

No. 854,023.

PATENTED MAY 21, 1907.

J. H. BRADY.

WRAPPING MACHINE.

APPLICATION FILED JULY 12, 1906.

8 SHEETS—SHEET 1.

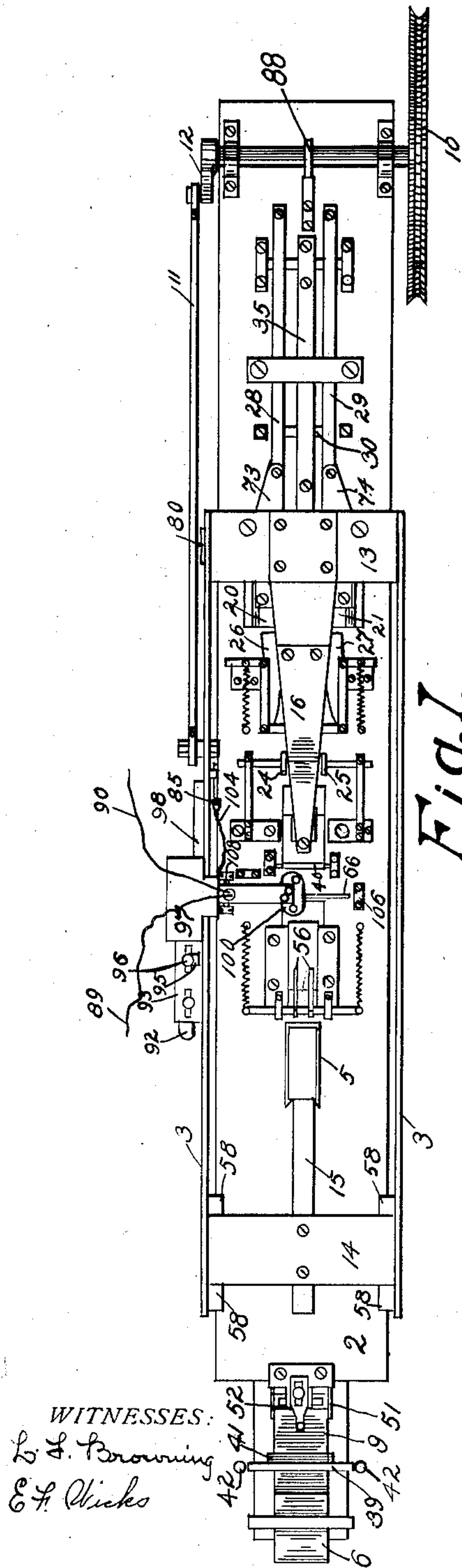


Fig. 1.

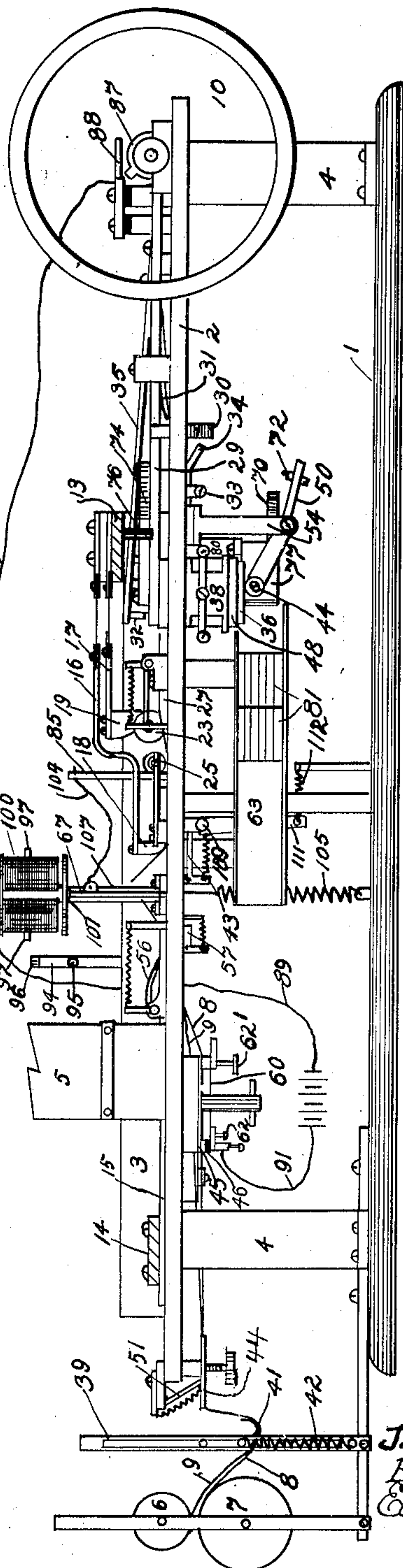


Fig. 2.

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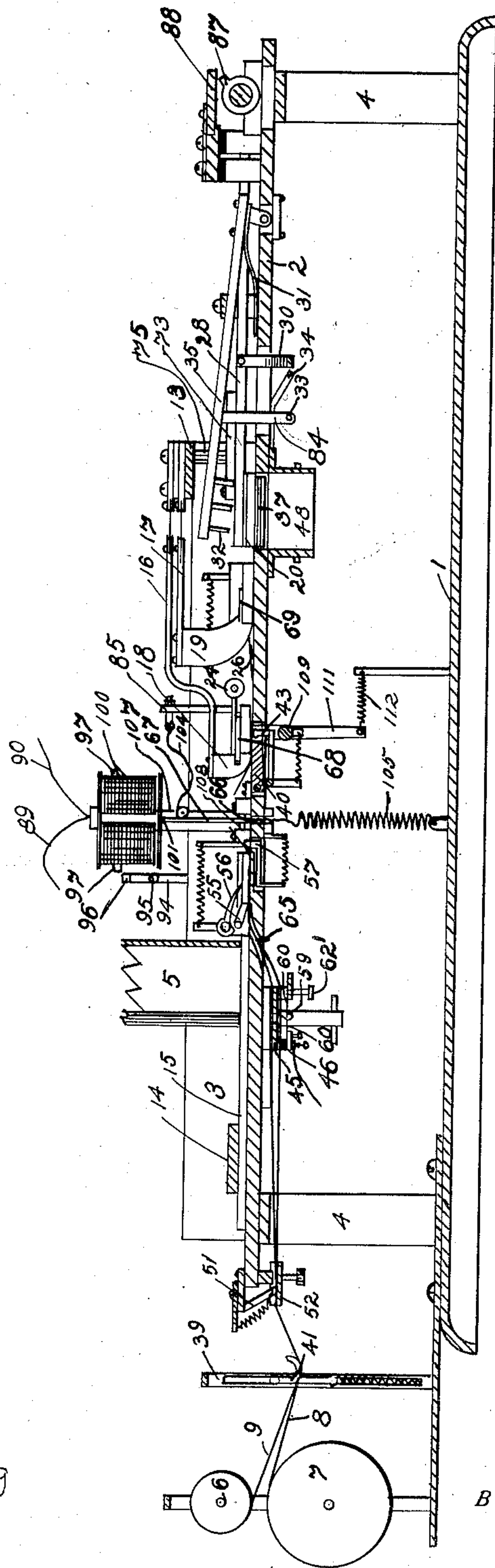


Fig. 3.

