

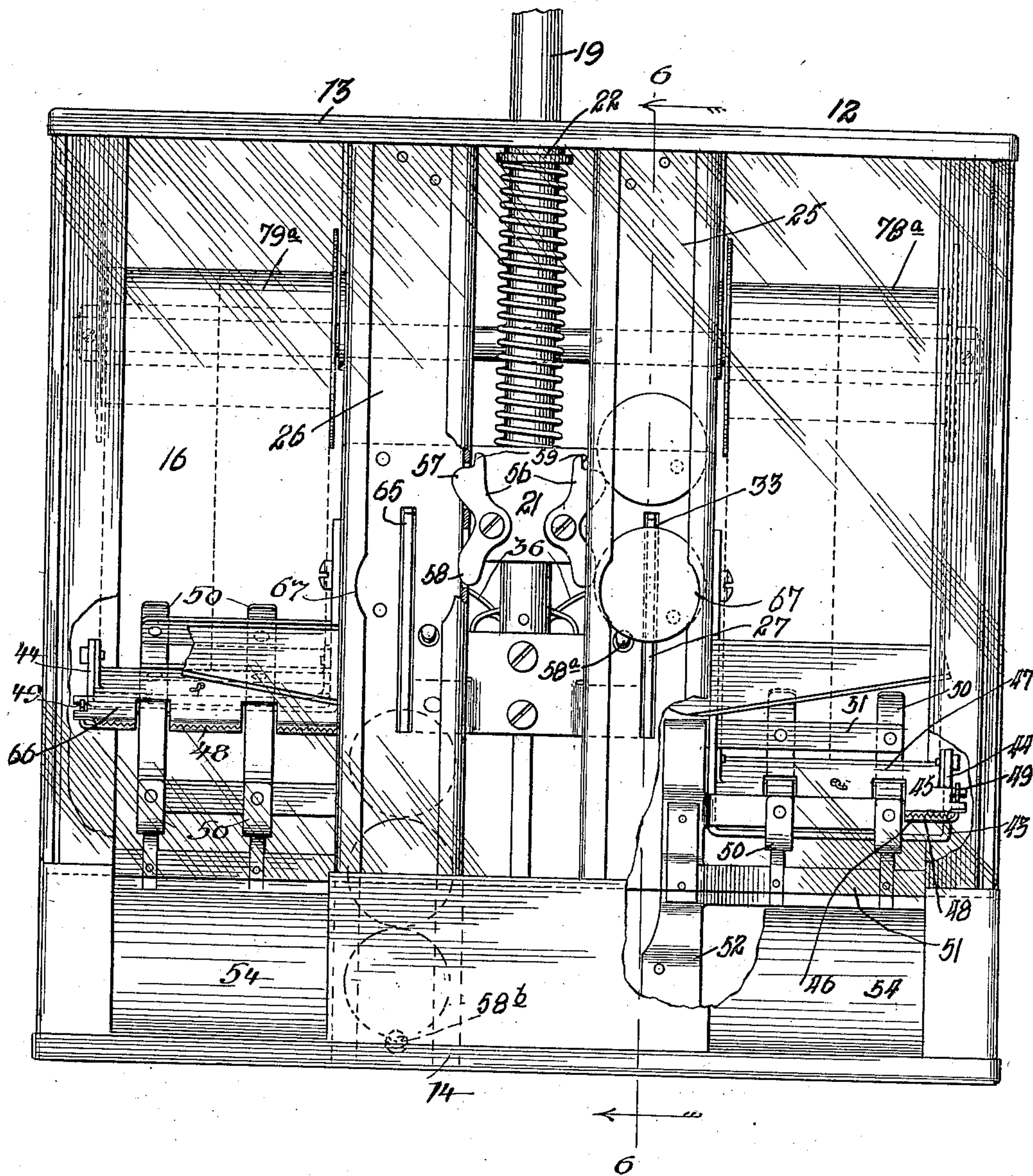
E. H. SPERBERG.
STAMP VENDING MACHINE.
APPLICATION FILED FEB. 11, 1910.

997,714.

Patented July 11, 1911.

