing 5, on the side of the frame or casing and at the other end is supported in a U-shaped bearing 6 formed on an upright 65 bar 7. The said shaft 3 is so mounted as shown, that it may readily be removed for the insertion of another roll of stamps. From the roll 4 the stamp tape leads over a feed roller 8 mounted on a shaft 9, said shaft 70 having bearings in the upright 7 and side of the casing respectively.

The circumference of the feed roll 8 is equivalent to the combined length of a predetermined number of stamps, and it may 75 be provided with slightly pointed projections 10 extending transversely of the roller and circumferentially spaced a distance equal to the length of a stamp. The said projections are adapted to engage the perforations between adjoining stamps, of the 80 tape, and in case the stamp tape is not perforated the teeth 10 will pierce the tape at the juncture of two stamps, thereby positively feeding the stamps properly spaced 85 to the shear. Mounted on a shaft 11 and acting in conjunction with the roller 8 is another roller 12 covered with rubber or other resilient material thereby insuring frictional contact between the rollers and 90 tape.

Anchored to a pin 13 is one end of a coil spring 14, the other end being fastened to the shaft 15, which shaft extends transversely of the machine and has bearings in 95 the sides of the casing, one end projecting through the side a sufficient length to be squared as indicated at 16, for the reception of a key or crank for winding the spring 14. Secured to the shaft 15 is a ratchet wheel 17, 100 engaging the teeth of which is a spring pressed dog 18, pivotally secured at 19 to a

gear 20 loosely mounted on the shaft 15 and meshing with a pinion 21, said pinion being fixed to a shaft 22 having bearings in the opposite side of the casing. The said shaft 5 22 has also fixed thereon a cam disk 23, and offset thereon is a lug or stop 24, the shoulder 25 of which is adapted to engage and rests normally against a lug 26 offset from the top of lever 27, said lever being pivoted at 10 28 to a stub shaft 29, there being a spring 30 coiled around the shaft 29 with one end engaging the lever 28; while the other end rests on the bottom of the casing, thereby tending to keep the lever against a stop 31. Hinged 15 on the shaft 29 is a second lever 32, likewise spring pressed, the table 33 serving as a stop therefor. Extending rearwardly from the upper end of the lever 32 is an arm 34, having pivoted at its rear end a lever 35, one end 20 of which is acted upon by a cam projection 36 on the cam disk 23 as will presently appear. The other end of the lever 35 is formed into a hook 37 which normally remains in hooked relation on a projection 38 25 secured to the lever 27. Fixed to the shaft 22 is a gear 39 meshing with an idle pinion 40, mounted on a stub shaft 41 fixed to the upright 7.

Fixed to a shaft 42 is a gear 43 having the 30 same diameter as the gear 39 and likewise in mesh with the idler 40. Another gear 44 of the mutilated type is also fixed to the shaft 42, the teeth of which gear are adapted to engage, when rotated, the teeth of a gear 35 45 fixed on the feed roller shaft 9, so that when motion is imparted to the mutilated gear 44 it will engage the gear 45 and thereby rotate the feed roller 8 one-third of a revolution or the length of one stamp. Still 40 another mutilated gear 46 is fixed to the shaft 42, the teeth of which gear engage the teeth of a rack 47, said rack being fixed to a squared sleeve 48, slidably mounted on a square plunger 49, which also has a limited 45 vertical movement. Secured to the squared sleeves 48 is a cam plate 50, and interposed between the bottom of this plate and a transversely extending bar 51, is a helical spring 52, which tends to return the cam plate 50 50 together with the rack 47 to normal position after each stamping operation.

