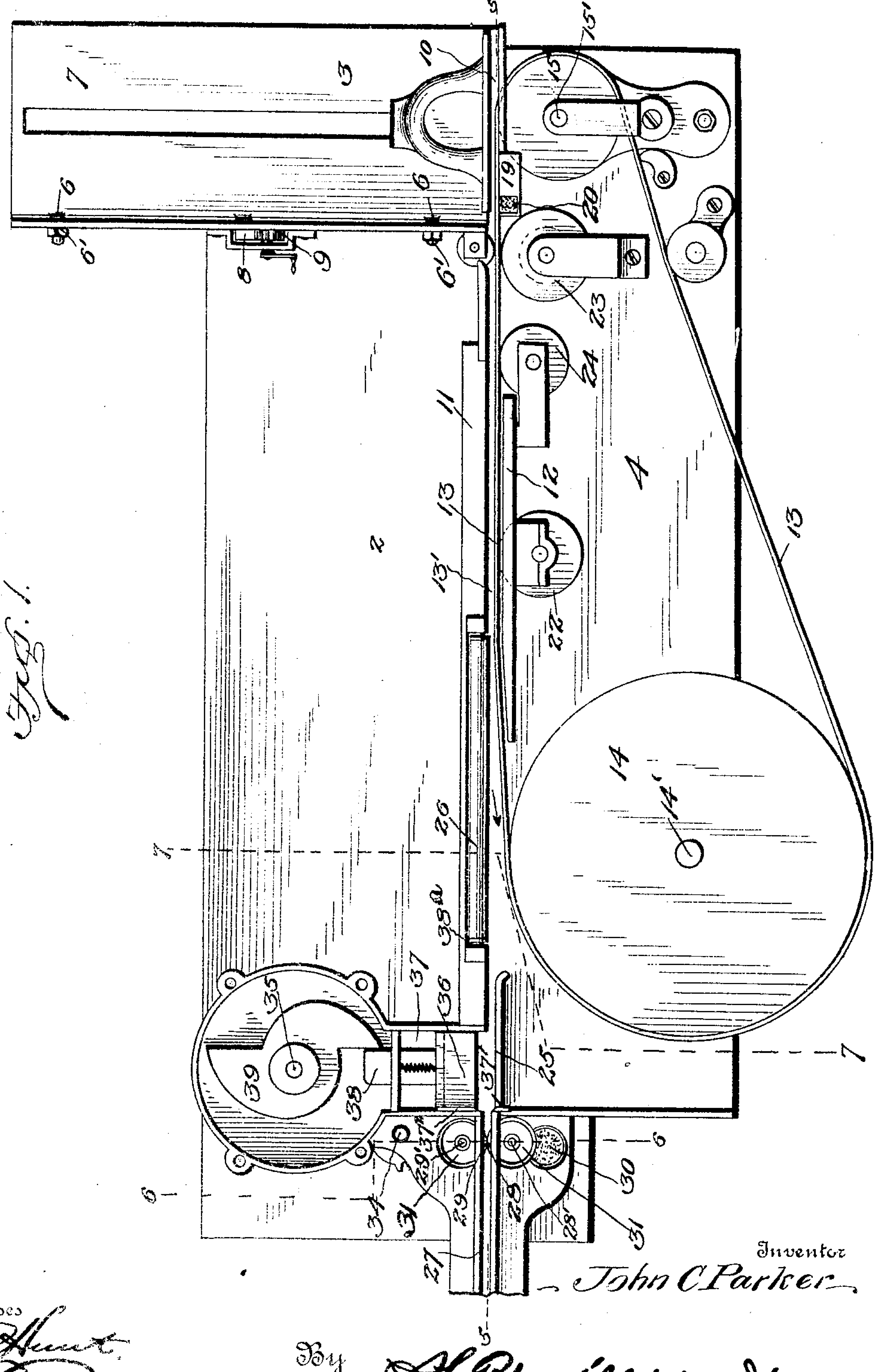
No. 765,097. PATENTED JULY 12, 1904.

J. C. PARKER.

ENVELOP SEALING AND STAMP AFFIXING MACHINE.

APPLICATION FILED NOV. 13, 1902.

NO MODEL. 4 SHEETS—SHEET 1.