6 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
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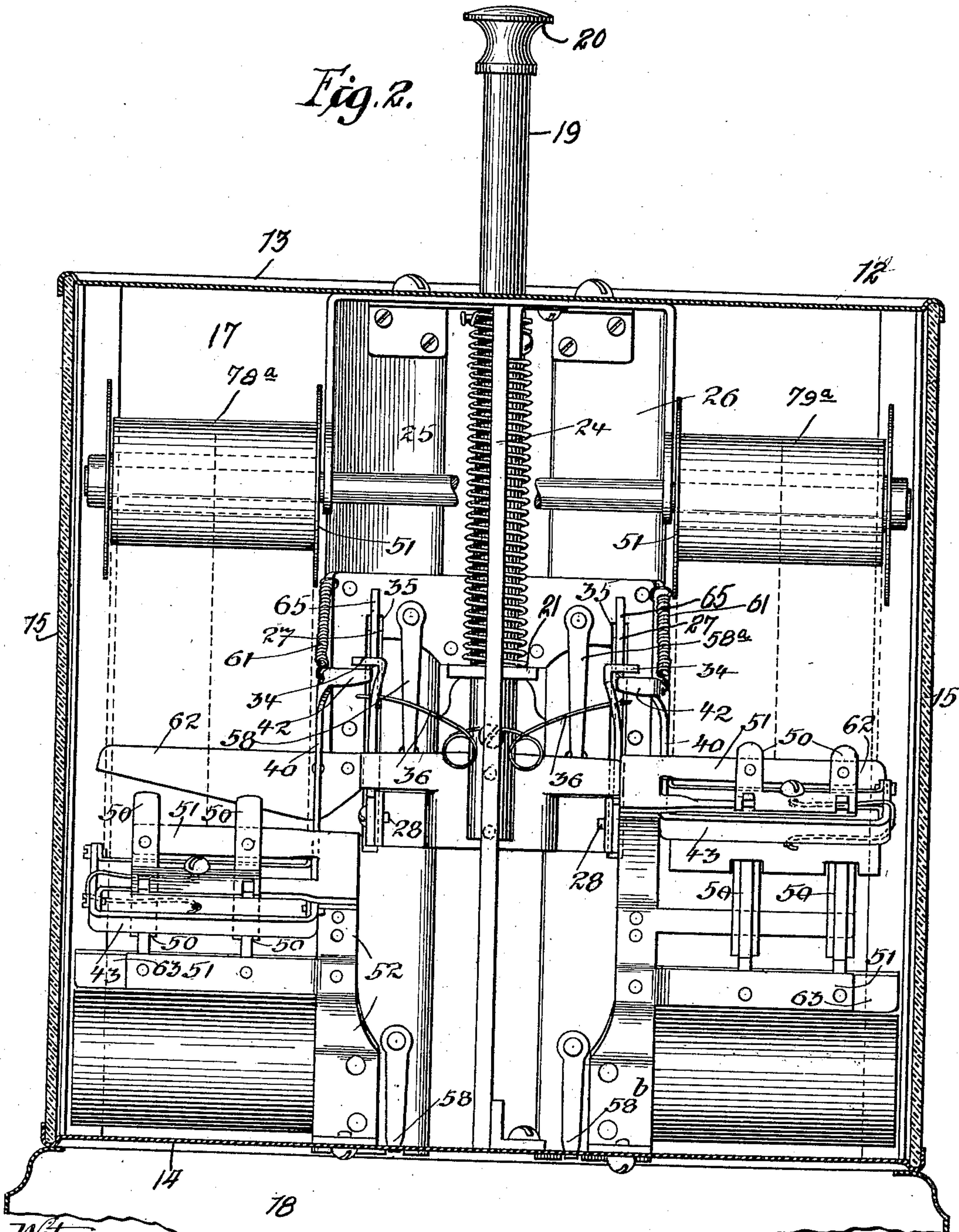
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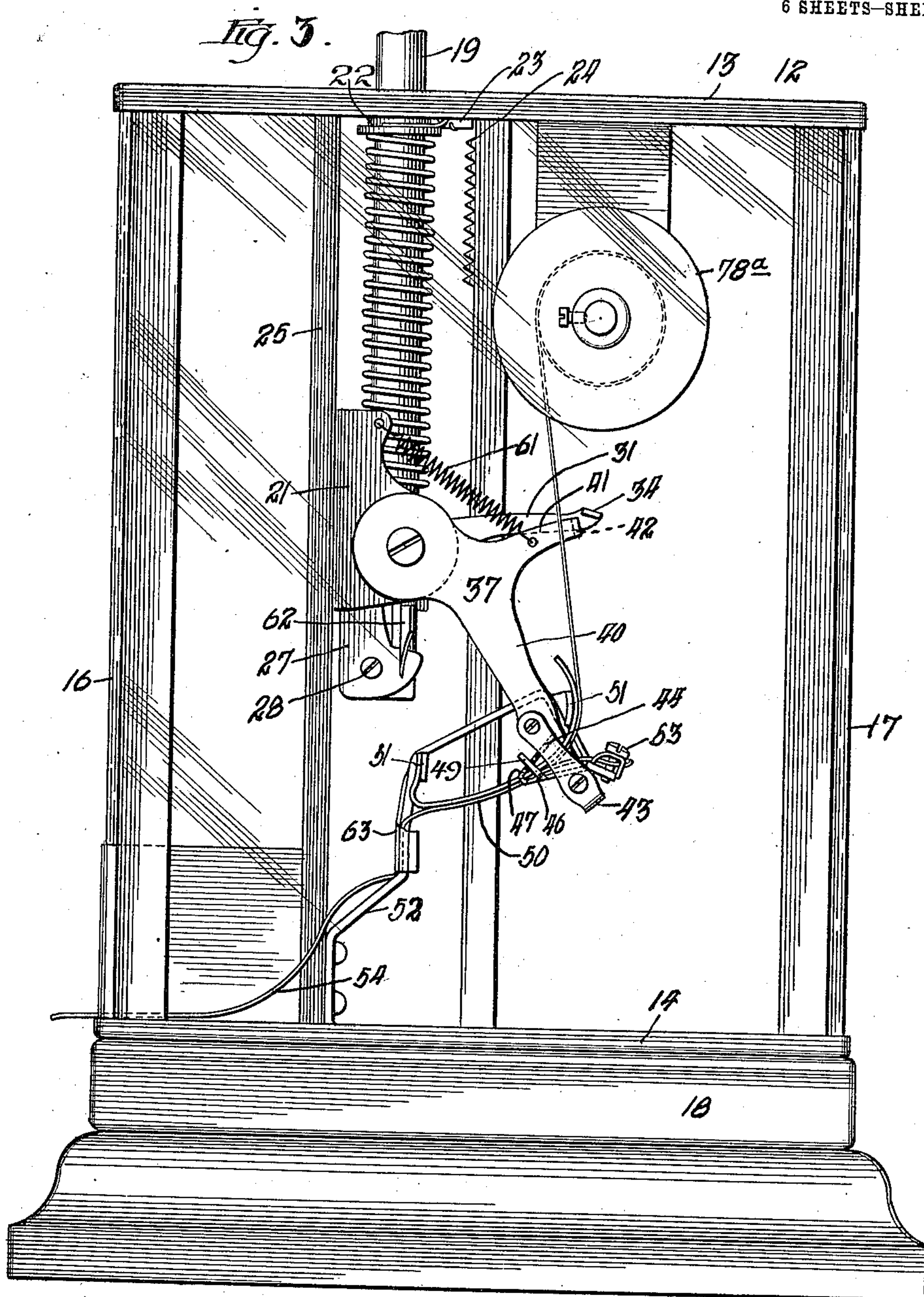