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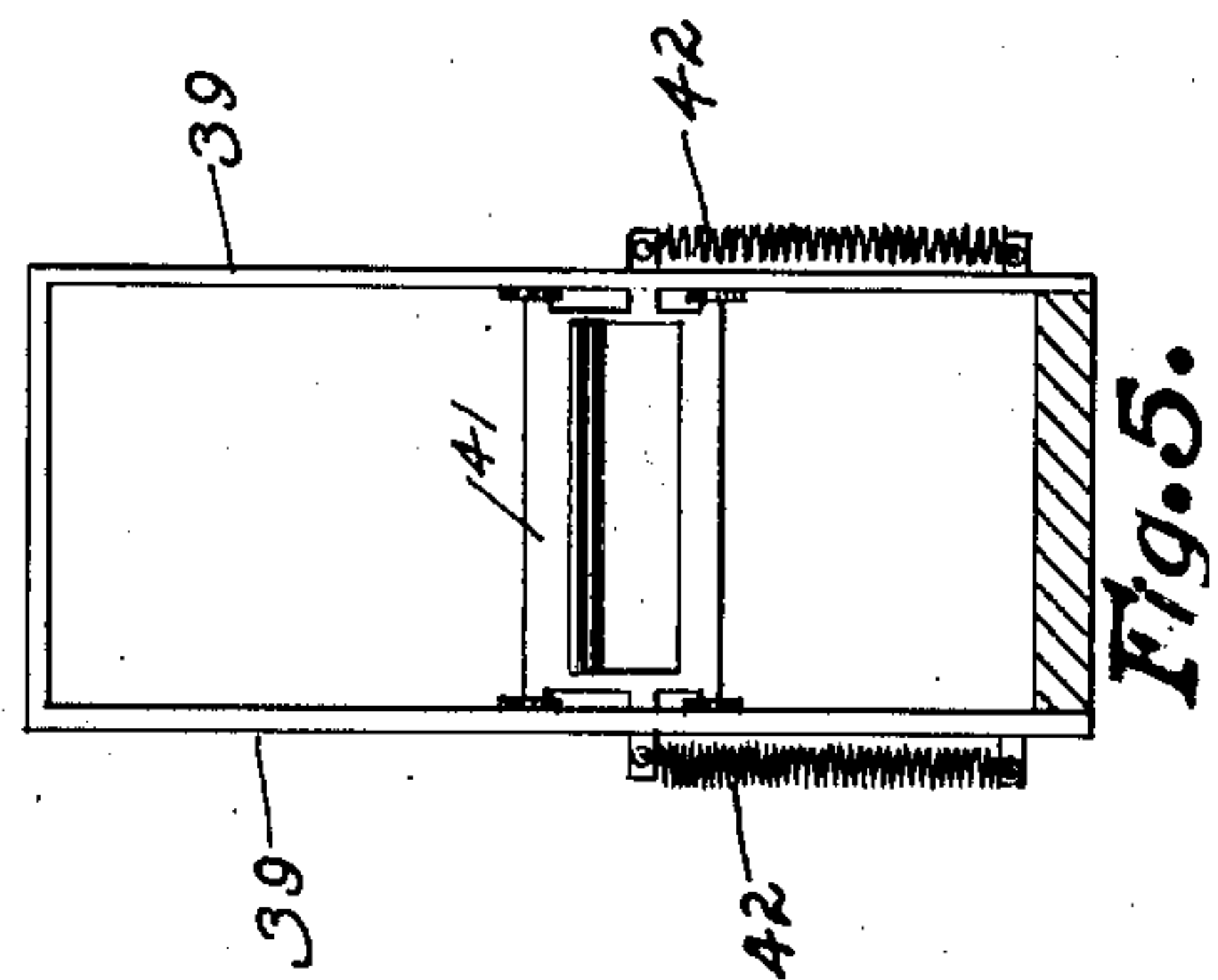
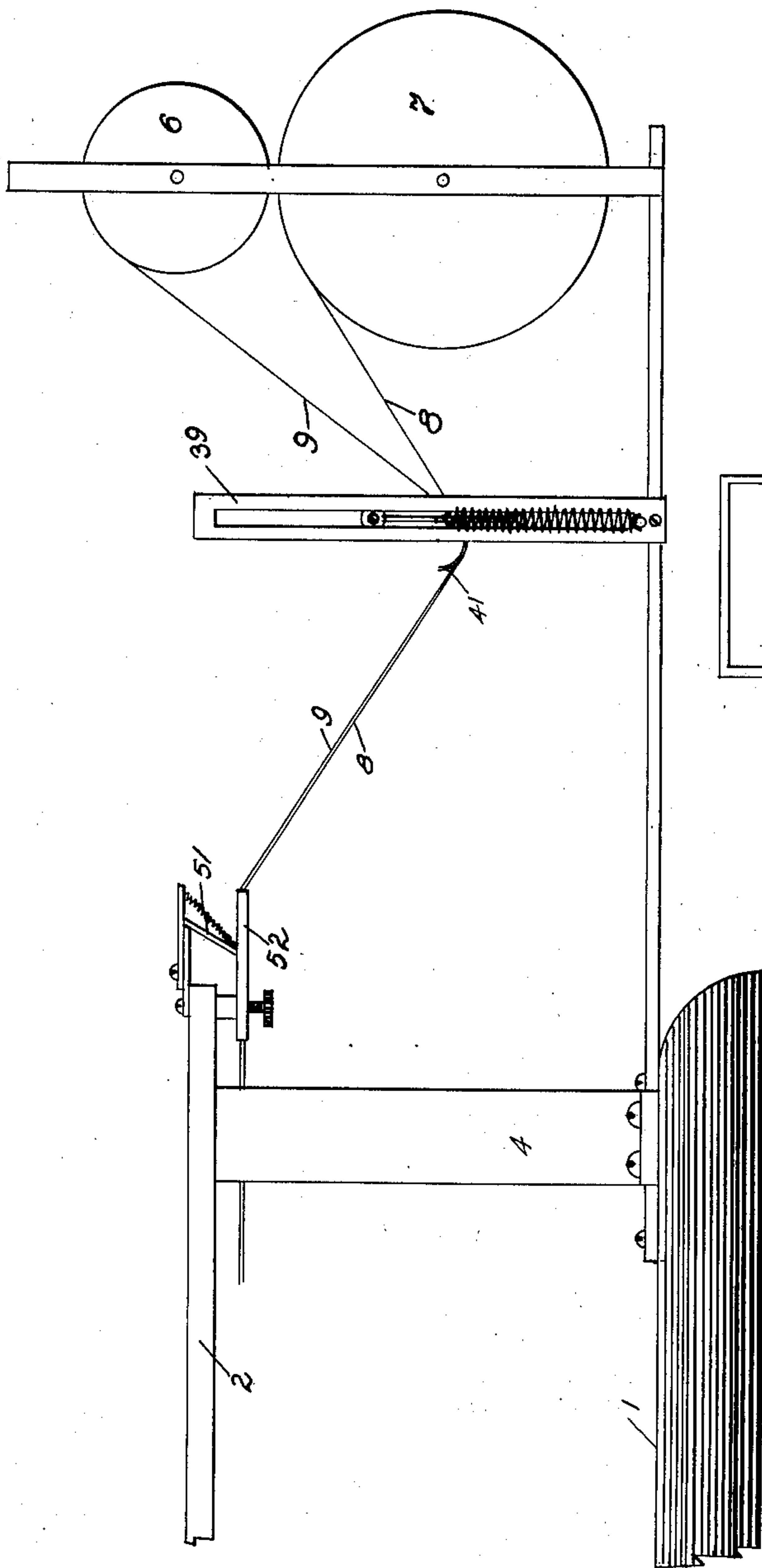
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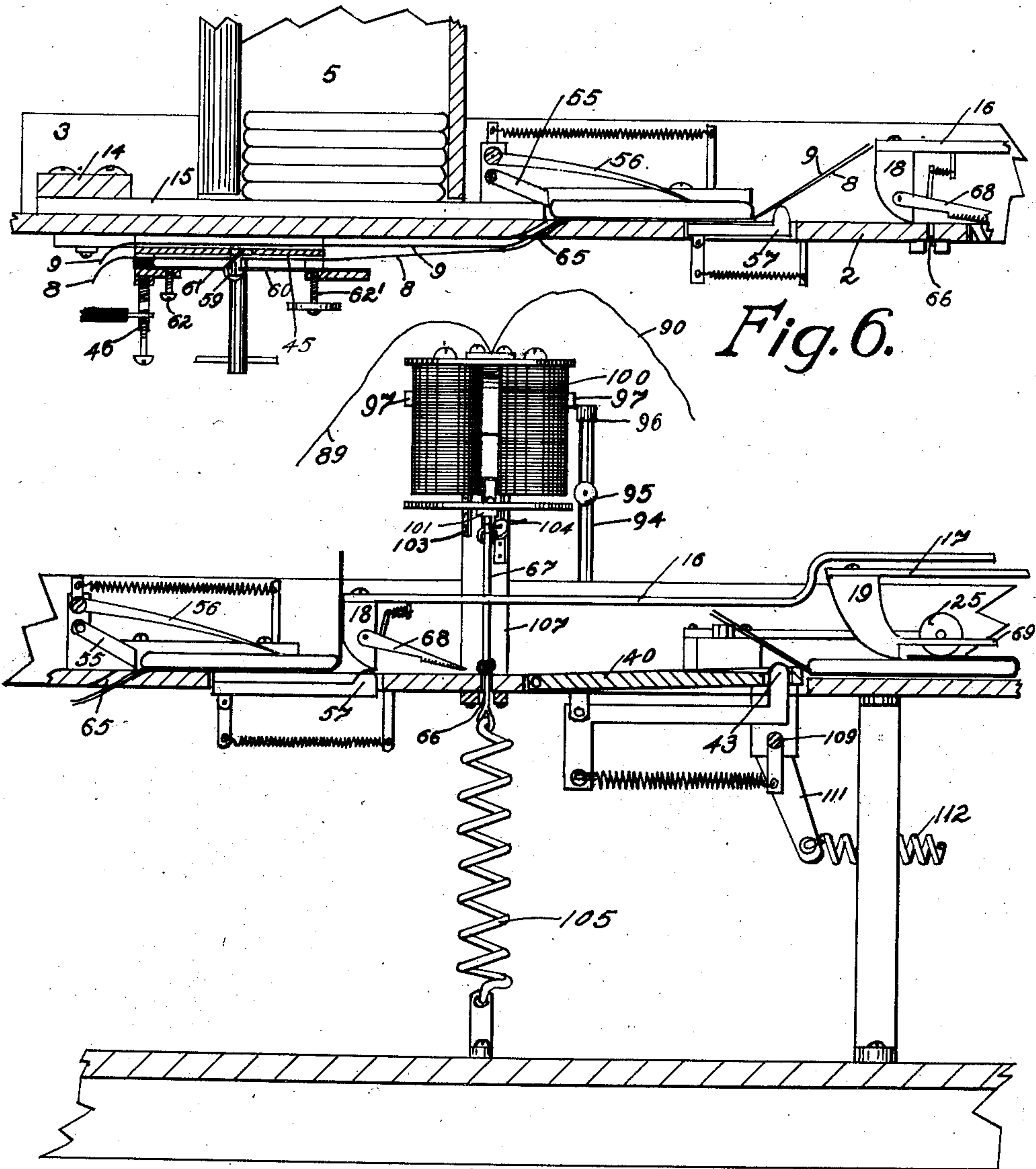
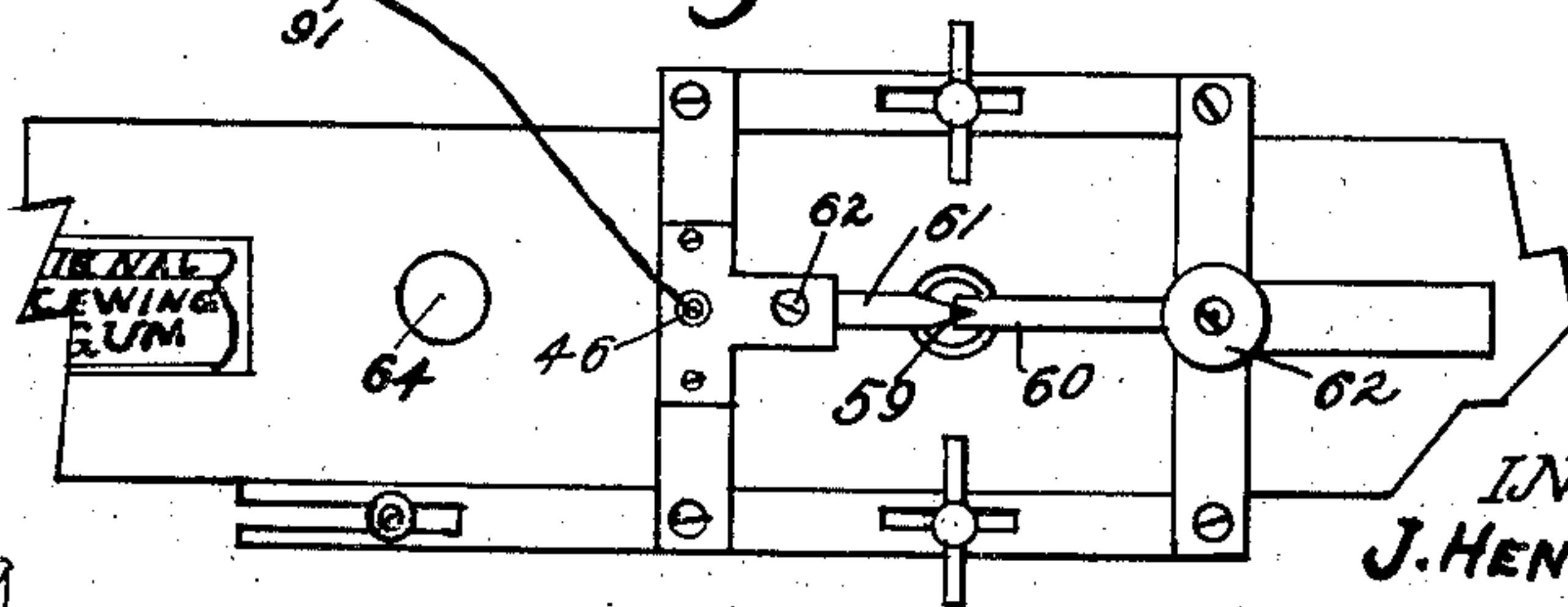


Fig. 7.



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Fig. 8.