Witnesses

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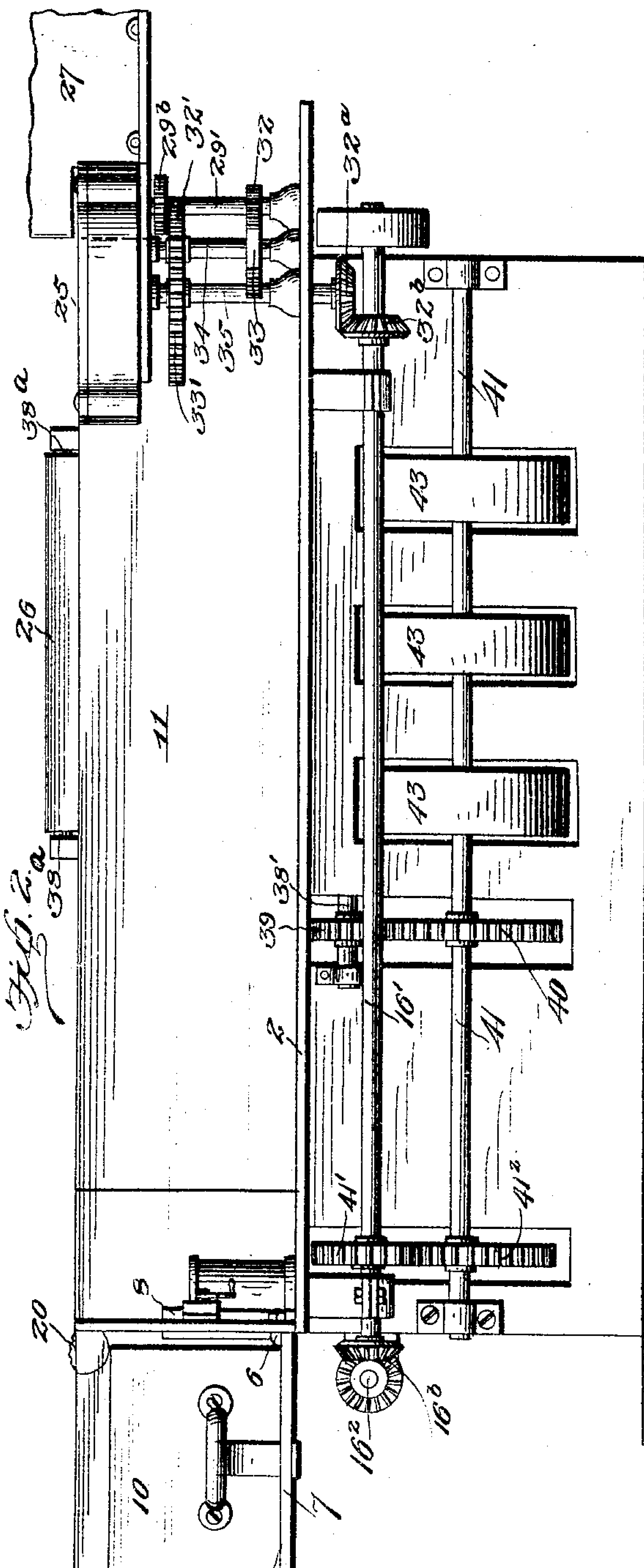