Secured to the bar 51 is a tube 53 which serves as a guide for the spring 52 and also guides the plate 50 in a vertical slot 54. 55 Formed in the plate 50 is a cam groove 55, and as the cam plate descends from the position shown in Fig. 2 to that shown in Fig. 1, this groove engages a pin or roller 56 projecting from an arm 57 pivoted at its upper 60 end to a shaft 58, having coiled thereon a helical spring 59, the ends of which are so disposed as to overcome the tendency of the arm 57 to swing outwardly in seeking its equilibrium. Pivotaly secured to the lower

end of and carried by the arm 57 is a tank 65 60 adapted to contain water for moistening the adhesive side of the stamps. Mounted for rotation at one end of this box is a moistening roller 61, covered with an absorbent material such as felt or the like, a 70 segment of which roller projects above, while the greater portion rotates within the receptacle 60 in contact with the moistening agent. It will be noted, the receptacle 60 75 has been referred to as containing water, but this does not preclude the use of mucilaginous substance therein in which case the stamps would not be coated with mucilage prior to putting in the machine. To the side of the casing adjacent the receptacle 60 is secured 80 a leaf spring 62 its width extending at a right angle to the side of the casing and as it is fixed at one end as indicated at 63 the other end may readily adjust itself as occasion requires, as will be explained later. Se- 85 cured to the receptacle 60 on the side adjacent the spring 62 is a laterally extending pin 64 adapted to engage the spring 62 as will hereinafter be more fully described.

The plunger 49 terminates at its lower end 90 in a presser foot 65, countersunk as indicated at 66 Figs. 2 and 4, for the purpose of arresting any excess lubricant that may be applied to the plunger, thereby preventing the soiling of the matter to which stamps are 95 being applied.

Extending transversely of the machine is a bar 67 which bar, besides serving to help give the necessary rigidity to the frame, carries a block 68 spaced sufficiently therefrom 100 for the stamp tape to be fed between. One edge 69 of the said block 68 serves as the stationary blade of a pair of shears, while the other blade 70 is pivoted to a lug 71 rising from the bar 67. Extending laterally 105 from the shear blade 70 is a lug 72 and interposed between this lug and the presser foot 65 is a helical spring 73 which returns the blade 70 to normal position after having severed a stamp from the tape. Carried by 110 the rack 47 is a projection 74 in vertical alinement with the lug 72, and as the rack 47 descends the projection 74 will engage the lug 72, thereby operating the shear blade 70.

Let it be assumed that the machine is in 115 normal position which is as follows: The shoulder 25 on the cam disk 23 rests against the lug 26 of the lever 27, the lever 32 rests against the table 33 as before described and the hook 37 is engaging the lug 38. The 120 spring 14 having been placed under tension, and it being desired to place a stamp on an envelop indicated in dotted lines at B Fig. 1, the envelop is grasped by the lower edge, with the address upward, and inserted be- 125 tween the tank 60 and table 33, with the side of the casing adjacent thereto serving as a guide against which to guide the envelop.

The opposite side of the casing is cut away as indicated at 75. The envelop is moved rearwardly until it moves the lever 32 to the position shown in Fig. 1, during which movement the lever 27 has also been moved to the position shown, by reason of the hook 37 being over the lug 38. As the lever 27 is moved back, the lug 26 thereof is disengaged from the lug 24 on the cam disk 23. As soon as released said disk will start to rotate by reason of the action of spring 14 exerted thereon through the intermediary of the gears 20 and 21. As the disk 23 continues to revolve the cam projection 36 will engage the free end of the lever 35 thereby disengaging the hook 37 from the lug 38, whereupon the lever 27 will be carried by the spring 30 back to its normal position to stop the cam disk when it has made a complete revolution. During this revolution the shaft 42 has also made a complete revolution through the intermediary of the gears 39, 40 and 43. As the said shaft 42 rotates, the teeth of the gear 46 engage the teeth of the rack 47, depressing the sleeve 48. During the downward movement of the cam plate 50 the pin 56 enters the cam groove 55, causing the arm 57 to swing inwardly, carrying the moistening agent therewith. As the receptacle 60 is moved inwardly, the pin 64 engages under the turned-up end of the spring 62, thus depressing the said receptacle and keeping the roller 61 from coming in contact with the free end of the stamp as the roller is carried back, which would cause the stamp to become disarranged. As the pin 64 clears the end of spring 62, the receptacle 60 is swung upwardly by the spring 59' and the roller 61 applies moisture to the stamp on the outward movement of the arm 57, during which movement the pin 64 is above spring 62, the upturned end of which it depresses until free, which then springs to the position shown in dotted lines in Fig. 2.