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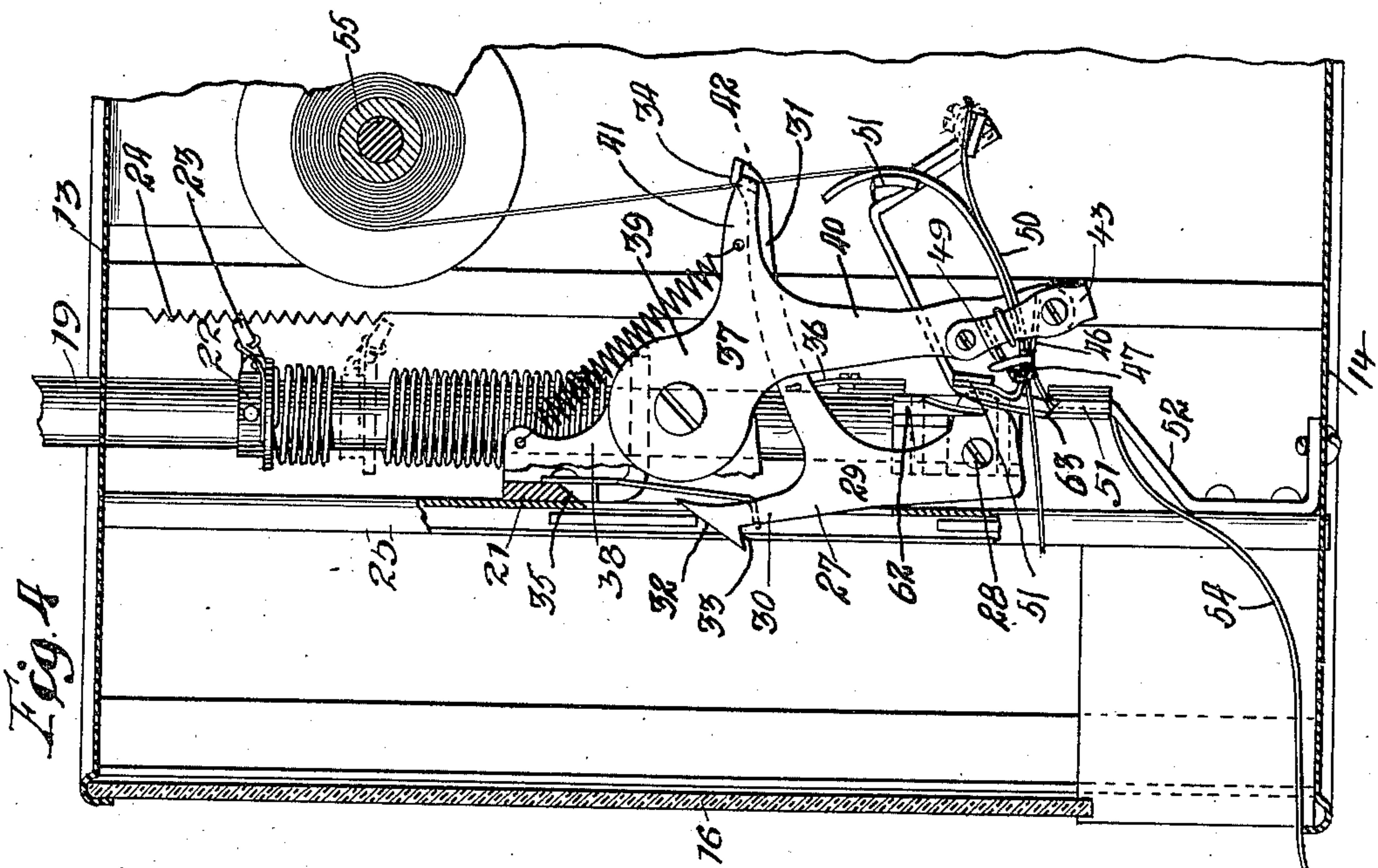
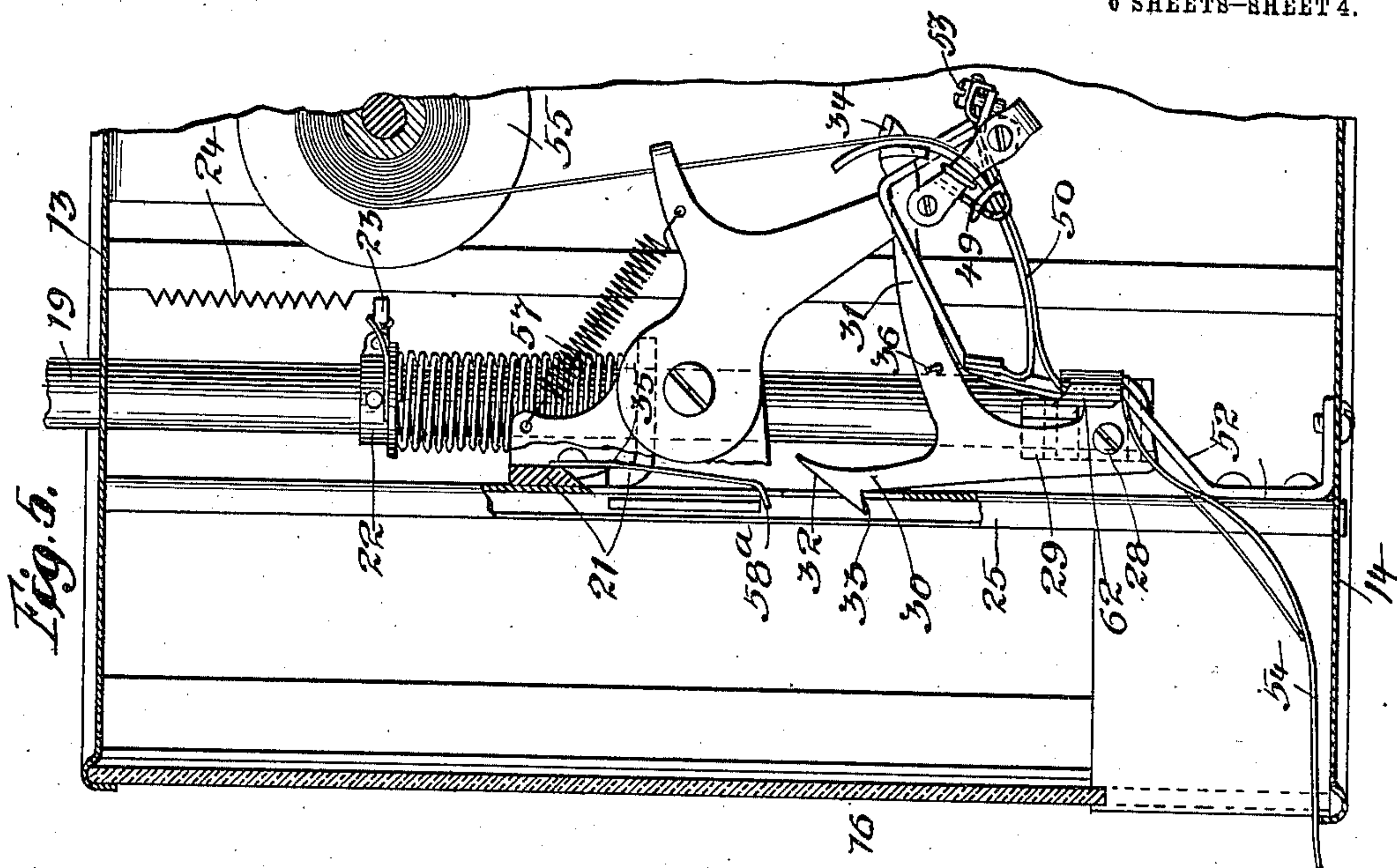
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6 SHEETS—SHEET 4.