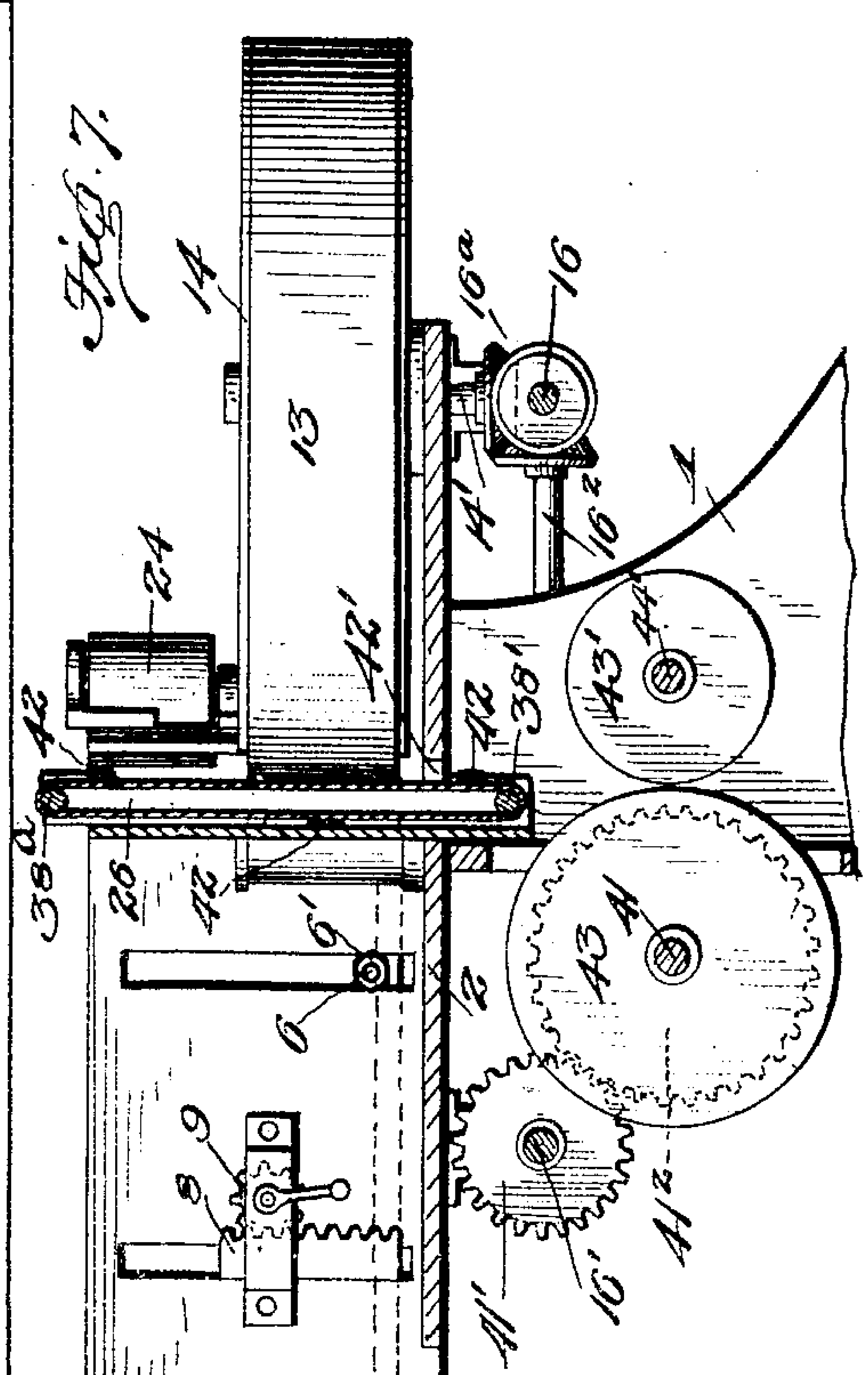
NO MODEL. 4 SHEETS—SHEET 2.