To prevent the arm 57 from being operated during the return movement of the cam plate 50, there is provided a leaf spring 76 secured to the said plate at 77, the free end of which covers the upper end of the cam groove 55, so that when the pin 56 leaves the cam groove said spring will cover the groove, thus preventing the pin from entering same on the return movement of the cam plate. About the time the pin 56 leaves the cam groove, the lug 74 strikes lug 72 and starts to sever the stamp, which operation is completed at the time the sleeve 48 strikes the presser foot 65, which it then carries downwardly to complete the application of the stamp. As the presser foot moves down, a spring 78 is placed under tension, for returning the presser foot to normal position. As soon as the teeth on the gear 46 leave the teeth on rack 47, the presser foot 65 and

sleeve 48 will be returned to their normal position, and the teeth on the gear 44 will engage the gear 45 and cause same to feed another stamp under the shear. By reference to Fig. 2, it will be seen when the mechanism is brought to a stop, the last tooth of the mutilated gear 44 is allowed to rest between two adjacent teeth on the gear 45, so as to effectively stop the stamp feed should there be any tendency by reason of the momentum of the rollers to continue the feed. A roller 79 is also provided to prevent displacement of the stamp tape on the roller 8 which might be caused by the roller 4 continuing to unroll after a sufficient length has been drawn. The table 33 is mounted on a spring pressed plunger 80 mounted in a sleeve 81, upward movement being limited by a pin and slot connection, thus providing for differences in thickness of parcels to be stamped.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a machine for affixing stamps to envelops, a prime mover, means for holding the prime mover against action, means for feeding stamps into position to be applied to an envelop, means for moistening each stamp, while in said position, a plunger for forcing a moistened stamp onto an envelop, connections between the prime mover and the several operative parts for causing the actuation thereof in proper sequence, and means actuated by an inserted envelop for releasing the prime mover to action.

2. In a machine for affixing stamps to envelops, a prime mover, means for holding the prime mover against action, means for feeding stamps into position to be applied to an envelop, means for moistening each stamp, means for forcing a moistened stamp onto an envelop, connections between the prime mover and the several operative parts for causing the actuation thereof in proper sequence, and means actuated by the prime mover for stopping the latter after a limited active movement.

3. In a machine for affixing stamps to envelops, a prime mover, a stamp affixing mechanism driven by the prime mover, a detent for holding the prime mover against action, means under the control of an inserted envelop for actuating the detent to release the prime mover and for holding the detent temporarily in the release position, and means actuated by the prime mover for releasing the detent to action to stop the prime mover after a period of action.

4. In a machine for affixing stamps to envelops, a plunger for forcing the stamps onto the envelops, a knife in the path of the plunger and engaged thereby before the

plunger becomes active to the stamp, means for feeding a strip of connected stamps intermittently into position to be affixed to the envelops, means for moistening the bottom of the first stamp of the strip, while in said position, and means for actuating the plunger first to actuate the moistener, next into engagement with the knife to sever a stamp from the strip, and finally to force the severed moistened stamp onto the envelop.

5. In a machine for affixing stamps to envelops, a plunger for forcing the stamps onto the envelops, a knife in the path of the plunger and engaged thereby before the plunger becomes active to the stamp, means for feeding a strip of connected stamps intermittently into position to be affixed to the envelops, and means for moistening the stamp to be severed, actuated by the plunger in advance of the engagement of the latter with the knife.

6. In a machine for affixing stamps to envelops, a plunger for forcing the stamps onto the envelops, a reciprocating moistener, a spring guide acting to hold the moistener away from the stamps when moving in opposition to the latter and releasing the moistener to engagement with the stamps when traveling in the same sense, and means for causing the reciprocation of the moistener comprising a lever carrying the moistener and a cam on the plunger acting on the lever prior to the engagement of the plunger with the moistened stamp.