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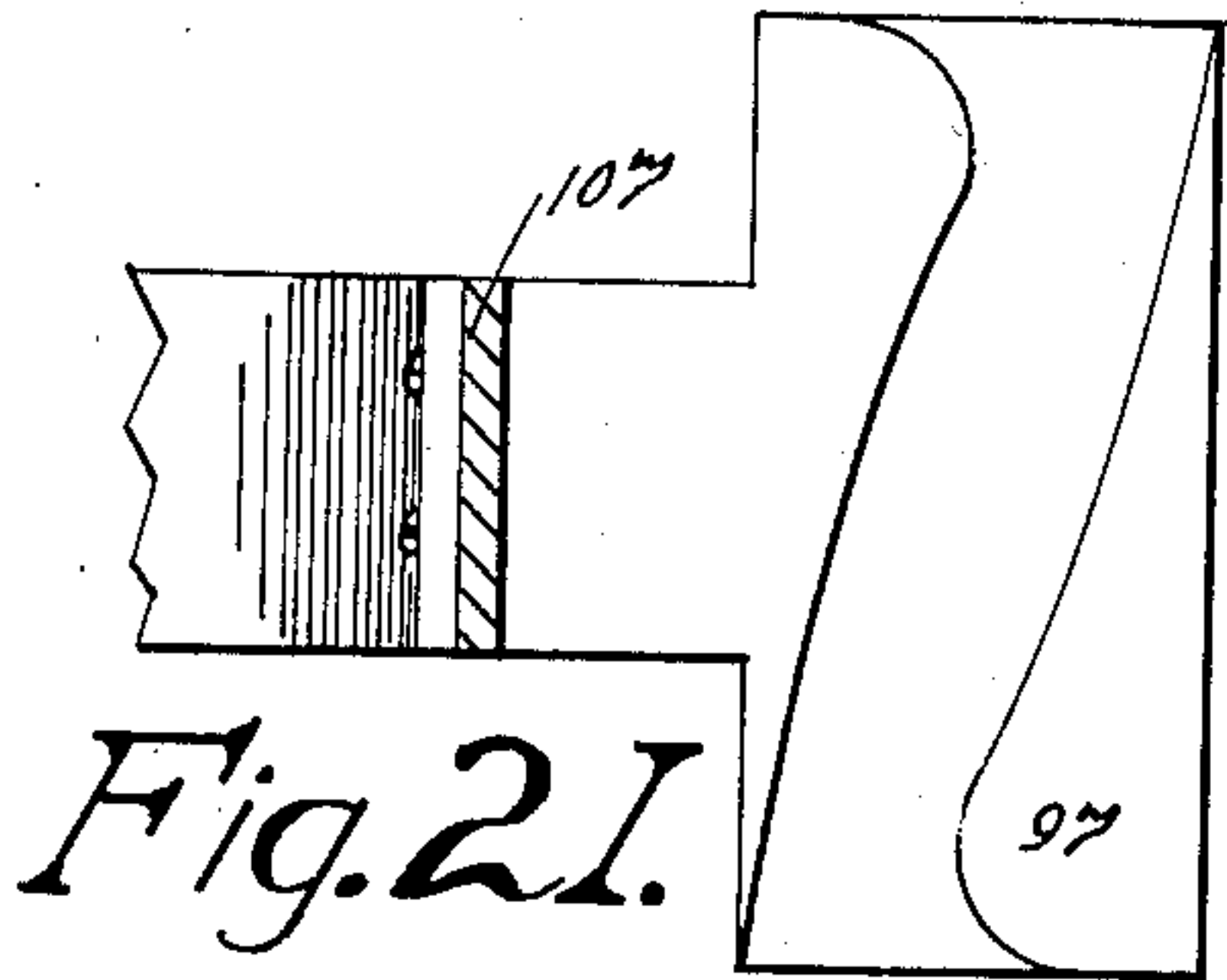


Fig. 21.

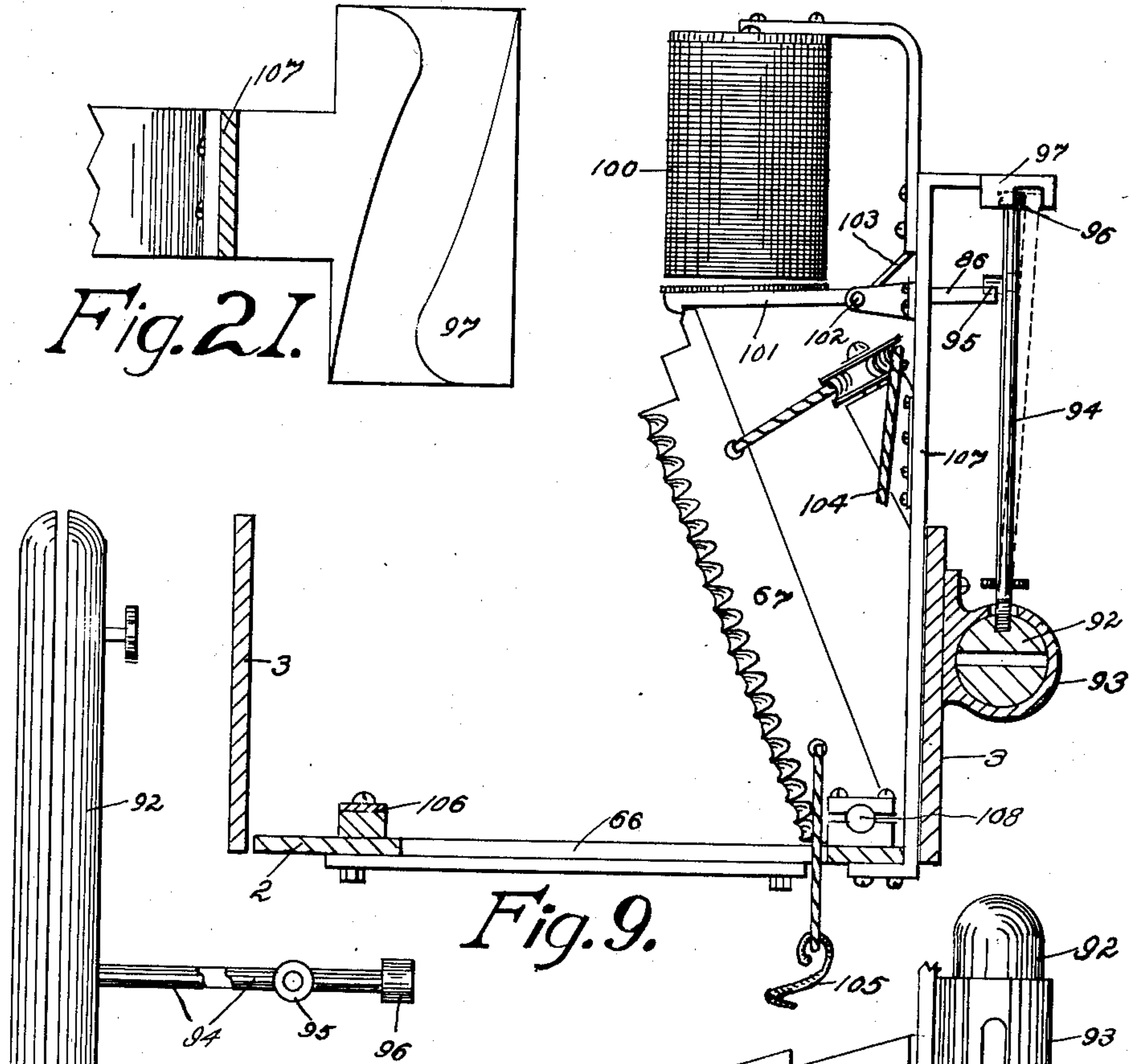


Fig. 9.

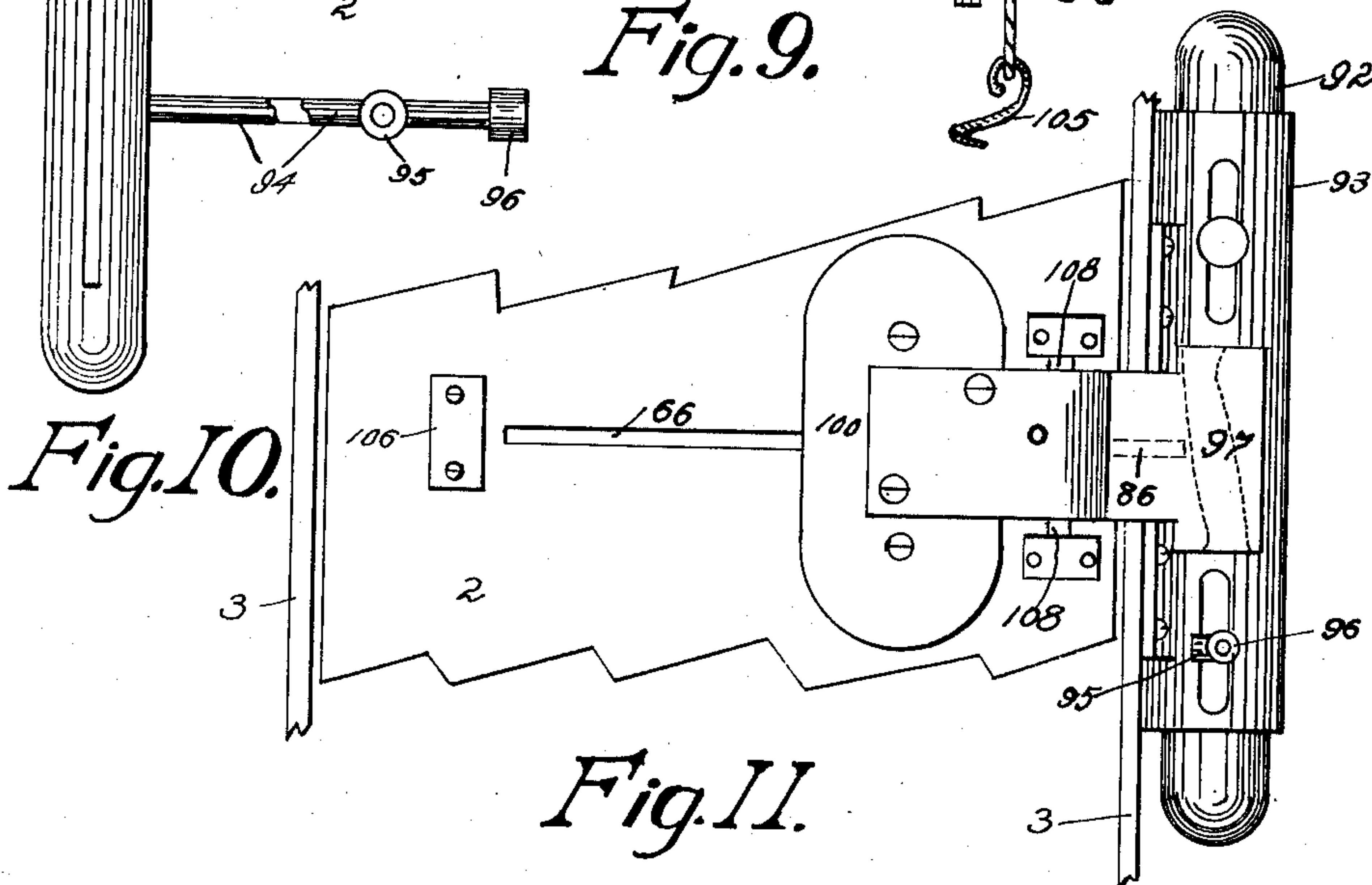


Fig. 10.

Fig. 11.

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8 SHEETS—SHEET 6.

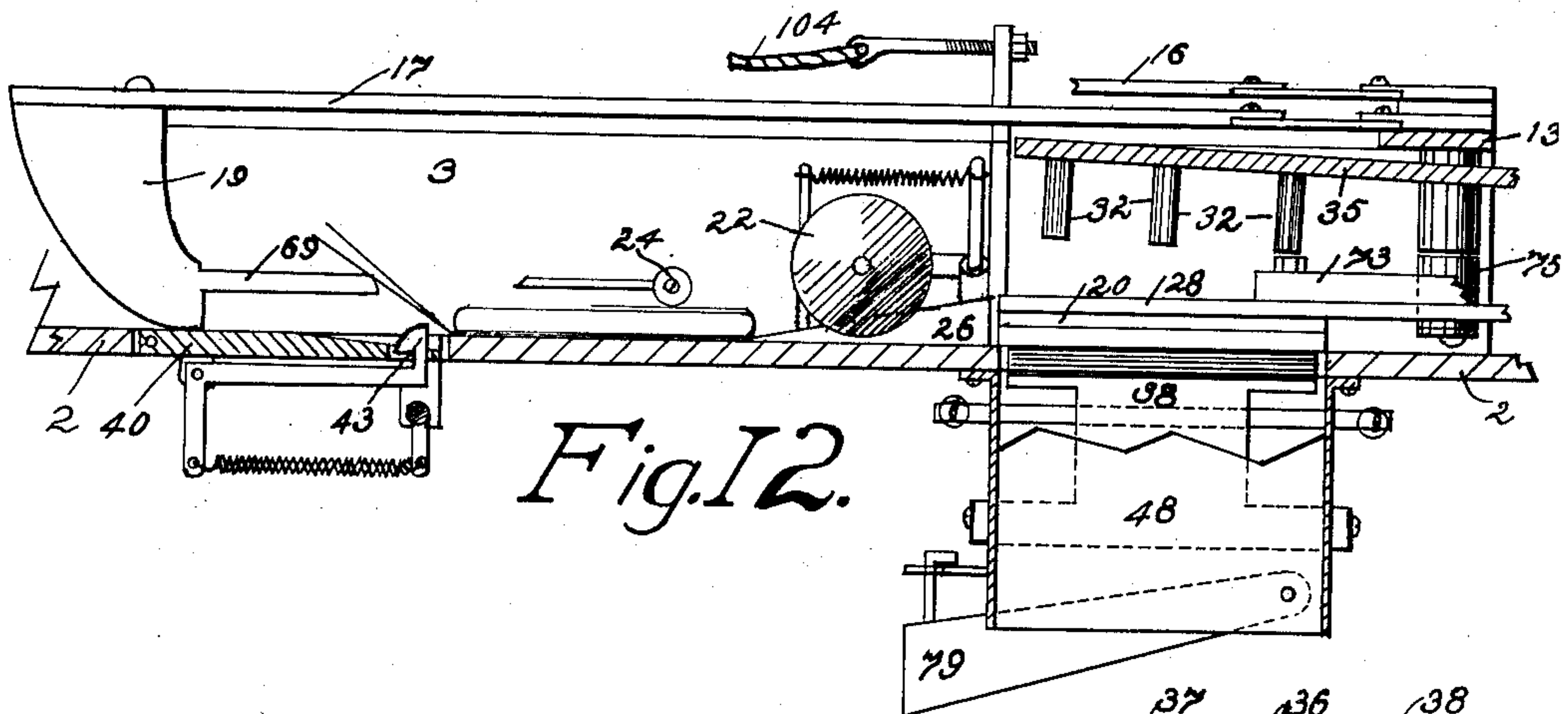


Fig. 12.