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NO MODEL. 4 SHEETS—SHEET 3.

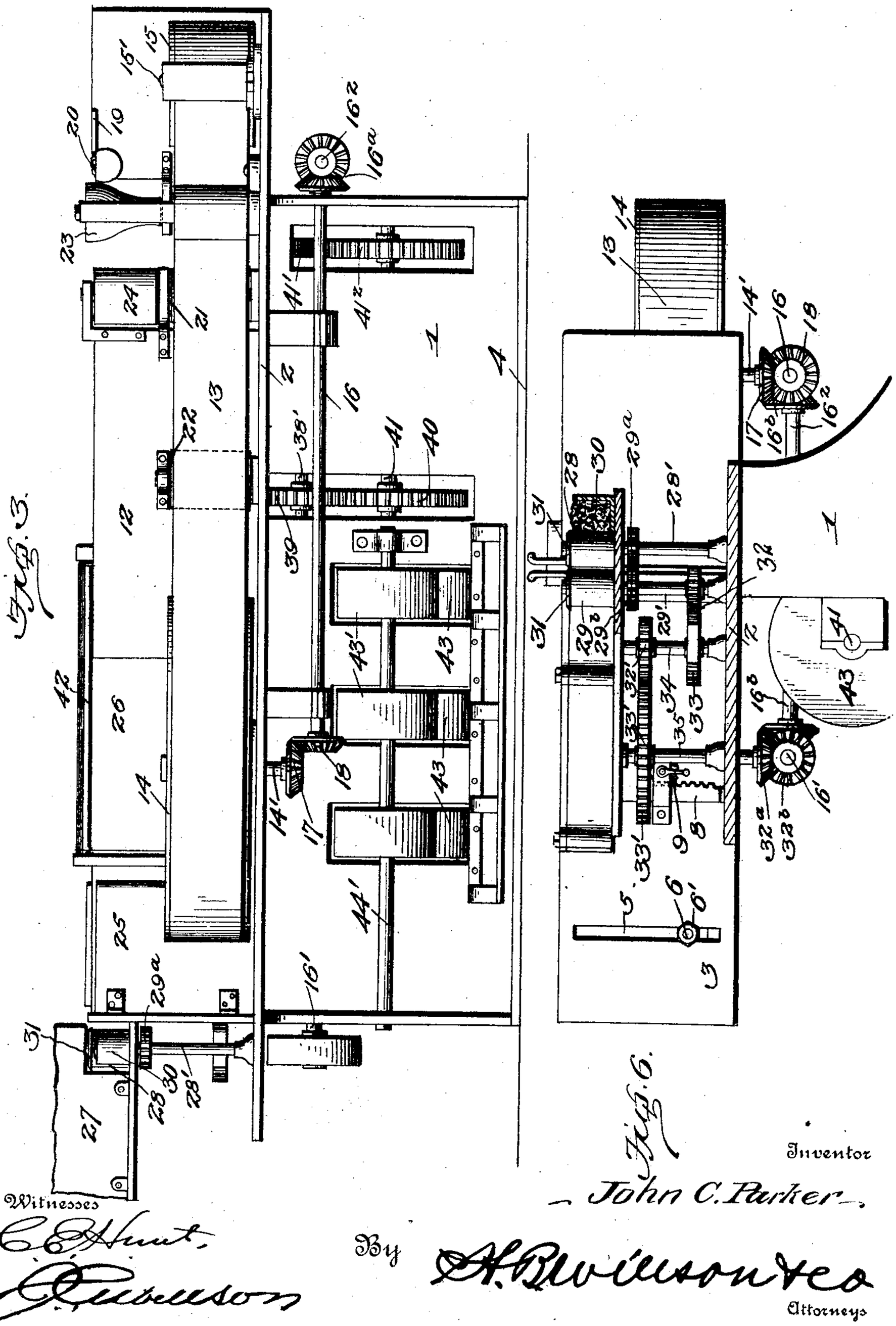

Fig. 3.

Fig. 6.

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Fig. 5.