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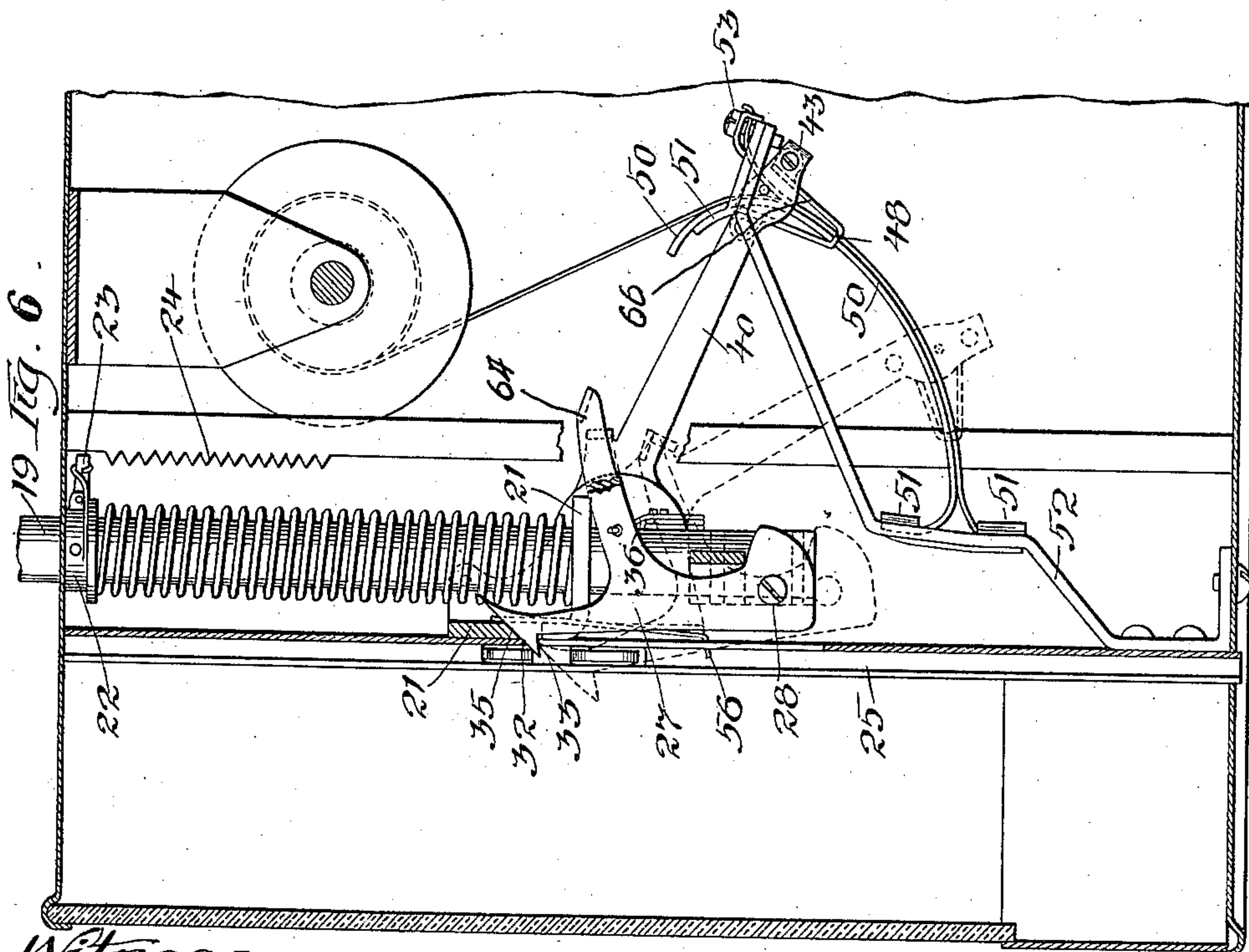
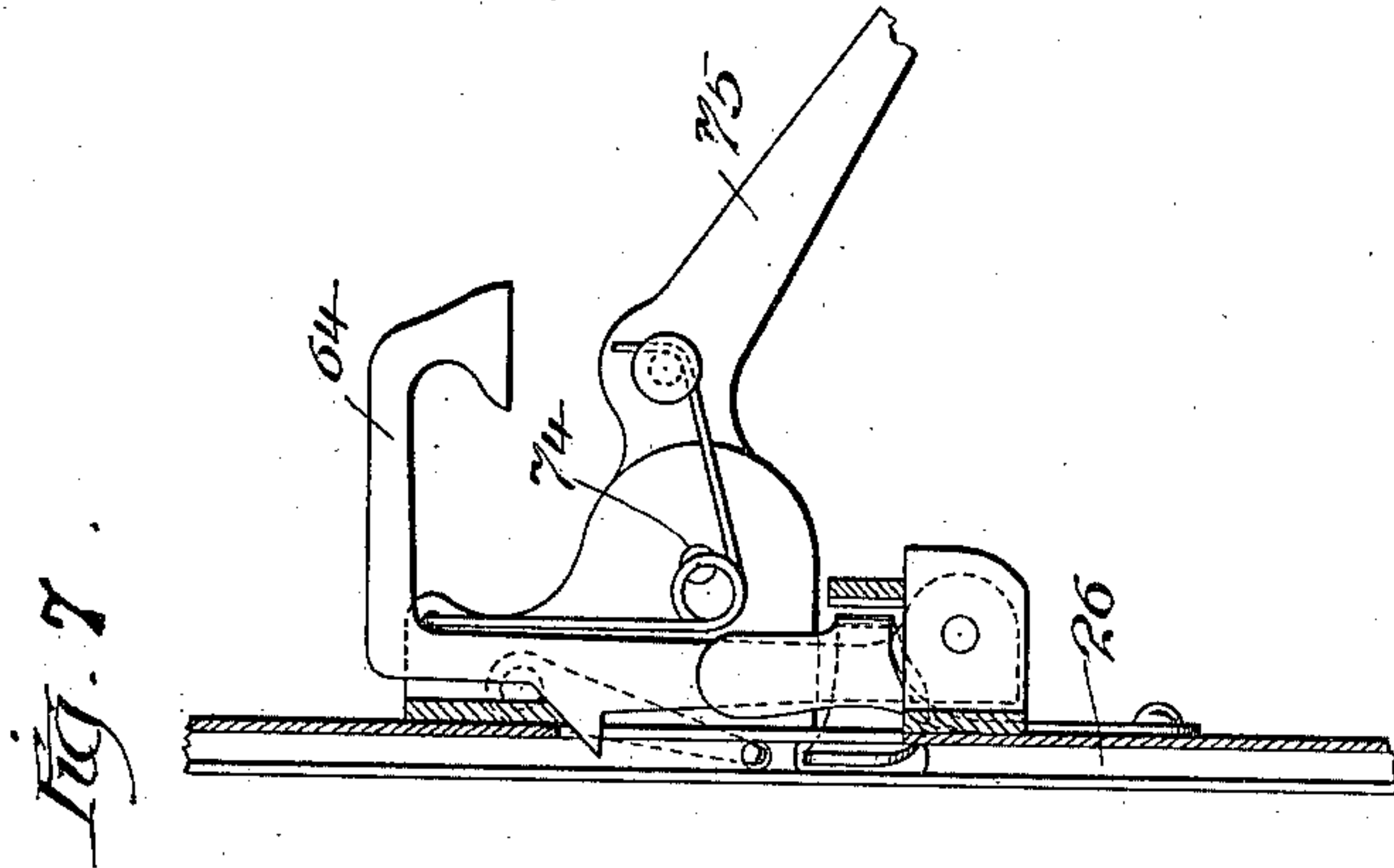
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6 SHEETS—SHEET 5.