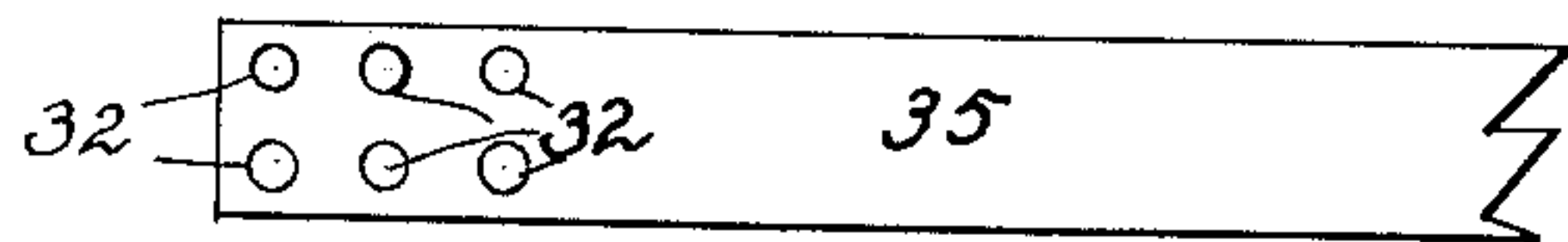


Fig. 13.

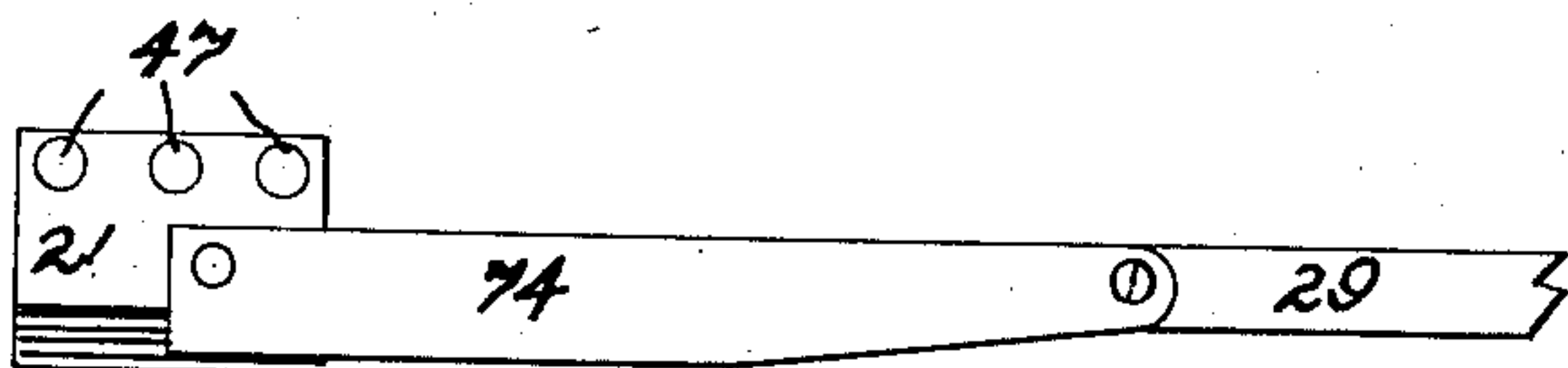


Fig. 14.

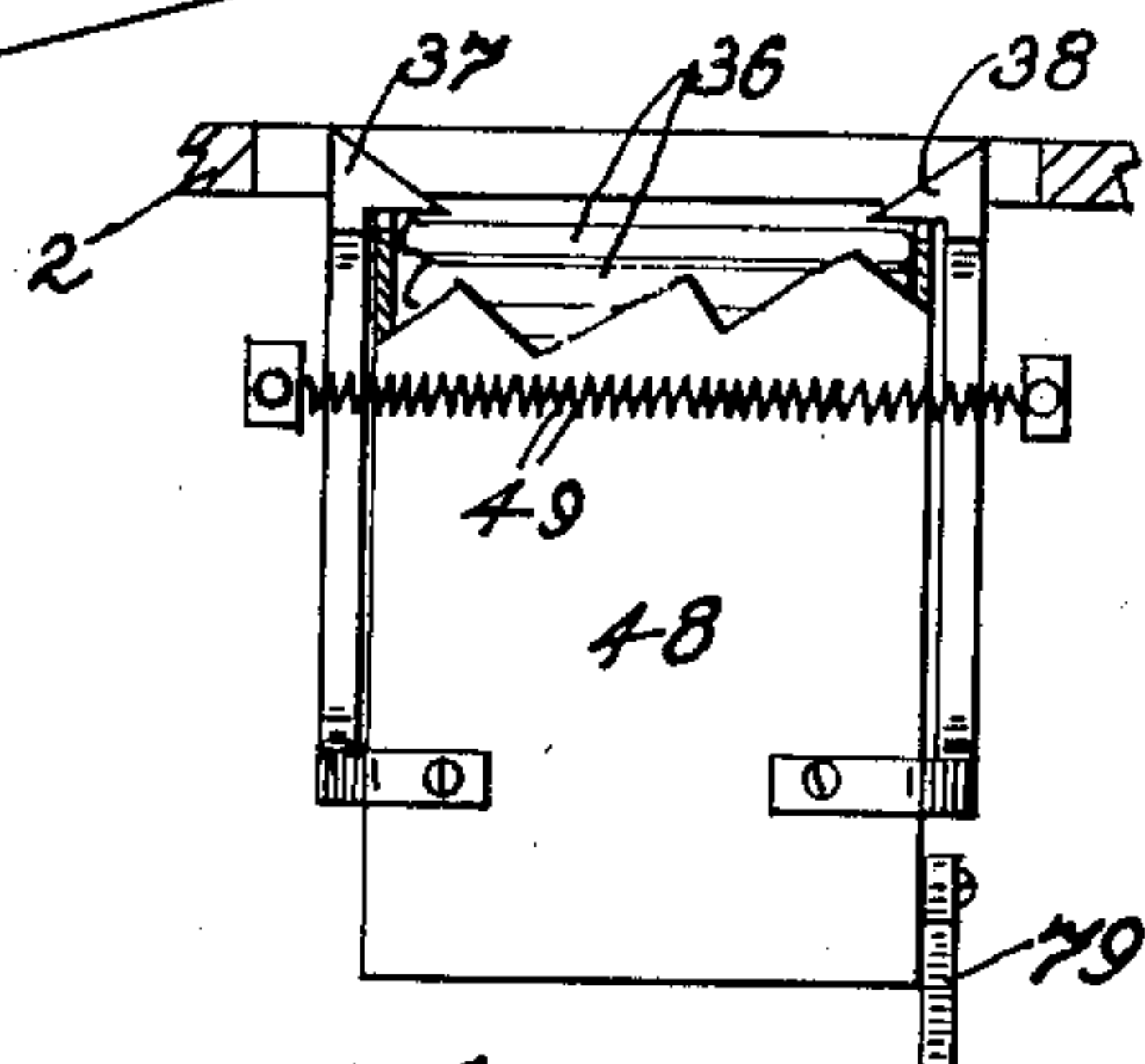


Fig. 15.

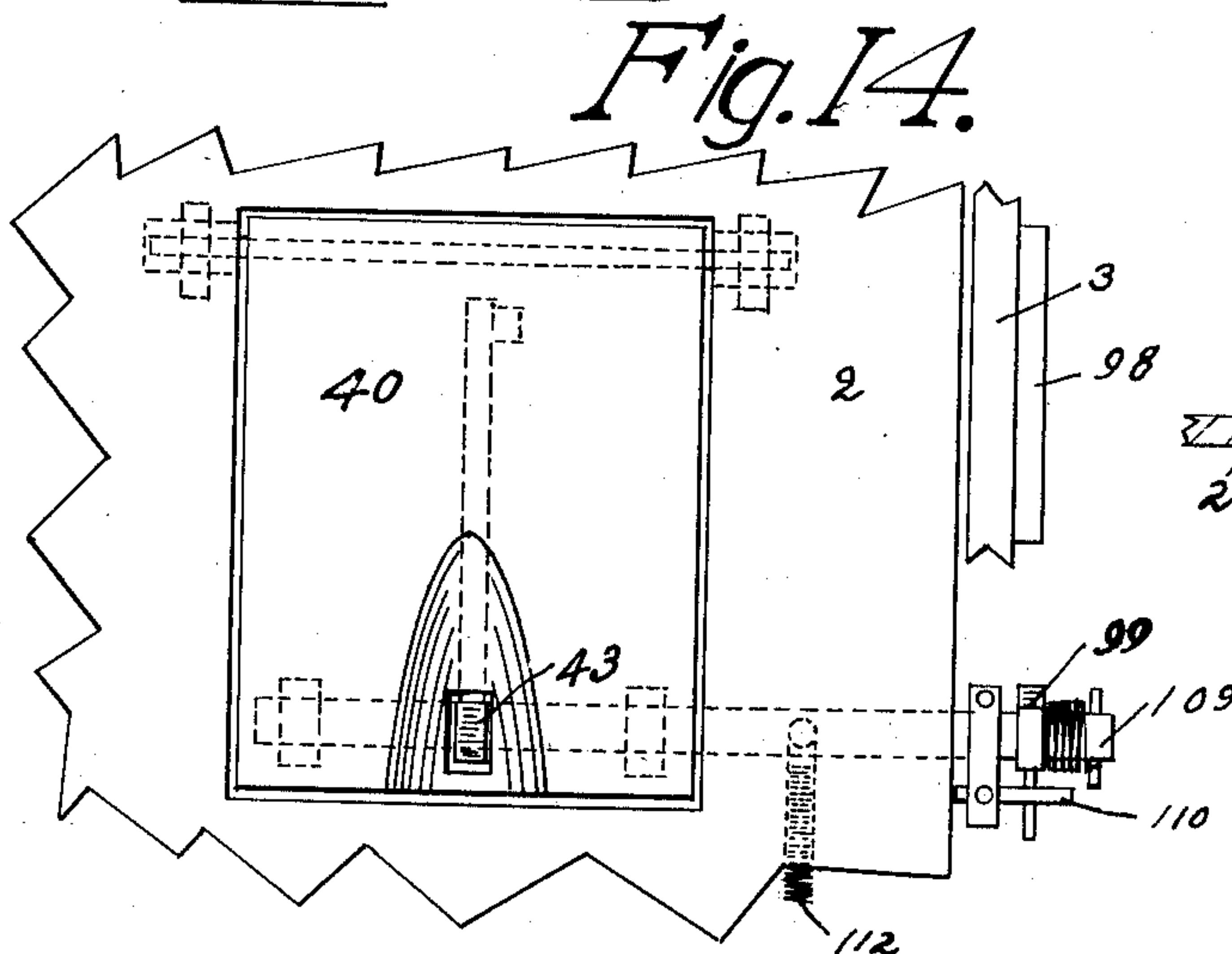


Fig. 16.