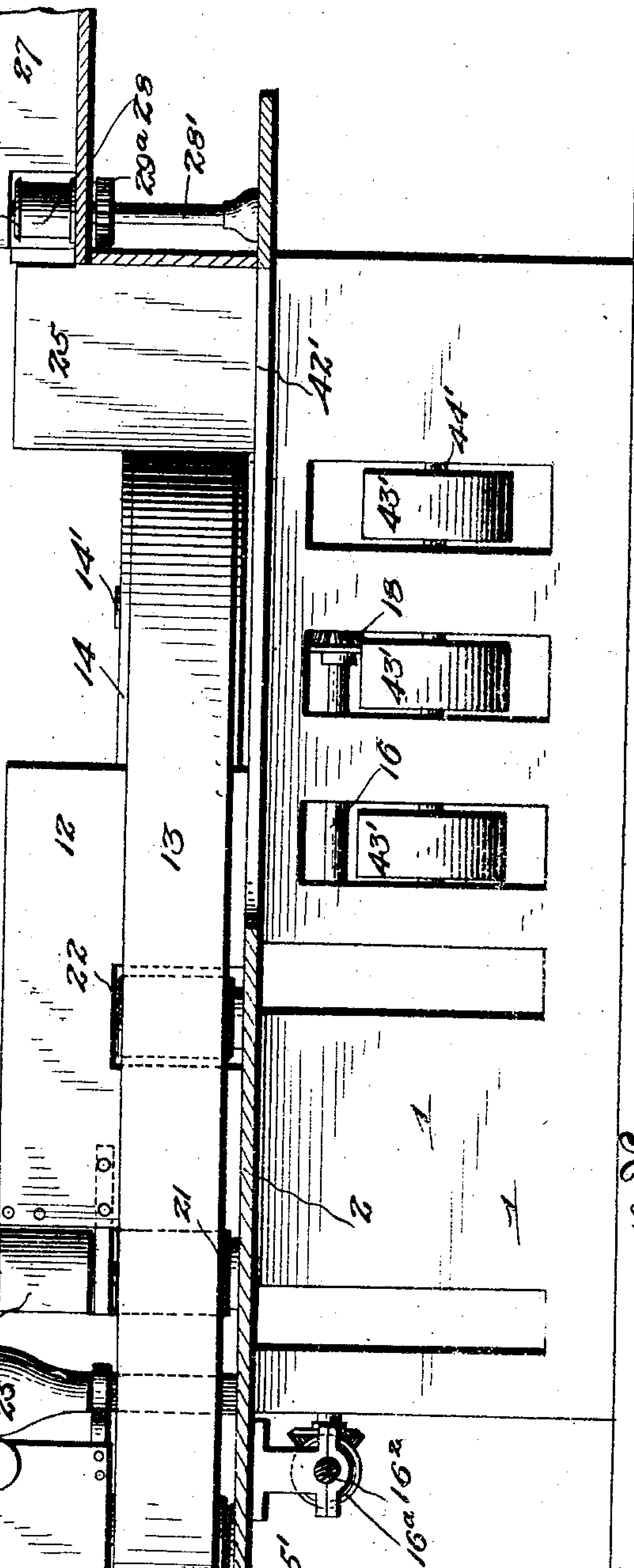
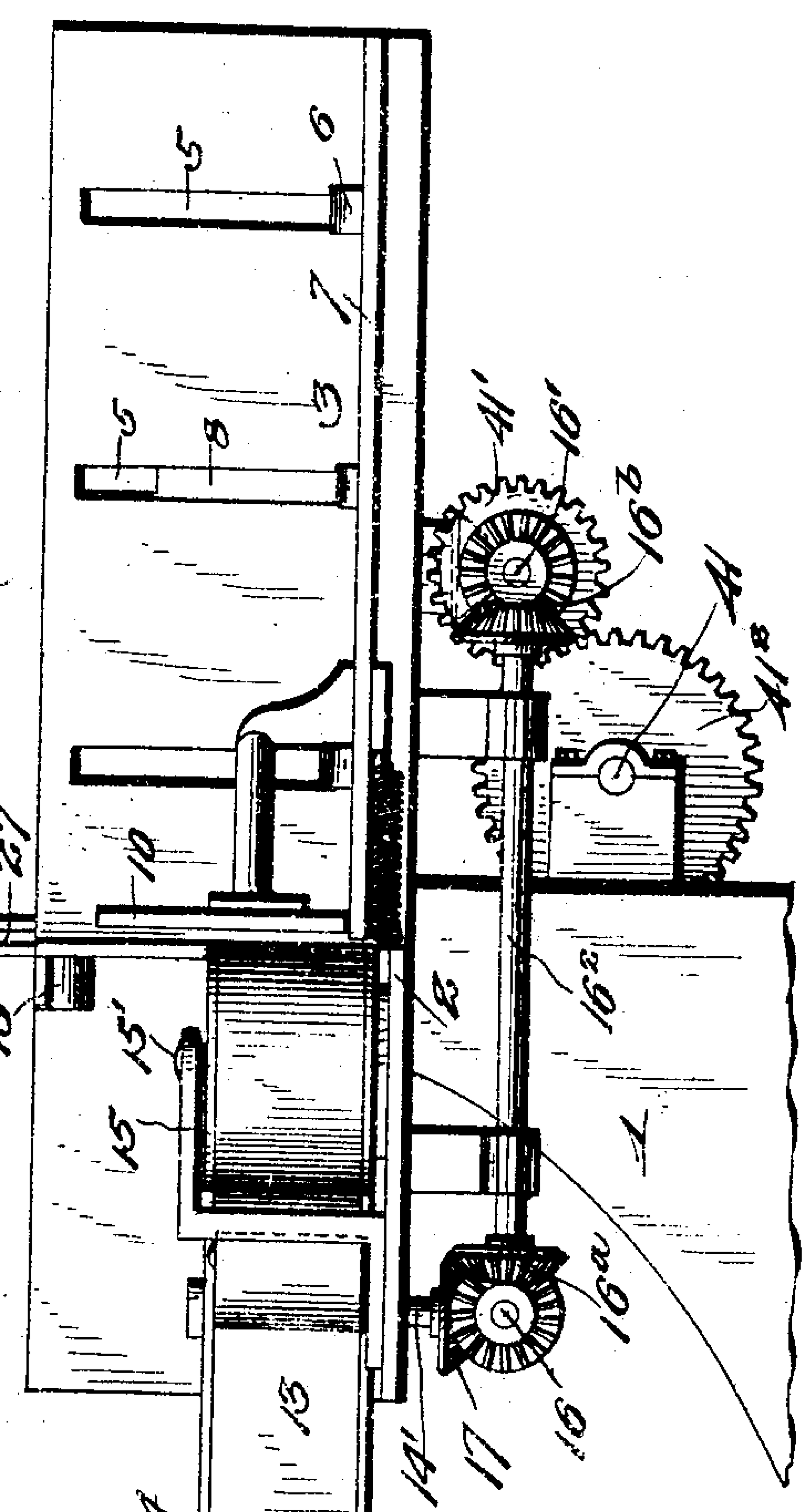