Witnesses:

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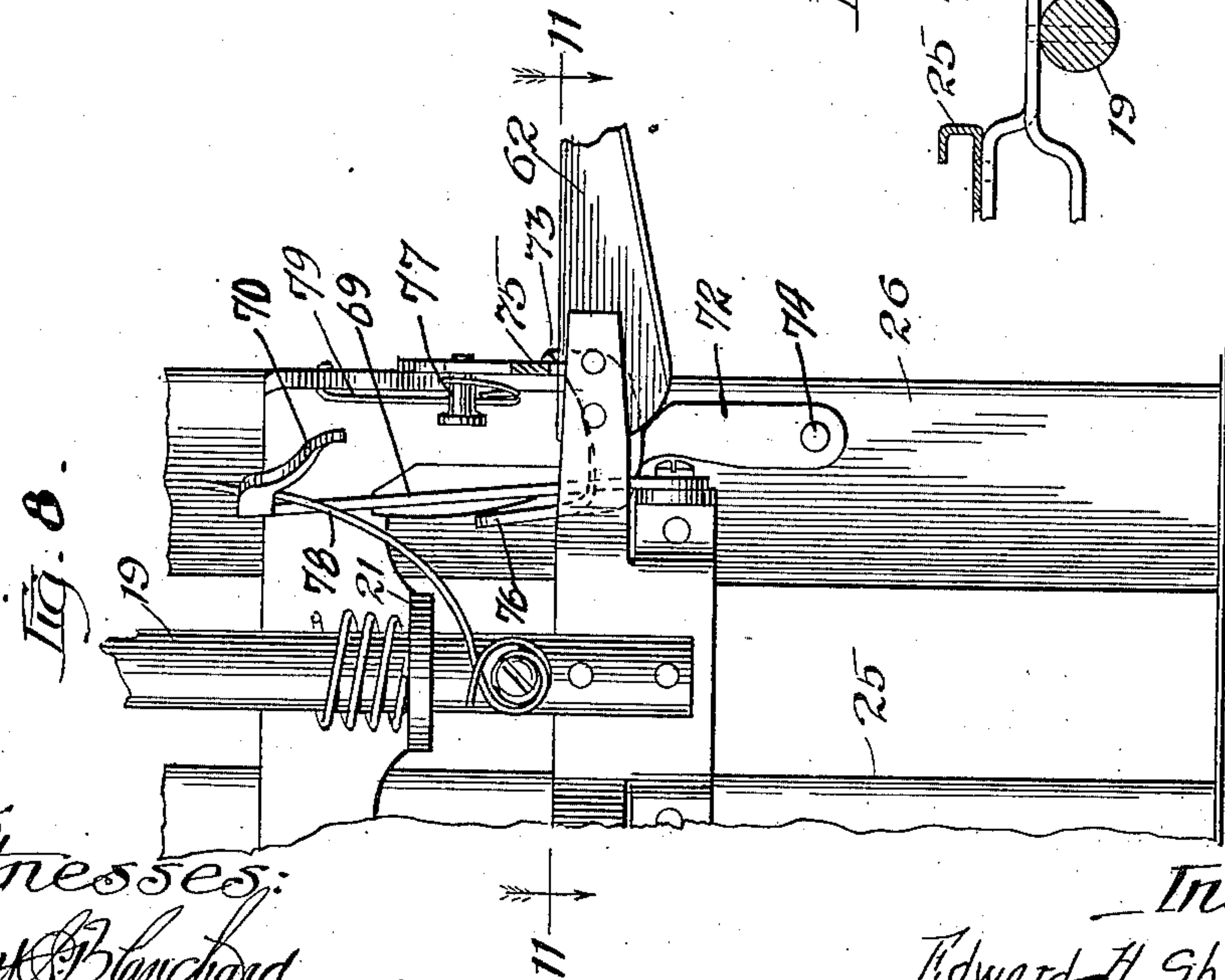
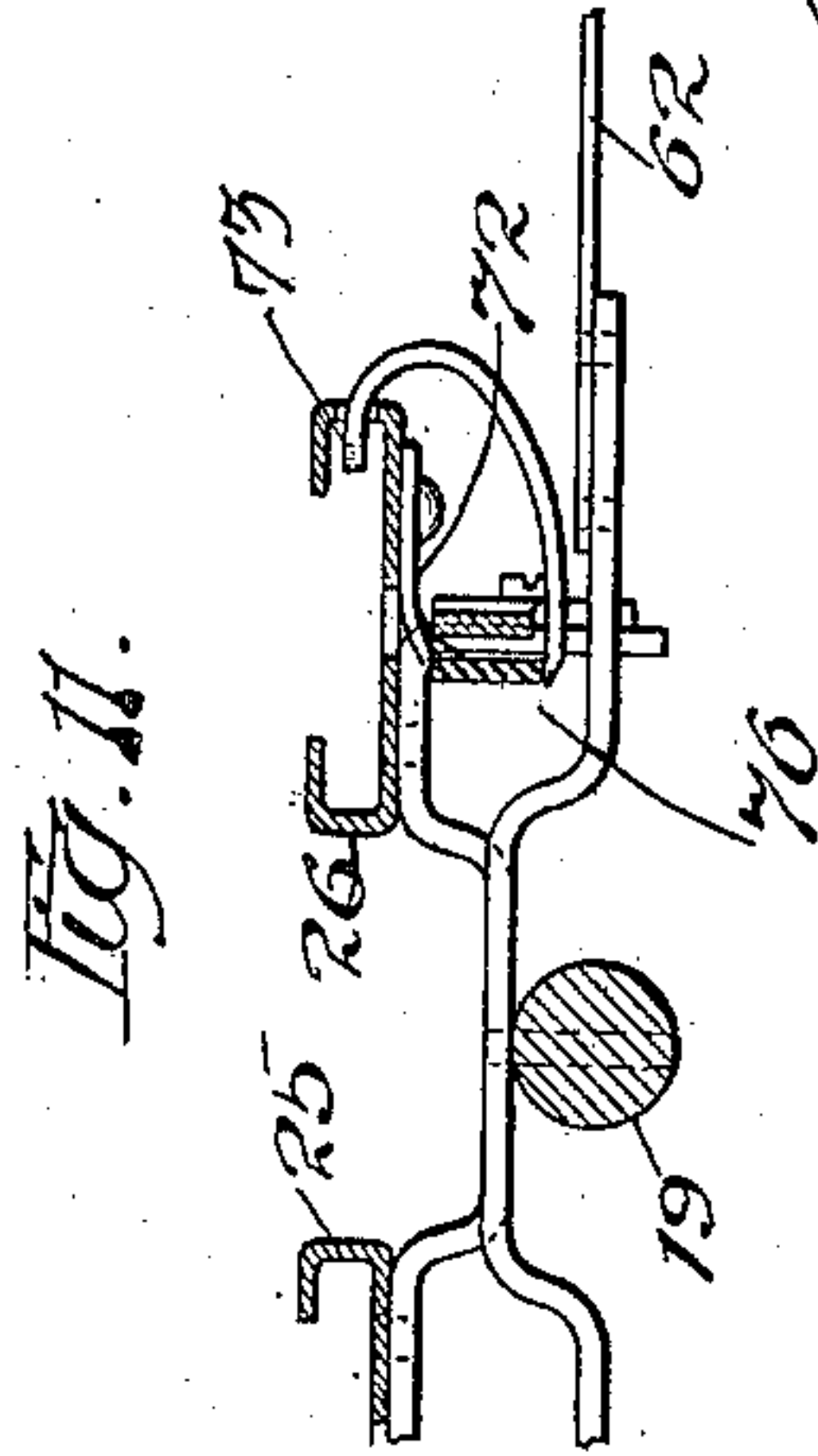
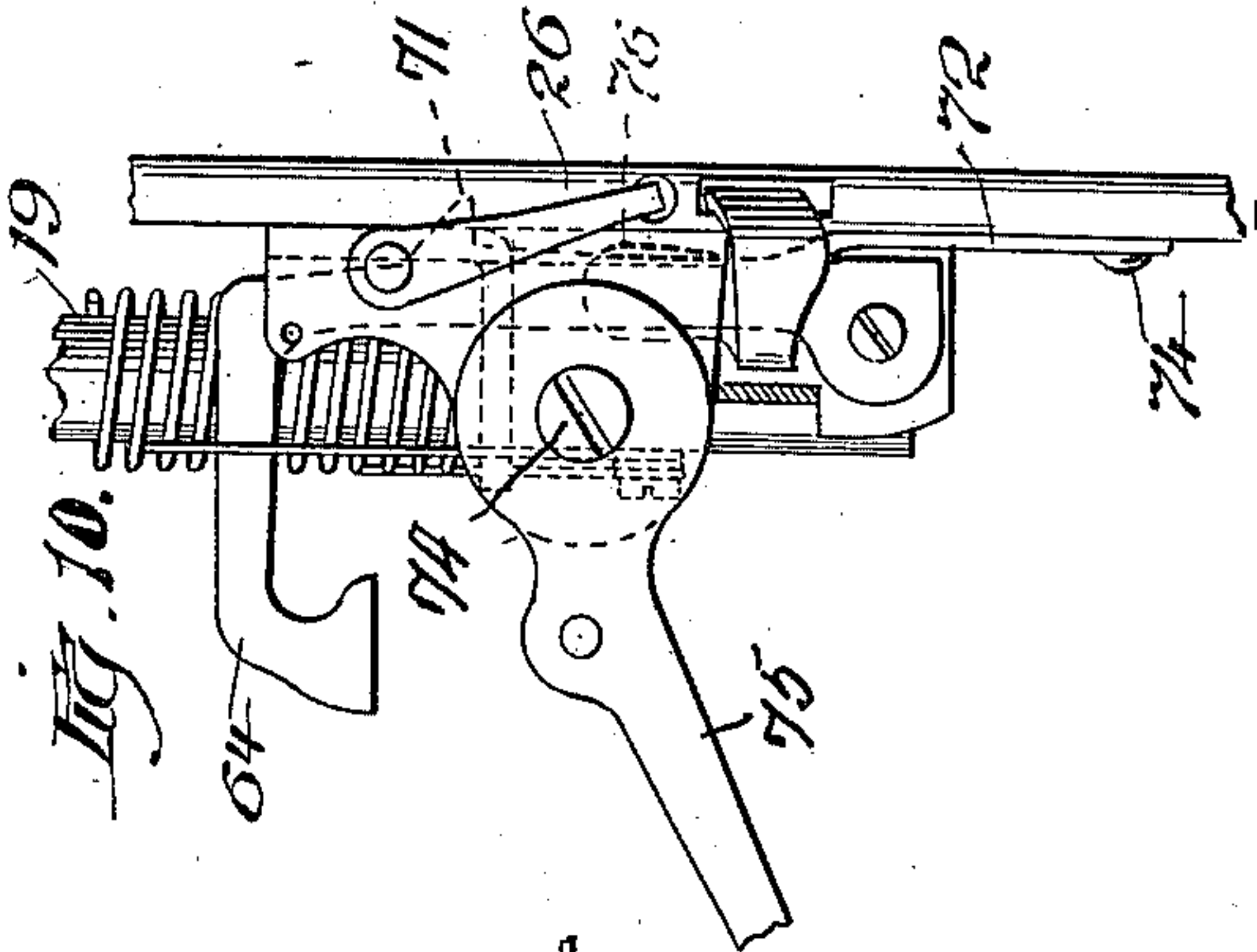
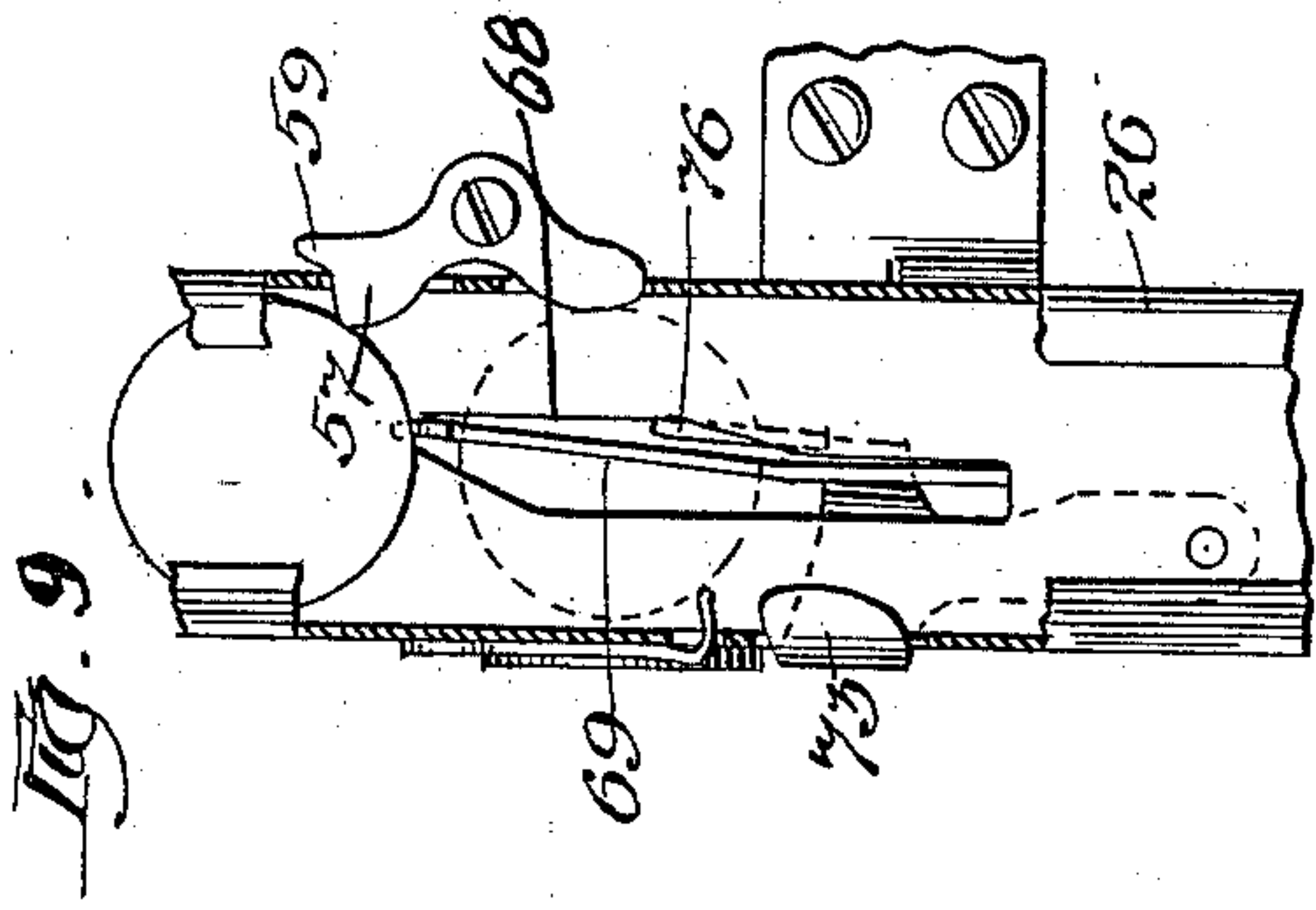
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6 SHEETS—SHEET 6.