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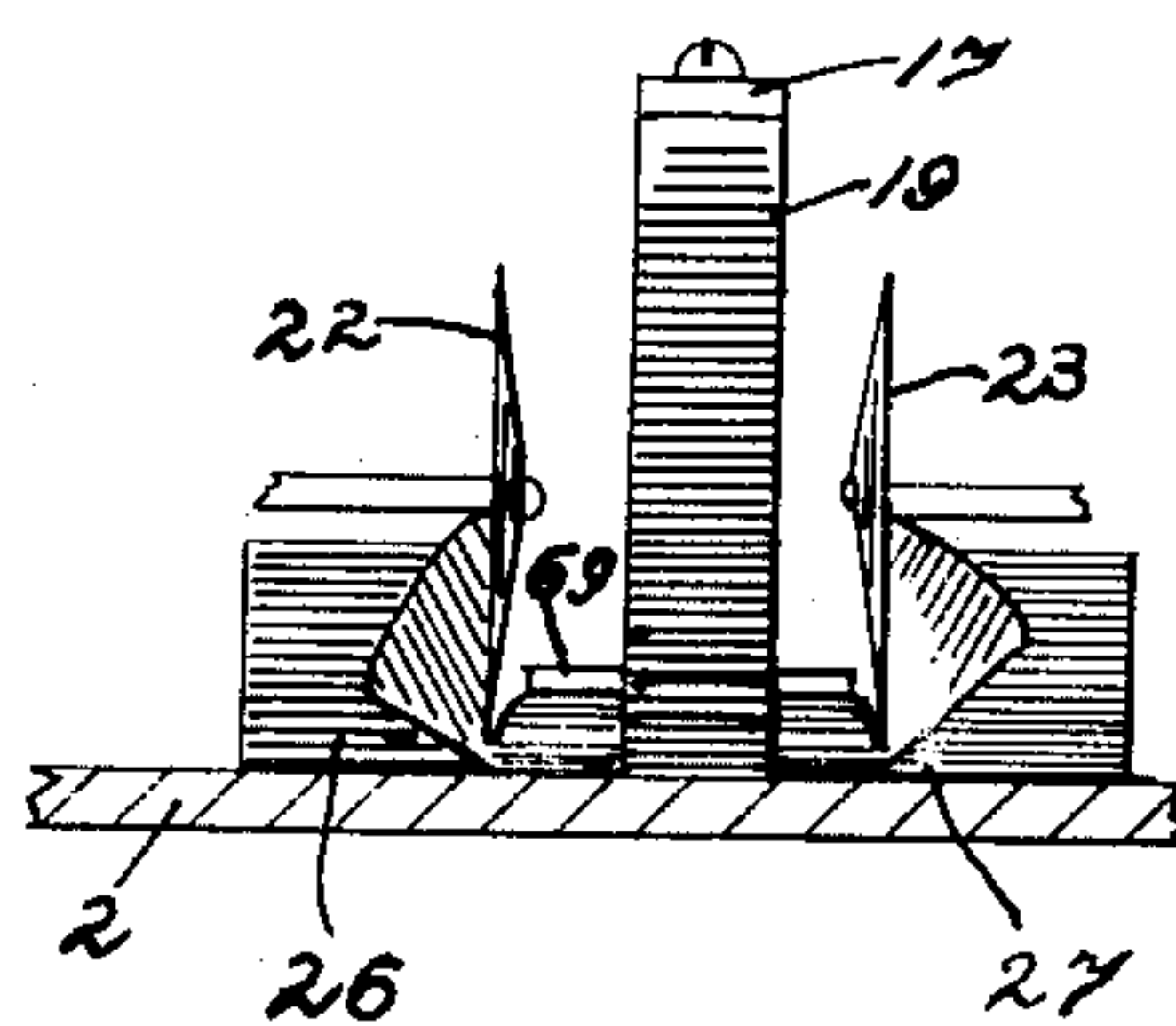


Fig. 17.

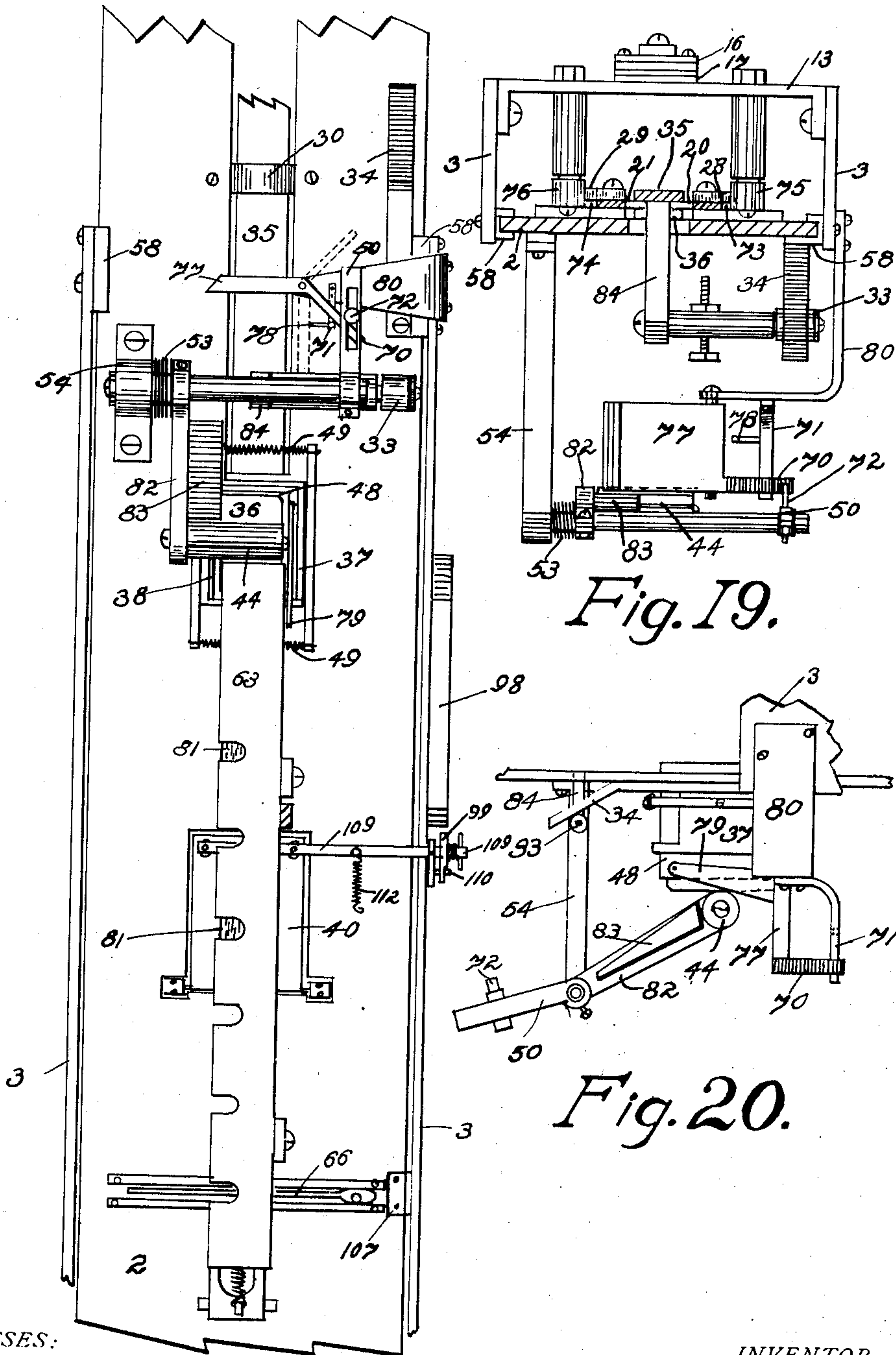
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APPLICATION FILED JULY 12, 1906.

8 SHEETS—SHEET 7.



WITNESSES:
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Fig. 18.

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8 SHEETS—SHEET 8.

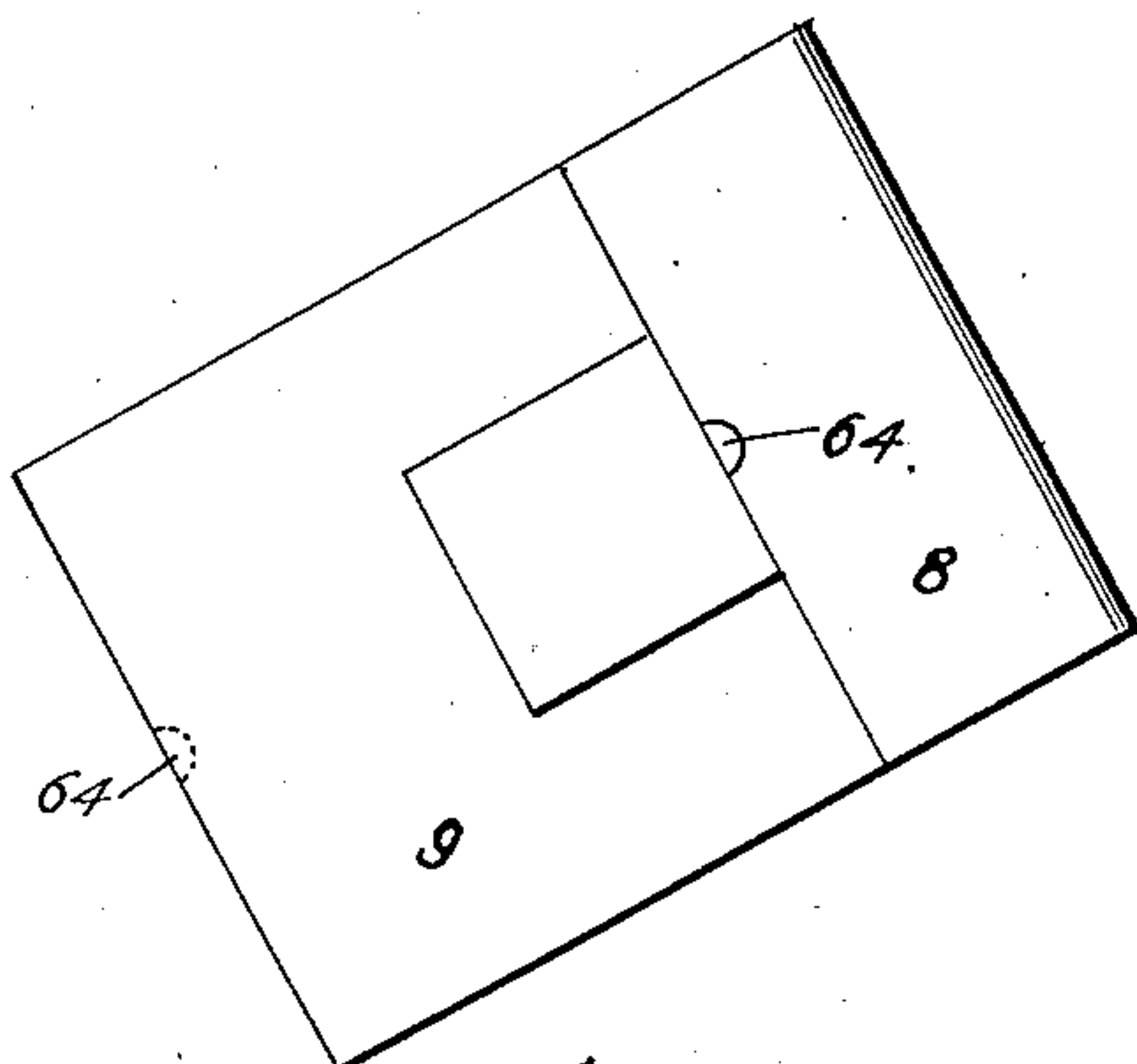


Fig. 22.