Fig. 4.



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No. 765,097. Patented July 12, 1904.

UNITED STATES PATENT OFFICE.

JOHN C. PARKER, OF OMAHA, NEBRASKA.

ENVELOP-SEALING AND STAMP-AFFIXING MACHINE.

SPECIFICATION forming part of Letters Patent No. 765,097, dated July 12, 1904.

Application filed November 13, 1902. Serial No. 131,234. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. PARKER, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Envelop-Sealing and Stamp-Affixing Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a machine for sealing and stamping envelops. Its object is to provide a machine of this character which is simple of construction, efficient in use, and comparatively inexpensive of production and which automatically and successively performs the several operations of sealing the envelops, stamping them, and ejecting the sealed and stamped envelops into or onto a suitable shelf or receptacle.

With these and other objects in view the invention consists in certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a top plan view of an envelop sealing and stamping machine constructed in accordance with my invention. Fig. 2 is a front elevation. Fig. 3 is a rear elevation. Fig. 4 is an end elevation. Fig. 5 is a longitudinal section on the line 5 5 of Fig. 1. Fig. 6 is a detail section on the line 6 6 of Fig. 1. Fig. 7 is a front to rear section on line 7 7 of Fig. 1.

Referring now more particularly to the drawings, 1 represents a frame suitably supported and constructed and provided with a horizontal platform or table 2, a feed-chute 3 at the front and one end of said table, and a rear delivery-shelf 4 below said table to receive the sealed and stamped envelops.

The side wall of the chute 3 is formed with vertical guide-slots 5 to receive guiding projections 6 on the bottom 7 of said chute, and in one or more of these slots is fitted a rack 8, engaged by a crank-actuated gear 9, whereby the bottom 7 may be raised or lowered to suit different widths of envelops. Preferably the guiding projections 6 are in form of threaded bolts or stems, which are engaged by nuts 6′, by means of which the bottom 7 may be clamped at the desired adjusted position to the side walls of the chute. Suitable means may be provided to lock the gear 9 against rotation, if desired.

The filled envelops to be sealed and stamped are stacked on edge in the chute 3, with their rear sides facing inwardly and their flaps opened at a right angle and overlapping throughout the stack. A spring-actuated plunger 10 maintains the envelops in stacked position and forces the same automatically toward the table 2, so as to be engaged one by one by the feed mechanism and fed to the sealing and stamping devices.

A wall 11 divides the table or platform 2 longitudinally in line with the inner end of the chute 3 and in conjunction with a parallel wall 12 forms a guide-passage 13′ for the working stretch of a feed-belt 13. This belt 13 passes around pulleys 14 and 15, carried by vertical shafts 14′ and 15′, and receives motion from a shaft 16 through the medium of beveled gears 17 and 18 on the contiguous ends of said shaft 16 and the shaft 14′. The shaft 16 is driven from a drive-shaft 16′ by intermeshing sets of bevel-gears 16^a 16^b and an intermediate shaft 16^2. As each envelop is fed up into engagement with the belt the gummed flap thereof is supported and held open by a short shelf 19, at one end of which in the direction of feed of the envelop is located a sponge-cup or moistener 20, which moistens the gummed surface of said flap. The belt travels from right to left in Fig. 1, as indicated by the arrow therein, and its working stretch is engaged and guided by friction guide-rolls 21 and 22, above and in the longitudinal plane of which are flap closing and sealing rolls 23 and 24, said rolls being suitably journaled upon the frame. The roll 23 is cone-shaped and disposed adjacent to the moistener 20, and its wall is so tapered as to turn down the flap of the advancing envelop, so that as the envelop passes the roll 24 the latter will press the same gently against the wall 11, thereby causing the flap to adhere to