7. In a machine for affixing stamps to envelops, a motor, a train of gearing leading from the motor, comprising shafts, and connecting gear wheels, a cam disk on one of the shafts of said train, means for holding said cam disk normally, stationary, releasing means, a stamp holding device within the frame, means for feeding the stamps comprising rollers actuated through said gearing, one of which rollers is made resilient, and the other provided with projections, adapted to engage the perforations between adjacent stamps, a cutter for severing a stamp, means for moistening the stamp, and means for securing the stamp to mailing matter.

8. In a machine for affixing stamps to envelops, a motor comprising a coil spring about a shaft, a train of gearing leading from the motor comprising shafts, and connecting gear wheels, a cam disk on one of the shafts, means for holding the cam disk stationary, releasing means, a stamp holding device within the frame, feed mechanism actuated by the train of gearing, and limited by the movement of the cam disk, a cutter, and means of securing the stamp on mail matter.

9. In a machine for affixing stamps to envelops, comprising a frame, a motor, a train

of gearing leading from the motor comprising shafts, and connecting gear wheels secured thereto, a disk carried by one of said shafts, means for alternately holding and releasing said disk, a stamp holding means within the frame, a pair of feed rollers, one of which is made resilient, and the other provided with projections to engage the perforations between adjacent stamps, means controlled by the disk to limit the extent of the feed movement, means for moistening the forward stamp, a cutter to separate it from the strip, and means for securing it upon an envelop.

10. In a machine for affixing stamps to envelops, comprising a motor, shafts geared thereto and to each other, ratchet mechanism connecting the motor with the shafts, a cam disk carried by one of the shafts, means for holding a strip of stamps, means actuated by the gearing for feeding the strip forward, means limiting the feed movement, means for moistening the leading stamp, a cutter for separating one stamp from the strip, and levers forming a part of the operating means, and cooperating with the cam disk to start and stop the mechanism, said levers being in the path of the matter entering the machine whereby a single movement of the levers imparts motion to the remaining parts whereby a single stamp is affixed to an envelop with each revolution of the machine.

11. In a machine for affixing stamps to envelops, comprising mechanism for holding and feeding a strip of stamps, a reciprocating stamp applying device, a cutter, means adapted to actuate the stamp strip feeding mechanism, and means to limit the movement of the same to bring the first stamp to position for cutting moistening and applying, means for moistening the first stamp in such position, a cam carried by the plunger for actuating the moistener, and means to impart motion to the cutter and applying device consecutively, thereby causing the parts to operate in proper sequence all from a single source of power.

12. In a machine for affixing stamps to envelops, a motor, a train of gearing leading from the motor, and comprising shafts and intermeshing gears mounted thereon, a cam disk on one of the shafts, a detent normally held in engagement with the cam disk, to hold the gearing and motor inactive, a lever pivoted in the path of an envelop being entered into the machine, and forced by the envelop against the detent to release it, and connections whereby the movement of said lever caused by the entrance of said envelop, will move the detent out of engagement with the cam disk and permit the motor and gearing to operate.

13. In a machine for affixing stamps to envelops, a motor, a train of gearing leading

from the motor, and comprising shafts and intermeshing gears mounted thereon, a cam disk on one of the shafts, a detent normally held in engagement with the cam disk to
5 hold the gearing and motor inactive, a lever pivoted in the path of an envelop being entered into the machine and forced by the envelop against the detent to release it, an arm projecting from said lever, and a lever
10 pivoted to said arm, one end of which is hooked to engage the detent and the other

end arranged to be actuated by a lug on the cam disk to disengage said hook, and permit the detent to resume its engagement with the cam disk to stop the machine.

15

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

HENRY S. BREWINGTON.

Witnesses:

KATHERINE M. MANNION,
MARY M. MAGRAW.