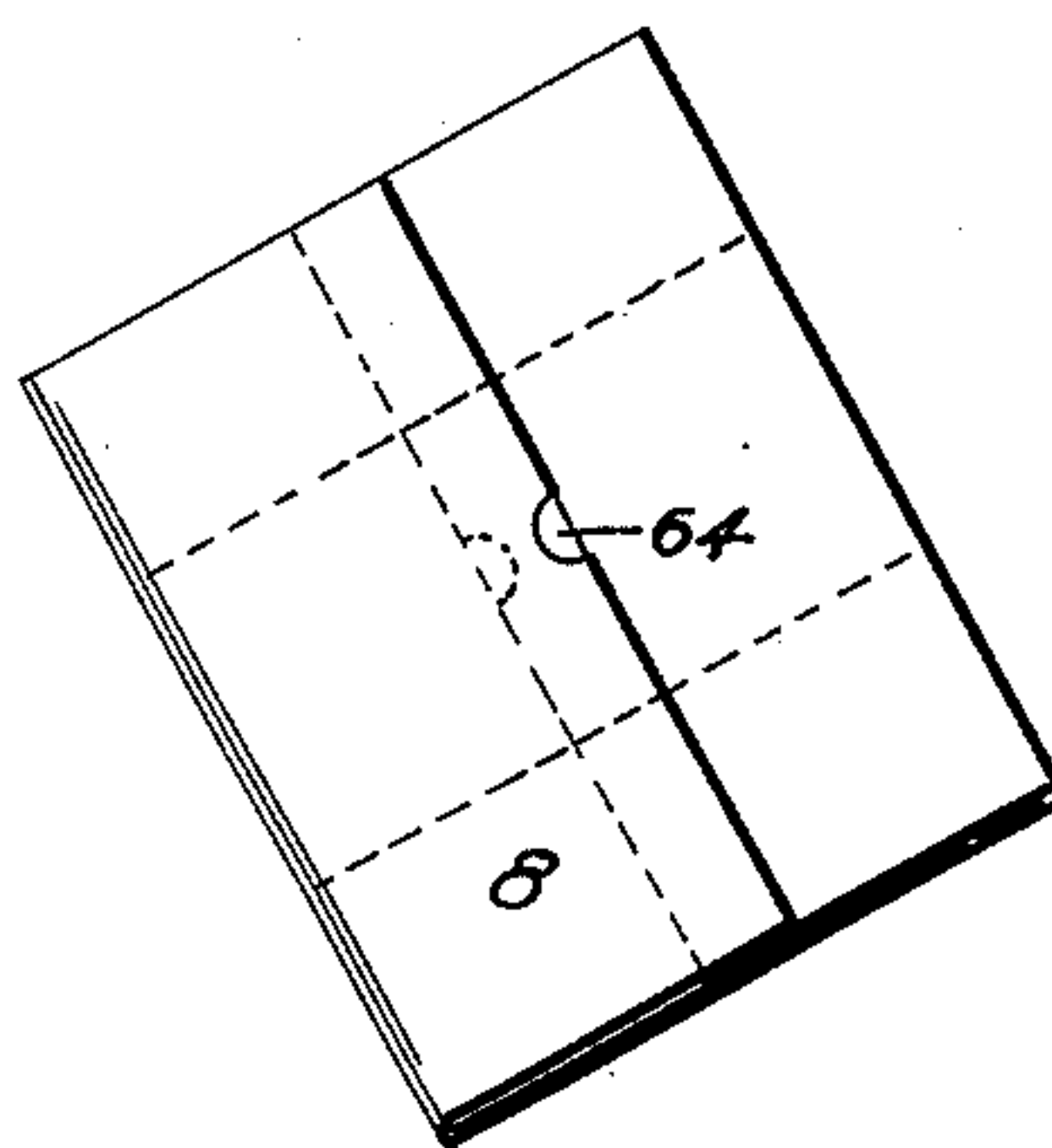


Fig. 23.

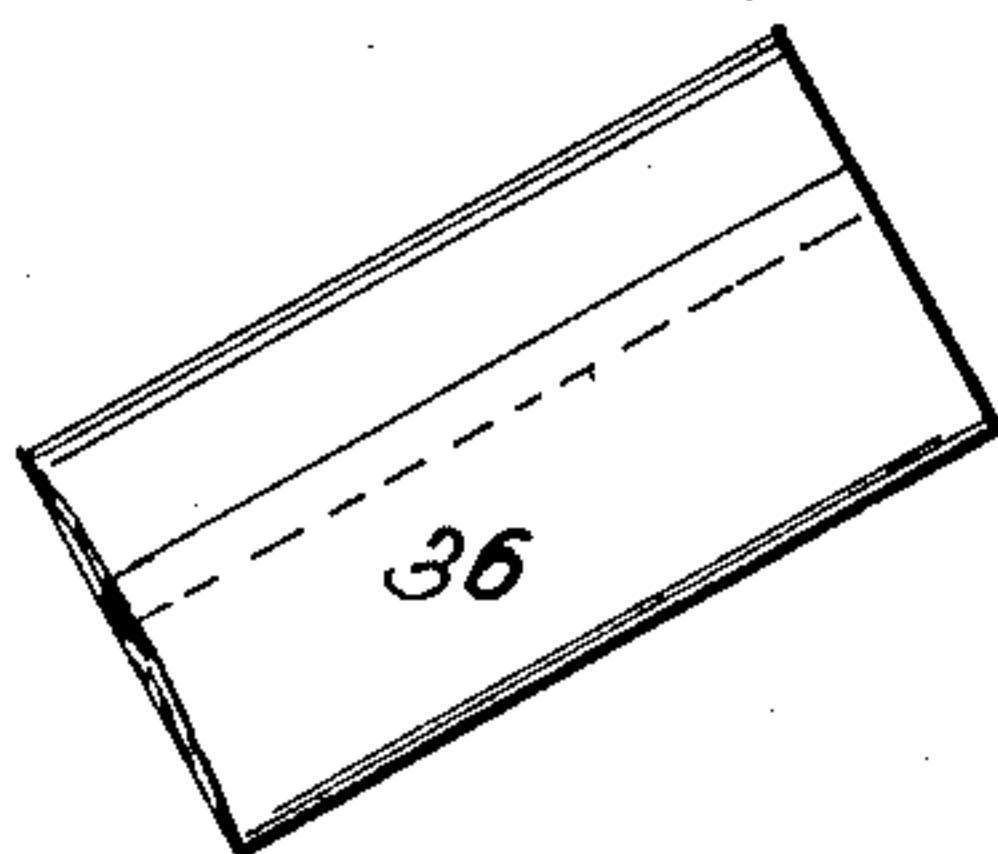


Fig. 24.

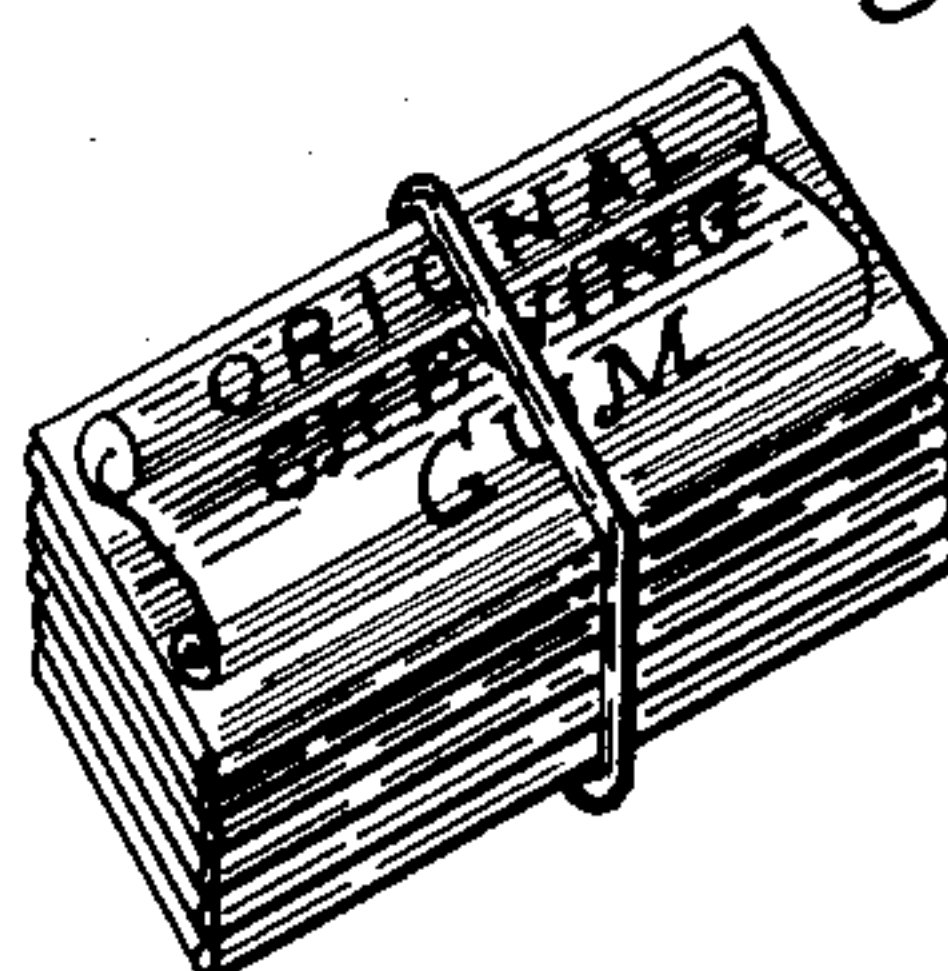


Fig. 25.