the rear side of the envelop and the latter to be sealed. The further movement of the envelop under the action of the feed-belt brings the right-hand end thereof between the wall 11 and a short supporting-wall 25 and the central portion of the envelop in rear of a delivery belt or apron 26, in which position the envelop is adapted to be first stamped and then discharged upon the shelf 4. As shown, the wall 25 is disposed, substantially, in line with the wall 12, but is spaced therefrom for passage of the belt 13 from the guide-passage 13′ to the pulley 14. Hence the two walls 12 and 25 are practically continuous, and the space between them constitutes a slot for passage of the belt.

The stamp-affixing mechanism comprises a stamp-holder 27, adapted to hold the stamps in sheets or strips, which are fed therefrom into the guide-passage 13′ by feed-rolls 28 and 29 and moistened by the roll 28, whose surface is kept wet by a sponge-cup or moistener 30. These rolls carry cutting-disks 31, which sever the strips of stamps horizontally along their perforated lines and are mounted upon shafts 28′ and 29′, provided with intermeshing gears 29^a and 29^b, the shaft 29′ also being provided with a pinion 32, meshing with a mutilated gear 33 on a parallel shaft 34, driven by spur-gears 32′ and 33′ from a shaft 35, driven by beveled gears 32^a and 32^b from the drive-shaft 16′. These gears 32 and 33 operate the rolls 28 and 29 twice on each revolution of said shaft 34.

Each time a moistened stamp is projected from the holder 27 it is engaged by and pressed into contact with the envelop by a spring-retracted plunger 36, sliding in a casing 37 and provided with a stem 38, which is engaged by the working projections of a double cam 39, which projections operate to project the plunger twice on each revolution of shaft 34 and simultaneously with the movement of the feed-rolls 28 and 29. Just previous to the affixing of the stamp by the plunger 36 the stamp is severed from the strip by cutting-knives 37′ and 37^2, the former fixed to the holder 27 and the latter carried by and operated with said plunger 36. The delivery-apron 26 is mounted upon upper and lower shafts 38^a and 38′, and upon the shaft 38′ is a pinion 39, meshing with a gear 40 on a counter-shaft 41, which counter-shaft is driven from the drive-shaft 16′ by the gears 41′ and 41^2. On the apron are two equidistant projecting strips 42, one of which engages the envelop after the stamp has been applied thereto and connects the envelop with the apron, whereby the latter conducts the same downward through a feed-slot 42′. The apron is so geared up that it makes one complete course of travel on each revolution of shaft 34, and the action of the strip 42 is so timed as to engage the two envelops stamped on each revolution of said shaft immediately after the stamping operation. On the shaft 41 are gripping-rolls 43, which cooperate with companion rolls 43′ on a shaft 44′, these rolls serving to grip the envelop as it projects down through the slot 42′.

It will of course be understood that the stamp-holder 27 may be made of any desired length and depth to receive different-sized sheets of stamps or strips of stamps of different lengths—*i. e.*, made up of any desired number of stamps. I have illustrated it fragmentarily in the drawings from lack of space to show its proper relative size. In the operation of the stamp-feeder it will be understood that the rolls 28 and 29 feed the sheet of stamps bodily out from holder 27 and the cutters 31 cut off the lower row or strip of stamps from the sheet and that the stamps of said lower row are individually separated as they in turn project from the holder 27 by the cutting-knives 37′ 37^2 under the action of plunger 36. As the body of the sheet feeds out it is grasped by the operator or attendant and turned toward the front of the machine, so as to keep it clear of the wall 11 and apron 26. At the time each stamp of the lower row is fully projected from the holder 27 the rolls 28 and 29 cease operation and hold the sheet immovable while the projected stamp is severed from the lower row by the knives 37′ 37^2. After one row or strip of stamps has been severed from the sheet the latter, which is completely fed out of holder 27 during such operation, is placed back in holder 27, and the operation is repeated as before until all the stamps are separated and used.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction, operation, and advantages of my improved machine for sealing and stamping envelops will be readily apparent without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. An envelop sealing and stamping machine, comprising a suitable table or support, a series of devices for successively feeding the envelops on edge, holding open and moistening the flap of the envelop, turning down the flap of the standing envelop, sealing the flap, moistening and feeding a stamp into position for use, severing said stamp from a strip, and affixing the stamp to an envelop, and mechanism for operating said devices, substantially as described.