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UNITED STATES PATENT OFFICE.

EDWARD H. SPERBERG, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WORLD MANUFACTURING AND SPECIALTY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

STAMP-VENDING MACHINE.

997,714.

Specification of Letters Patent.

Patented July 11, 1911.

Application filed February 11, 1910. Serial No. 543,350.

To all whom it may concern:

Be it known that I, EDWARD H. SPERBERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stamp-Vending Machines, of which the following is a specification.

This invention relates to that class of coin actuated, stamp vending machines which are adapted to be placed in hotels, drug-stores, and other places, and when a coin of proper denomination is inserted therein, will deliver to the purchaser a predetermined number of stamps, the value of the stamps being slightly less than the value of the coin, so that a small profit is made by the owner of the machine in the transaction.

The objects of the present invention are, to construct a machine which will be neat and attractive in appearance; whose operative parts will be simple of construction; which will be positive of operation; which will be so arranged that when a coin of certain denomination is inserted, the mechanism will act to deliver to the purchaser, stamps of varying face values, as he may desire; which will embody feeding mechanism adapted to grip the stamps at the transversely extending line of perforations and feed them forward into position to be severed and delivered to the purchaser, and pass back over the surface of the stamps without moving them; and in which the feeding mechanism will remain inoperative when coins of improper denomination are inserted in the coin chute, or when the plunger is depressed without the insertion of any coin.

The invention further consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a front elevation of an assembled machine with the casing broken away at various places to show portions of the interior mechanism; Fig. 2, a rear elevation of an assembled machine, showing the entire rear wall of the casing removed; Fig. 3, a side elevation of the assembled machine; Fig. 4, a detail showing a portion of the casing in section, and the coin controlled, severing, and feeding mechanism in the position they assume when a section of stamps is fed into position to be severed; Fig. 5, a view similar to Fig. 4,

showing the feeding mechanism returned to normal position and the coin controlled and severing mechanism in depressed position; Fig. 6, a view similar to Fig. 4, showing the operating mechanism on one side of the plunger partially broken away and the feeding mechanism on the opposite side of the plunger showing in full and dotted lines its position at either extremity of movement; Fig. 7, a detail showing a modification of the coin controlled mechanism; Fig. 8, a rear view of the mechanism shown in Fig. 7; Fig. 9, a face view of the same; Fig. 10, a side view of the same; and Fig. 11, a section taken on line 11—11 of Fig. 8.

The device is inclosed within a casing 12 of suitable form and size, and consists, as shown, of a top wall 13, bottom wall 14, side walls 15, front and rear walls 16 and 17 respectively, and a base 18. The front, side and rear walls are shown as made of glass, so that the operator can view the mechanism inclosed by the casing; although, the casing could, of course, be constructed of any suitable material desired.

Entered through the top wall of the casing and extending thereinto is a plunger 19 formed upon its upper end with a grip or handle 20. This plunger is mounted in a bracket arm 21 located in the interior of the casing, and has a collar 22 affixed thereto. The collar is provided with a spring detent 23, which coöperates with a tooth-rack 24 in the interior of the casing, to prevent the operator from partially depressing the plunger to operate the mechanism and then return to normal position, and again depress it to operate the mechanism without the insertion of another coin. The detent and rack make it necessary to fully depress the plunger before it can be returned, and this full depression of the plunger will eject the coin so that the feeding mechanism will not be operated without the insertion of another coin.

Lying on either side of the plunger are coin chutes 25 and 26, each formed in a similar manner, and each, in the form shown, having its front face partially cut away. Inasmuch as the construction and operation of the coin controlled, severing, and feeding mechanisms actuated by the insertion of a coin into the coin chute 25, and the coin controlled, severing, and feeding mechanism actuated by the insertion of a coin into the

coin chute 26 are exactly similar, save as to the size of certain of the parts, a description of the construction and operation of the coin controlled, severing, and feeding mechanism actuated by the insertion of a coin in the chute 25 will be sufficient to disclose the construction and operation of both of the mechanisms when taken in connection with an explanation of the necessity for reducing in size some of the parts in the mechanism operated by the insertion of a coin in the chute 26.