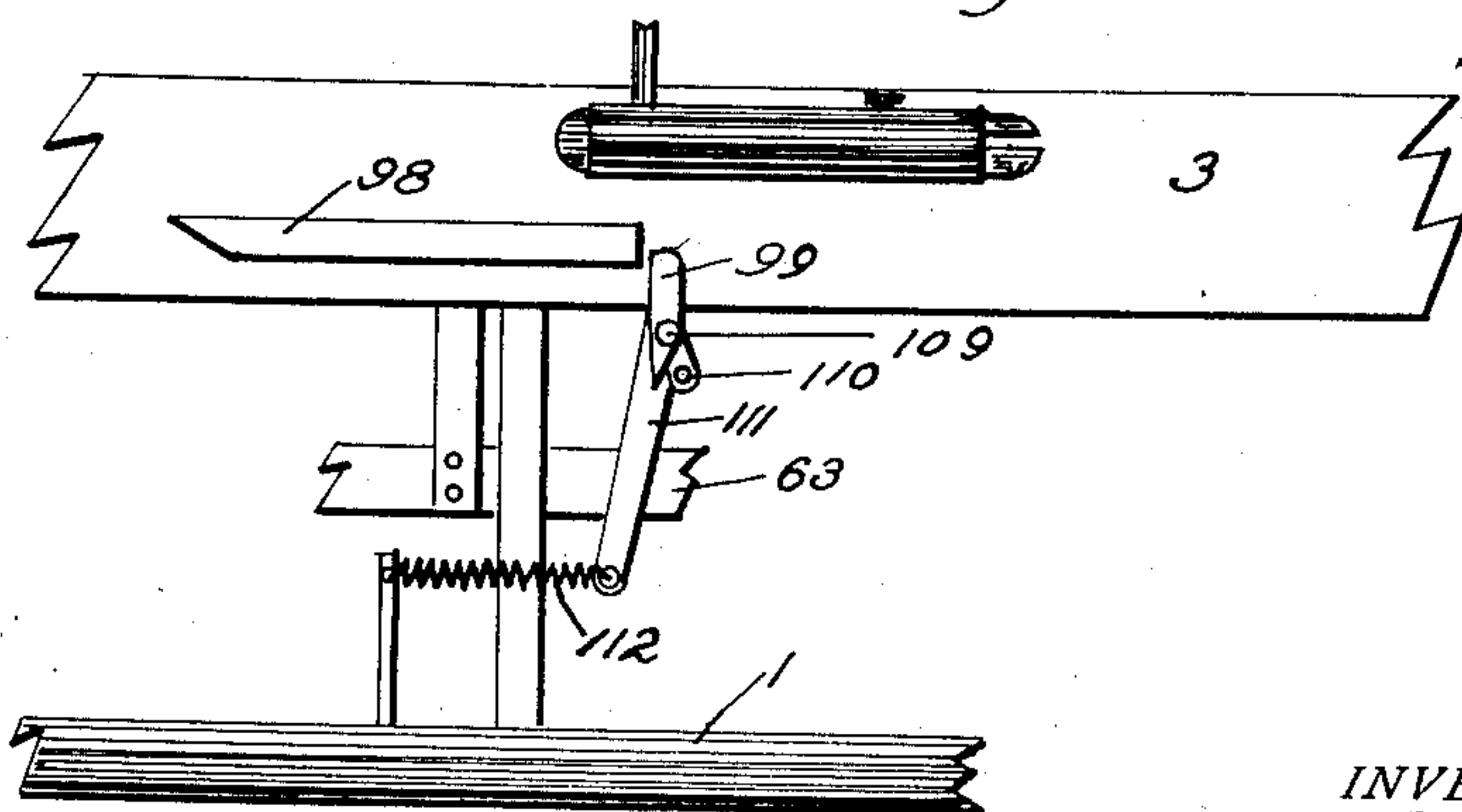


Fig. 26.

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UNITED STATES PATENT OFFICE.

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WRAPPING-MACHINE.

No. 854,023.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed July 12, 1906. Serial No. 325,758.

To all whom it may concern:

Be it known that I, JAMES HENRY BRADY, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Wrapping-Machine, of which the following is a specification.

This invention relates primarily to machines for wrapping articles, such, for instance, as cakes of chewing gum, in wrappers severed, in the machine, from a continuous web supplied to the machine in the form of a roll. It comprises improvements upon the machine disclosed in my application Serial No. 253,517, filed April 3, 1905.

In the accompanying drawings: Figure 1 is a plan view; Fig. 2, a left-hand side elevation with the rear side bar of the carriage removed; Fig. 3, a longitudinal section showing the right-hand portion of the machine; Fig. 4, a detail side elevation of the rear end, the paper rolls, and the slack-apparatus; Fig. 5, an end elevation of the slack-apparatus; Fig. 6, a detail longitudinal section of a portion of the hopper, the electric contact apparatus and adjacent parts; Fig. 7, a longitudinal section of that portion of the machine which comprises the web severing mechanism and adjacent parts; Fig. 8, a bottom plan view of the electric contact apparatus; Fig. 9, a transverse section taken just in front of the web severing knife; Fig. 10, a detail view of the safety mechanical knife-tripping device; Fig. 11, a detail plan view of the web severing mechanism; Fig. 12, a detail longitudinal section of the trap-door, the depressor mechanism and adjacent parts; Fig. 13, a bottom plan view of the rear end of the depressor-arm; Fig. 14, a plan view of one of the side folding-shoes and its arm; Fig. 15, a detail transverse section showing the front end of the receptacle in which the wrapped cakes are packed; Fig. 16, a plan view of the trap-door and related parts; Fig. 17, a detail sectional view, looking from the rear, showing the wrapper scoring-wheels, the folding-guides, and adjacent parts; Fig. 18, a detail bottom plan view showing the package-pusher mechanism and the package chute; Fig. 19, a detail transverse section illustrating the depressor-cam and package-pusher; Fig. 20, a detail side view of the subject of Fig. 19; Fig. 21, (Sheet 5) a bottom plan view of the cam-plate of the safety mechanical

tripper of the web severing knife; Fig. 22, a perspective view illustrating the first fold of the wrapper; Fig. 23, a perspective view illustrating the first and second folds of the wrapper; Fig. 24, a perspective view illustrating the reverse side of the completely wrapped cake; Fig. 25, a perspective view of a package of wrapped cakes; and Fig. 26, a detail side view of the mechanism for operating the trap-door.

For the purpose of the following description, the end of the machine carrying the driving shaft is regarded as the front.

The machine comprises a bed-plate 1, a base-plate 2, a reciprocating carriage 3, folding-shoes 18 and 19, carried by the reciprocating carriage, and the slack mechanism in the rear of the machine for controlling the wrapper webs.

The hopper 5 toward the rear of the machine is fixed upon base-plate 2, in such a manner that the front and rear walls do not quite reach the base-plate, but leave a space slightly greater than the thickness of a cake of the material to be wrapped.

A cake-ejecting bar 15, is secured to the rear cross-bar 14, of carriage 3, in such a manner that it passes under the hopper on the forward stroke of the carriage and pushes out the bottom cake.

The particular machine illustrated in the drawings is designed for wrapping cakes of chewing gum in a waxed paper wrapper and a covering label-wrapper. These wrappers are fed into the machine from rolls 6 and 7 in the form of webs 8 and 9, web 9 being the waxed paper and web 8 being the label-paper.

Since the webs are drawn into the machine by a reciprocating shoe 18, attached to carriage 3, the draft upon the webs is intermittent and somewhat abrupt and they would be liable to be torn because of the inertia of the rolls. It is therefore desirable to provide mechanism for setting the rolls gradually into motion. This is attained by the tension or slack-apparatus (illustrated in Figs. 2, 4 and 5) comprising slotted uprights 39, and a slotted plate 41, provided with rollers adapted to travel in the slots of the uprights, and having lateral extensions provided with eyes to receive tension springs 42. Plate 41 is preferably made of sheet aluminium, on account of its lightness, and the portion removed from the slot intended to accommodate the

webs left unsevered at the upper edge and curved so as to form a smooth rounded surface under which the webs may slide.

From the slack-apparatus, the webs pass through detent devices (Fig. 4) comprising a plate 44 over which the webs pass, and a pivoted check 51. The latter is a rectangular frame pivoted above the webs, inclining forward and having a spring to draw the free end yieldingly down upon the surface of the upper web, so that the webs cannot be drawn backward, but may easily travel forward. This prevents the slack-apparatus from drawing the webs back out of the machine.

From paper-check 51 the webs pass through electric contact apparatus secured to the bottom of base-plate 2 (Fig. 6) and comprising a horizontal partition plate 45, between the top of which and under face of the base plate web 9 travels. Under plate 45 are secured the binding post 46, contact-spring 61, which carries contact-point 59, both insulated from the machine; and a contact-member 60 electrically in contact with the machine. Members 60 and 61 may, respectively, be adjusted by screws 62, 62'. Label-web 8 is provided with perforations 64, midway between the printed labels (Fig. 8). When the webs 8 and 9 are fed forward and a perforation comes opposite the point on the end of spring 61, the point springs up through the perforation into a perforation in partition plate 45, and contact-point 59 rises into contact with member 60, completing an electric circuit which effects operation of the web severing knife, hereinafter described.

From the electric contact apparatus, the webs pass through a slot 65 (Figs. 3 and 6) in base-plate 2, to the upper surface of the plate, and then forward as far as shear-slot 66.

When bar 15 ejects a cake from hopper 5, it is deposited upon the webs 8 and 9 (Fig. 6). When this occurs a pair of spring-actuated dogs 55, pivoted in front of the hopper, drop behind the rear edge of the cake and prevent its moving backward; and a pair of spring-actuated fingers 56, pivoted above dogs 55, press down upon the cake so that it rests firmly upon the webs. Under the ends of webs 8 and 9 in front of the cake, is a spring actuated web elevating finger 57, pivoted in a slot in base-plate 2, and acting to throw up the free ends of the web (Fig. 6).

A suitable distance in front of the forward edge of the cake lying upon the webs is a transverse shear-slot 66, formed in the base-plate 2. Over the shear-slot is arranged a web severing knife 67, the operation of which is hereinafter described.

A folding shoe 18, is attached to a spring arm 16 secured to the front cross-piece 13 of the reciprocating carriage 3. In front of shoe 18, is a folding shoe 19 attached to a shorter spring arm 17, also secured to front

cross-piece 13 underneath arm 16. On the backward stroke of the carriage, shoe 18 (Figs. 6 and 7) strikes the upturned ends of webs 8 and 9, folds them over upon the cake, and rides over them until the heel of the shoe drops in behind the cake. In this position, the spring-actuated presser-foot 68 carried by the shoe rides upon and holds firmly the folded down ends of webs 8 and 9. The carriage now moves forward, and the heel of shoe 18 drags the cake and webs forward. When the cake is beyond shear-slot 66 a sufficient distance to leave enough of the web behind it to form the second fold or rear fold, knife 67 operates and the webs are severed, traverse thereof immediately ceasing. The cake is, however, carried forward over a trap-door 40, located in an opening in the base-plate and hinged at its rear end. As the cake passes over the trap-door 40, the latter is depressed by a cam-piece attached to carriage 3, and is released and rises when the rear edge of the cake has passed its front edge. In this way the front edge of the door forms an abutment for the cake and prevents the cake moving backward on the backward stroke of shoe 18. Spring-actuated presser-rollers 24 and 25, are so arranged that the cake is pushed under them by shoe 18, and they hold the first fold of the wrappers down upon the cake after shoe has moved back. Shoe 19, moving backward (Figs. 6, 7 and 12) with shoe 18, rides over the cake deposited in front of the trap-door, until the front edge of its folding or presser-foot 69 has passed beyond the severed ends of the wrappers, which have been turned up by the front edge of trap-door 40. To prevent them remaining flat upon the trap-door on account of the rubbing effect of shoe 19 as it passes over them, there is provided a spring-actuated finger 43, normally protruding through the trap-door and acting to elevate the ends of the wrappers. On the next forward stroke of the carriage when shoe 18 brings forward another cake, the end of presser-foot 69 of shoe 19 passes under the upturned ends of the wrappers, carries them over the top of the cake (Fig. 12) laps them over the first folded ends now held down by presser-rollers 24 and 25 and the heel of shoe 19 depresses finger 43, engages the rear edge of the cake, carrying it and the wrapper forward under right-hand and left-hand scoring disks 22 and 23, by which the paper is drawn down closely over the side edges of the cake and scored. While the scoring is being done, the side edges of the wrapper are turned upward by the side folding-guides 26 and 27, which are secured rigidly on the top of base-plate 2.