2. In an envelop-stamping machine, stamp-affixing mechanism comprising a stamp-recep-

tacle adapted for holding a sheet of stamps, rolls for moistening and feeding the stamps therefrom, knives operated by the rolls for severing the sheet of stamps into strips, a stationary knife, a reciprocatory plunger carrying a coacting knife, said knives and plunger being adapted to first sever the projecting stamp from the strip and then press the same against the envelop, a spring for normally holding the plunger in retracted position, and means for periodically operating the plunger against the tension of said spring, substantially as described.

3. In an envelop-stamping machine, a vertical guideway having a supporting-plate adapted to hold an envelop vertically on edge, a stamp-holder in line with the guideway, means for moistening and feeding a strip of stamps into the guideway, a stationary knife between the stamp-holder and supporting-plate, a stamp-affixing plunger reciprocatory transversely of the guideway and toward and from said supporting-plate, and a knife carried by the plunger and coacting with said stationary knife to sever a stamp from the strip at the time said stamp is pressed against the envelop by the plunger, substantially as described.

4. In an envelop-stamping machine, and in combination with a drive-shaft, a vertical guideway for the envelop, means for feeding the envelop on edge along said guideway, a stamp-holder in line with the guideway, means for feeding a strip of stamps therefrom, a stamp-affixing plunger reciprocatory transversely of the guideway, means for severing a projecting stamp from the strip simultaneously with the pressure of the same against the envelop, a cam for operating the plunger, a shaft carrying said cam, gearing for periodically operating said cam, and connections between said gearing and the drive-shaft, substantially as described.

5. An envelop sealing and stamping machine, embodying means for moistening and sealing the flap of an envelop, in combination with envelop-feeding means, and stamp-affixing mechanism comprising a holder for a strip of stamps, means for intermittently feeding the strip therefrom to project one stamp at a time, means for moistening and severing the projected stamp from the strip, a plunger for pressing the moistened and severed stamp against the envelop, and a double cam for intermittently projecting said plunger, substantially as described.

6. In an envelop-stamping machine, a stamp-affixing plunger, stamp feeding and moistening rolls, a compound cam for periodically reciprocating said plunger, shafts carrying the rolls and cam, a drive-shaft, gearing between said drive-shaft and one of the aforesaid shafts, and gearing between the latter-named shafts to periodically operate the rolls and plunger, substantially as described.

7. In a machine of the character described, and in combination with successively-operating flap moistening and sealing and stamp-affixing devices, means for feeding the envelop in an upright position in a horizontal line on edge past said devices, and means for operating said devices to act upon the upright envelop, substantially as described.

8. In a machine of the character described, and in combination with successively-operating flap moistening and sealing and stamp-affixing devices, means for feeding the envelop in an upright position in a horizontal line on edge past said devices, a guide for the envelop having a discharge-slot, a vertically-movable feed-apron provided with gripping devices for discharging the envelop through said slot, and means for operating the several parts to act upon the upright envelop, substantially as described.

9. An envelop sealing and stamping machine having a shelf provided with a feed-chute, a discharge-slot, and a guideway, means for feeding the envelop in an upright position along the guideway, means for holding open and moistening the flap of the envelop, means for turning down and sealing the moistened flap, means for feeding a strip of stamps into the guideway and moistening the same, means movable transversely of the guideway for severing a projecting stamp and affixing the same to the envelop, and a vertically-movable member for discharging the sealed and stamped envelop down through said discharge-slot, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN C. PARKER.

Witnesses:
W. A. SAUNDERS,
A. L. SCHNURR.