The coin actuated mechanism consists of a swinging member 27 pivoted at a point 28 and formed of a body portion 29, having formed therewith a vertically extending arm 30 and a horizontally extending arm 31. The arm 30 is formed, on its upper end, with a beveled surface 32, terminating at one end in a squared shoulder 33, and the end of the arm 31 is formed with a protruding contact 34. As shown in Fig. 6, when in normal or raised position, the beveled surface 32 lies against a beveled surface 35 formed in the bracket arm 21 and in the rear wall of the coin chute, thus holding the member 27 against movement when in normal position; and the member is placed under a spring tension, tending to throw its upper end toward the interior of the coin chute by a spring 36 carried by the plunger 19.

The feeding mechanism consists of a swinging member 37 pivoted to the bracket 21 and comprises a body portion 39, having formed therewith a vertically extending arm 40 and a horizontally extending arm 41, the latter of which is formed with a protruding contact 42 adapted to be engaged by the contact 34. The arm 41 is bent at its end 43 to form a supporting bracket 44, which carries the feed member 45, which latter consists of companion jaws 46 and 47 formed with teeth 48, which, when the jaws are closed, intermesh with one another as shown in Fig. 1. The jaws are guided in their opening and closing movements by a stem 49, (Fig. 1), and are guided in their backward and forward movements by guide members 50, which are bent so that they are held against each other by spring tension. These guide members 50 are secured to bars 51, which project out from a stationary offset bracket 52, as best shown in Fig. 1. By means of adjusting a set screw 53, the guide members 50 can be brought into more or less firm contact, as desired. Extending out from the bracket 52 is a delivery chute 54 projecting through the front of the casing, and the stamps are preferably formed in strips and wound upon a roll 55 suspended in any suitable manner from the casing.

In order to prevent one coin from being inserted on top of another in a manner to lie against each other, so that the upper coin

will prevent the swinging of the member 27 and thus prevent the operation of the mechanism, pivoted stops 56 are provided, which, as shown in Fig. 1, are formed with upper and lower protruding contacts 57 and 58. When the initial coin is inserted in the slot, it strikes the upper contact, forcing it out of the way, and when the coin has descended into the position shown by the lower coin in Fig. 1, it will rest against the lower contact 58 and a spring 58^a, and the stop will be locked against movement in one direction by the coin, and in the other direction by an abutment 59, so that if a second coin is inserted before the first coin is moved out of the way, it will be held by the contact 57, as shown in Fig. 1, so that it will not interfere with the movements of the swinging member 27 when the plunger is depressed.

It has been found that there is a slight variation in the distance between the perforations of the stamps. It is, therefore, preferable to have the jaws return to a point slightly beyond the transverse line of perforations, so as to insure against their lying in front of the perforations which the teeth should enter, and which might occur if the movement of the feeding mechanism were not sufficient to allow for the differences in the distance between the lines of perforations. The spring pressure upon the jaws is not sufficient to cause them to grip the stamp, so that, until the teeth enter the rows of perforations, no feeding of the stamps by the forward movement of the jaws will be effected, and when the jaws are drawn back, the teeth will slide over the surface of the stamps without catching thereon. When the jaws are being returned the teeth will enter a row of perforations, but such engagement will impart no movement to the stamps because the jaws will be pried apart when brought into contact with the edge of the perforations and the teeth will pass out of the perforations and slide over the surface of the stamps, and the stamps will be held against movement with the jaws during their retraction by the spring properties of the guide member 50 between which they lie.

After the stamps have been fed forward into the position shown in Fig. 4, they will remain there until the plunger has been depressed sufficiently to bring the movable cutters 62 carried thereby into coöperative relation with the fixed cutters 63 carried by the bracket 52, and when such coöperative position has been reached, the section of stamps will be severed from the strip or roll and delivered to the purchaser.

In Fig. 6 is shown an arm 64 on the coin actuated mechanism 65 located upon the opposite side of the plunger. As will be seen by comparison, this arm is somewhat

shorter than the arm 31. This shortage is necessitated because of the fact that the mechanism 65 is intended to operate feeding mechanism 66 for feeding forward into position to be delivered, stamps of lower denomination than the feeding mechanism heretofore described. And as it is intended to have a coin of the same denomination actuate each set of mechanism, it is obvious that more of the stamps of lower denomination must be delivered to the purchaser than of the higher denomination.

By referring to Figs. 4 and 6, it will be seen that the feeding mechanism in the latter figure travels farther than the feeding mechanism in the former figure. This is because of the difference in the length of the arms 31 and 64, the latter arm swinging the arm carrying the feeding mechanism farther before it releases itself from it than would the arm 31. This difference in time of releasing is caused by the arm 64 contacting the member 66 nearer its pivot than the arm 31 contacts the arm 41. Except for the difference in the length of the arms 31 and 64, both sets of mechanism are identical in construction and operation.

If the plunger is lowered without any coin being inserted in the slot, the member 27 will swing forward far enough so that the contact 34 will lie in front and clear the contact 42, and as the plunger is further depressed, the coin actuating mechanism will descend therewith without operating the feeding mechanism, so that no delivery of stamps will take place in case the plunger is depressed without first inserting a coin in the chute. The coin chute is cut out, as at 67, so that if a coin of smaller denomination than that intended to operate the mechanism were inserted, it would be forced out of the chute by the member 27 when that member was swung forward as the plunger was depressed. The swinging of the member 27 would force the coin out of the chute and hence no operation of the feeding mechanism would take place as the plunger was further depressed. The swinging member carrying the feeding mechanism is so mounted that it can be adjusted to bring the feeding mechanism into any desired distance behind the line of perforations when the feeding mechanism is returned to normal position.

The operation is as follows: The coin is first inserted into the chute and travels downward to rest against a spring 58^a, as shown in Fig. 6. The member 27 will be held against forward movement by the sloping surface 32 contacting the sloping surface 35, but, as the plunger is moved downward, the member will be thrown forward by the action of the spring 36 until it rests against the coin, the shoulder 33 resting upon the top of the coin. The throwing of

the member 27 forward will bring the contact 34 into engagement with the contact 42, so that upon a further depression of the plunger, the member 37 will be swung around its pivot (see Fig. 4) and the feeding mechanism will travel forward around its pivotal center until the contact 34 has cleared the contact 42, when the member 37 will be carried back to normal position by action of a spring 61, as shown in Fig. 5; after which the cutting mechanism will act to sever the stamps. The jaws 45 and 46, when in the position shown in Fig. 5, have their toothed edges lying slightly beyond the line of transverse perforations of the stamps. They will be carried forward by the movement of the member 37 until the teeth enter the transversely extending perforations in the stamps, and will then intermesh and act to carry the stamps forward into position to be severed from the strip and delivered to the purchaser.

In Figs. 7, 8, 9, 10 and 11 is shown a modified construction of coin actuating mechanism, the description and operation of which is as follows: Formed in the coin chute is a slot 68, best shown in Fig. 9, which is somewhat larger at its upper end. Lying in the rear of the coin chute is a swinging arm 69, which is formed with a contact 70, and with a protrusion 71, which extends through the slot. Pivoted to the coin chute is a swinging bracket 72, which is bent at its end, as at 73, to extend into the coin chute and pivoted, as at 74, is a swinging arm 75, which carries the feeding mechanism. The operation is as follows: When the coin has reached the position shown in the dotted lines in Fig. 9, the plunger is depressed and the coin carried downward. As it passes the end 73 of the swinging bracket 74, it will swing the bracket around its pivot to bring the vertically extending portion 76 of the bracket into engagement with the swinging arm 69, and this will force the arm sideways and cause the contact to be swung into position where, upon further depression of the plunger, it will engage a stud 77, which is secured to the swinging arm 75. After the contact 70 has engaged the stud 77, a further depression of the lever will swing the arm 75 and operate the feeding mechanism. The arm 69 is returned to normal position by a spring 78, and the arm 75 is returned to normal position by a spring 79. When the plunger is operated without a coin being inserted in the chute, no movement of the feeding mechanism will take place, because no movement will be imparted to the swinging arm 69, which would bring it into position to have the contact 70 engage the stud 77.

As shown in Figs. 1 and 2, the casing contains two reels 78^a and 79^a, which are adapted to carry rolls of stamps of different

denominations. For purposes of illustration, we will say that the reel 78 carries two-cent stamps and the reel 79 carries one-cent stamps. Each of the strips of stamps is fed forward by feeding mechanism of similar nature; each of the feeding mechanisms is actuated by coin actuated mechanism of similar character; each of the coin actuated mechanisms is operated by the plunger 19; and each of the coin actuated mechanisms operates one of the feeding mechanisms through the medium of a coin inserted in the coin chutes, and the coin intended to actuate either set of mechanisms is of the same denomination as, for instance, a five-cent piece. Hence, the purchaser, by inserting a coin into the slot 25 will receive two two-cent stamps, and by the insertion of a coin in the slot 26 will receive four one-cent stamps; or by inserting a coin in both slots, he will receive two two-cent and four one-cent stamps. The delivery of stamps in either case is effected by the lowering of the plunger 19, and this one member controls the entire operation of all the mechanisms in the casing.

As shown in Fig. 1, the coin chute is provided, at a point adjacent its lower end, with a spring 58^b, similar in construction to the spring 58^a. The coin after being forced past the spring 58^a descends in the chute and rests against the spring 58^b. As shown in Fig. 1, three coins will be gathered in the chute, each lying on top of the other, before the lower coin resting against the spring 58^b will be deposited in the coin box. By this arrangement, it is possible to observe whether any slugs have been inserted into the machine, either by the last person operating it, or by the last three persons operating it. This gives to the store-keeper the advantage of being able to detect what persons are operating the machine by means of slugs more easily than if only one coin at a time were visible in the chute.

I claim:

1. In a stamp vending machine, the combination of a swinging supporting member formed with vertically and horizontally extending arms, the horizontally extending arms carrying feeding mechanism, a contact on the vertically extending arms, and means for engaging the contact on the vertically extending arm to swing the supporting member and actuate the feeding mechanism to feed the stamps forward, substantially as described.

2. In a stamp vending machine, the combination of feeding mechanism, means operatively connected to said feeding mechanism for actuating the same, upper and lower guide plates held together under spring tension, between which the stamps pass, the guide plates also serving as guide members for the feeding mechanism, and a fixed

bracket to which the guide plates are secured, substantially as described.

3. In a stamp vending machine, the combination of feeding mechanism, means operatively connected to said feeding mechanism for actuating the same, upper and lower guide plates held together under spring tension, between which the stamps pass, the guide plates also serving as guide members for the feeding mechanism, a fixed bracket to which the guide plates are secured, a fixed cutter carried by the brackets and located in front of the guide members, and a movable cutter operated jointly with the feeding mechanism, the fixed and movable cutters coöperating to sever from the main body of stamps a predetermined number of the stamps fed forward, substantially as described.

4. In a stamp vending machine, the combination of feeding mechanism, means operatively connected to said feeding mechanism, for actuating the same, upper and lower guide plates held together under spring tension, between which the stamps pass, the guide plates also serving as guide members for the feeding mechanism, a fixed bracket to which the guide plates are secured, and means for adjusting the strength of the spring tension on the guide plates, substantially as described.

5. In a stamp vending machine, the combination of feeding mechanism, comprising companion pivoted members adapted to contact one another at one end, the contacting ends being serrated to form teeth which intermesh and form a continuous acting face, means operatively connected for actuating the feeding mechanism with a reciprocating movement, the acting face presented by the intermeshing teeth bearing against the edge of the stamps along the perforation, and serving to feed the stamps forward when the feeding mechanism is moved in one direction, the surface of the stamps adjacent to the perforations serving to pry the teeth apart when the feeding mechanism is moved in the opposite direction, whereby said feeding mechanism passes over the surface of the stamps without imparting movement thereto, substantially as described.

6. In a stamp vending machine, the combination of feeding mechanism, comprising companion pivoted members adapted to contact one another at one end, the contacting ends being serrated to form teeth which intermesh and form a continuous acting face, means operatively connected for actuating the feeding mechanism with a reciprocating movement, the acting face presented by the intermeshing teeth bearing against the edge of the stamps along the perforation, and serving to feed the stamps forward when the feeding mechanism is moved in one direction, the surface of the

stamps adjacent to the perforations serving to pry the teeth apart when the feeding mechanism is moved in the opposite direction, whereby said feeding mechanism passes over the surface of the stamps without imparting movement thereto, and tension mechanism for normally holding the toothed edges in engagement, substantially as described.

7. In a stamp vending machine, the combination of feeding mechanism, comprising companion pivoted members adapted to contact one another at one end, the contacting ends being serrated to form teeth which intermesh and form a continuous acting face, means operatively connected for actuating the feeding mechanism with a reciprocating movement, the acting face presented by the intermeshing teeth bearing against the edge of the stamps along the perforation, and serving to feed the stamps forward when the feeding mechanism is moved in one direction, the surface of the stamps adjacent to the perforations serving to pry the teeth apart when the feeding mechanism is moved in the opposite direction, whereby said feeding mechanism passes over the surface of the stamps without imparting movement thereto, and guide members upon the pivoted members, for guiding them during their opening and closing movements, substantially as described.

8. In a stamp vending machine, the combination of a swinging supporting member carrying feeding mechanism consisting of companion members pivoted to the supporting member and positioned to contact one another at one end, the contacting edges being serrated to form teeth which intermesh and form a continuous acting face, means operatively connected for actuating the supporting member with a reciprocating movement, the acting face presented by the intermeshing teeth bearing against the edge of the stamps along the perforations, and serving to feed the stamps forward when the supporting member is moved in one direction, the surface of the stamps adjacent to the perforation prying the intermeshing teeth apart when the supporting member is moved in the opposite direction, whereby said feeding mechanism passes over the stamps without imparting movement thereto, substantially as described.

9. In a stamp vending machine, the combination of a pivotally mounted supporting member comprising two arms, one of the arms carrying feeding mechanism, and the other arm having a contact thereon, said feeding mechanism consisting of companion members pivoted to the supporting member, and positioned to contact with one an-

other at one end, the contacting edges being serrated to form teeth which intermesh and form a continuous acting face, means operatively connected for actuating the supporting member with a reciprocating movement, the acting face presented by the intermeshing teeth bearing against the edge of the stamps along the perforations, and serving to feed the stamps forward when the supporting member is moved in one direction, the surface of the stamps adjacent to the perforation prying the intermeshing teeth apart when the supporting member is moved in the opposite direction, whereby said feeding mechanism passes over the stamps without imparting movement thereto, and means for engaging said contact to swing the supporting member and actuate the feeding mechanism to feed the stamps forward, substantially as described.

10. In a stamp vending machine, the combination with feeding mechanism of a pivotally mounted supporting member comprising two arms, one of the arms carrying the feeding mechanism, and the other arm having a contact thereon, means for engaging said contact to swing the supporting member and actuate the feeding mechanism to feed the stamps forward, and guide members for the feeding mechanism, said guide members also serving as guides for the stamps, substantially as described.

11. In a stamp vending machine, the combination of a swinging supporting member carrying feeding mechanism consisting of companion members pivoted to the supporting member and positioned to contact one another at one end, the contacting edges being serrated to form teeth which intermesh and form a continuous acting face, means operatively connected for actuating the supporting member with a reciprocating movement, the acting face presented by the intermeshing teeth bearing against the edge of the stamps along the perforations, and serving to feed the stamps forward when the supporting member is moved in one direction, the surface of the stamps adjacent to the perforation prying the intermeshing teeth apart when the supporting member is moved in the opposite direction, whereby said feeding mechanism passes over the stamps without imparting movement thereto, and cutting mechanism for severing from the main body of stamps a predetermined number of stamps fed forward, substantially as described.

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Witnesses:

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