The cake, with the wrappers turned up at the sides vertically, is drawn beyond the lateral folding-guides 26 and 27 and between side folders 20, 21, where it is left, the carriage now moving backwardly again. The

lateral folding-shoes 20 and 21, are secured to the free ends of arms 28 and 29 pivoted at their front ends on the top of base-plate 2. These arms are provided with cam-pieces 73 and 74. On the under side of cross-piece 13 of the carriage are secured cam-rollers 75 and 76, adapted to engage cam-pieces 73 and 74 on the backward motion of the carriage and press the cam-pieces, and the lateral folding-shoes attached to them, toward each other. This causes the shoes to slide over the top of the cake, so as to press the side folds of the wrapper firmly down upon the cake. Shoes 20 and 21 (Fig. 14) are provided, along their adjacent edges, with perforations 47. The cam-pieces 73 and 74 are so arranged that the one shoe moves over the cake a little in advance of the other so that one fold is caused to lap over the other, and when they have reached the end of their folding movement they are caused to remain at rest for a moment, while pins 32 passing down through perforations 47, force the wrapped package down into a holder or receptacle, the construction of the devices being as follows: A depressor-arm 35, hinged toward the front end and on top of base-plate 2, extends rearward terminating over shoes 20 and 21. The arm is normally elevated by a spring 31 secured to its under side and bearing upon the base-plate (Fig. 12). The rear end of the arm 35 is provided with the pins 32, adapted to pass through the perforations 47 of the lateral folding-shoes.

A bracket 84 secured to the under side of arm 35 passes through a slot in base-plate 2 and has a lateral extension provided with a cam-roller 33, (Figs. 18 and 19.) A cam-strip 34, secured to the under side of one of the guide-shoes 58 of the reciprocating carriage in the path of roller 33 (Figs. 2, 18 and 19) is so arranged that when the carriage approaches the end of its backward stroke, the cam-strip 34 engages roller 33, draws down arm 35, and the pins 32 passing through perforations 47 press upon the top of the wrapped cake and push it downward into a receptacle 48, attached to the under side of base-plate 2 (Figs. 12, 15 and 20). This receptacle is a rectangular box of such size as to receive the wrapped cake snugly. On its right and left-hand sides are hinged holding-jaws 37 and 38 hinged to the front and back of the receptacle at their lower ends, and having their free ends drawn together by tension springs 49. When the wrapped cake is depressed by pins 32, it presses apart the jaws 37 and 38 which spring over and hold it firmly.

The open bottom of receptacle 48 is guarded by a transverse roller 44 (Figs. 1, 19 and 20) mounted on a spring actuated arm 82 secured to a transverse shaft carrying an arm 50 so that the two arms move in unison. A coil-spring 53 applied to this shaft acts to

yieldingly press the roller 44 against the lowermost of the wrapped cakes in receptacle 48. Arms 82 and 50 and their pivot shaft are mounted on a bracket 54, secured to the under side of base-plate 2. The pile of cakes in the receptacle is constantly pushed upward by roller 44 against the retaining jaws 37, 38, so that the final folds of the wrappers are held firmly. A bracket 80, secured to the right-hand side-bar of carriage 3, extends downward and laterally under base-plate 2, and has pivoted in its end a package-pusher-gate 77, adapted to swing across the axial line of the machine and push an assemblage of wrapped cakes from receptacle 48 into a horizontal chute 63 (Figs. 2, 18, 19 and 20).

The pivot-shaft of gate 77 is so made that the gate does not swing on the pivot-freely, but is constantly retarded by friction between the gate and its pivot-shaft, so that it will remain in whatever position placed by actuating means. The gate has a backward extension 70, by means of which it is tripped or opened. An adjustable tripping-pin 72, is placed in arm 50. A stop-arm 71 is secured to bracket 80 and extends downward in the path of extension 70, so that when the gate is opened it is held in transverse operative position (Figs. 18, 19 and 20). Stop-arm 71 is provided with a stop-pin 78, for stopping gate 77 in the closed or inoperative position illustrated by dotted lines in Fig. 18. A tripping-plate 79, for closing or folding the gate, is pivoted to the side of receptacle 48; adjacent to gate 77 (Figs. 12 and 15). This plate is loosely pivoted so as to drop by gravity and fall into the path of the gate as the latter is moved forward.

It will be understood that if the gate is in the open position (Figs. 18 and 19), as it moves backward to carry a pack of cakes into chute 63, the upper edge of the gate will strike the lower edge of plate 79 and raise the plate, which will drop as soon as the gate has passed. When the gate returns on the forward stroke, it will strike the perpendicular edge of the plate, and be closed or folded back in the position shown by dotted lines in Fig. 18, in which position being on a friction pivot, it will remain until it is opened again by means provided therefor.

As the wrapped cakes are pressed down through receptacle 48, they press roller 44 and its arm 82 gradually downward, and arm 50 carrying tripping-point 72, is gradually raised. Point 72 is adjusted at such a height, for instance, that when six wrapped cakes appear under receptacle 48 on roller 44, it engages extension 70 of the gate on the forward stroke of the carriage and swings the gate open, so that on the backward stroke it engages the six cakes immediately above the roller and pushes them into chute 63. It is obvious that as soon as the front end of the cakes pass beyond roller 44, the roller springs

upward into contact with the bottom cake left in the receptacle. The gate, on the return stroke, is closed by plate 79 as stated.

To prevent the gate in its backward movement from striking roller 44, should the gate be accidentally swung into the open position, a safety cam-piece 83, is placed on arm 82 in the path of the gate, so that on its backward stroke it will ride over the cam-piece, depressing roller 44, and pass over it without injury.

The chute, or horizontal chamber 63 has notches in its upper and lower walls (Fig. 18), so that the packages of cakes may be grasped between the fore-finger and thumb and removed. The chute is of such a length that should the operator be required to attend to other matters for a moment, the machine may be kept running and several packs accumulated in the chute till the operator is ready to take them out.

The mechanism for cutting the wrapper-webs consists of a pivoted knife 67 adapted to co-operate with the shear slot 66, an electromagnet 100, the armature-trigger 101, and the raising-cord 104. Knife 67 is provided with a transverse shaft 108, which is mounted in journal boxes, one on either side of the knife. A cord attached to the knife near its pivoted end passes downward through an aperture in the base-plate. A coiled tension-spring 105 is secured to the lower end of the cord and to bed-plate 1 so that it continually pulls downward on the knife. A cord 104 attached near the free end of the knife, passes over a guide-pulley attached to bracket 107, and is secured to a post or bracket 85, on the right-hand side-bar of carriage 3 (Figs. 1 and 2). By this means the free end of the knife is drawn up on the forward stroke of the carriage. To keep it in the raised position a trigger or latch 101 provided with a spring 103, is pivoted in a bracket 107, at 102. The outer end of the trigger has a suitable hook to engage the free end of the knife and hold it when it is slipped thereunder. The trigger is provided with a backward extension 86, at one side of pivot 102, and on the other side with an armature adapted to be attracted by the electro-magnet 100, mounted on the upper end of bracket 107. By this means, as soon as an electric circuit passes through magnet 100, trigger 101 is raised, and knife 67 is drawn down by its spring. The quick action of the knife thus arranged, provides for the proper severing of the web in transit, without interruption of its motion.

To prevent the electric circuit being closed during the entire time that the paper webs are at rest after the knife has been tripped, contact points 59 and 60 being then in contact by reason of spring 61 having entered a perforation 64 in the label-web, a revolving contact 87, and a contact brush 88 are provided at

the forward end of the machine. The contact 87 is mounted on the driving-shaft and the yielding spring brush 88 is insulated on the frame. By this means the circuit is closed during a small part of the revolution of the shaft, at such time as a perforation 64 in the label-web is passing spring 61 and another perforation is passing shear-slot 66. When the contact-point of 87 is touching brush 88 (Fig. 2), the current may pass from a battery or other source of electricity through wire 89, to magnet 100, through wire 90 to brush 88, contact 87, and through the machine to contact-point 60, the other contact point 59 being connected with the other pole of the battery. If the perforation in the label web has reached the position in which the point at the free end of spring 61 may enter, the circuit will be closed between points 59 and 60 (Fig. 6) and the current may pass through wire 91, (Fig. 2) and return to the battery. Trigger 101 will be attracted, and the knife will descend and sever the paper. As soon as the contact-point 87 has passed out of engagement with brush 88, although points 59 and 60 may be in contact, the circuit will be open at 87, 88, and the magnet cannot be energized, so that trigger 101 will drop into operative position ready to hold the knife when it is elevated by cord 104 during the forward stroke of the carriage.

To insure operation of the knife, even though there be an accidental absence of a perforation in the label-web; or from other causes, when the circuit may not be properly closed between points 59 and 60 or be otherwise inefficient, a safety mechanical apparatus is provided so that trigger 101 is actuated thereby immediately subsequent to the moment when the electric devices should act, (Figs. 9, 10 and 11). A bracket 93, secured to the right-hand side of carriage 3 is provided with a longitudinal hole in which is mounted a shaft 92. Shaft 92 is bifurcated, and its free ends spread, so that they normally spring apart and produce friction against their bearing surface in bracket 93. A tripping rod 94, carried by shaft 92 extends upward at right-angles thereto, and is so arranged that it may have a slight lateral motion, the friction of shaft 92 providing that it will remain in whatever position it may be placed by suitable actuating means.

A tripper-roller 95 is mounted on the right-hand side of stem 94, at a suitable height, so that it may be brought into the path of extension 86 of trigger 101 and depress the extension and raise the trigger. On the upper end of stem 94 is a cam-roller 96.

A horizontal cam-plate 97, is mounted on bracket 107 over the upper end of stem 94. This cam-plate is provided with a curved cam-groove (Figs. 11 and 21). When carriage 3 moves backward, roller 96 strikes

the right-hand or outer wall of the cam-groove, and on account of the friction of shaft 92 hugs the outer wall and is deflected inward thereby until it reaches the rear end of the groove. When the cam-roller returns, on the forward stroke of the carriage, it advances on the line to which it had been previously deflected and strikes the left-hand or inner wall of the groove, as shown in Fig. 9. In this position, it will be seen, cam-roller 95 is in the path of extension 86, and will depress it, but, on the backward stroke of the carriage, roller 96 having been previously moved outward by the wall of the cam-groove, will be out of the path of extension 86.

During the normal action of the electric contact apparatus, trigger 101 is still elevated and extension 86 depressed while roller 95 is passing it, so that the safety apparatus does not operate except when required.

The trap-door 40, previously referred to (Figs. 7, 16, 18 and 26) is operated by a cam-piece 98, secured to the side of the right-hand side-bar of carriage 3. A shaft 109, is mounted in blocks on the under side of the trap-door, near the free end (Figs. 7 and 16), and arm 111 extends downward from shaft 109 and terminates in an eye to which is attached a coiled tension-spring 112, which in turn is attached to a stationary post extending upward from bed-plate 1. Through the medium of arm 111, trap-door 40 is normally held in the raised position shown in Fig. 7. On the outer end of shaft 109 is mounted a cam-block 99, which is kept normally in a vertical position, Fig. 26, its lower end resting against a stop-pin 110, but its upper end is adapted to swing backward whenever pressed in that direction by cam-piece 98. Block 99 is kept normally in the upright position by a coiled torsion-spring mounted on shaft 109 (Fig. 16).

When the carriage moves backward, the square end of cam-piece 98 will strike the upper end of cam-block 99 and swing it backward without affecting the trap-door, but, on the forward movement the forward inclined end of cam-piece 98 strikes the upper end of block 99, which being unable to swing in the forward direction on account of stop-pin 110, must slide down the incline of piece 98, being thereby depressed until it reaches the rear end of the cam-piece, when it is at liberty to spring up. Cam-piece 98 is arranged at such a position on the carriage that, when foot 18 brings a cake and is about to slide it upon trap-door 40, the trap-door is depressed, so as to form a level surface for the cake to slide over, and, as soon as the rear edge of the cake has passed the front edge of the trap-door, it springs up behind the cake, so as to prevent its backward motion, and elevates the severed ends of the wrappers (Fig. 7) as previously described. It will be understood

that trap-door 40 must not be depressed on the backward stroke of the carriage because on this stroke it is necessary for shoe 19 to slide back over the cake, and hence the cake must be held in position and not be permitted to be pushed back by the shoe. Therefore cam-block 99 is arranged to swing to the inoperative position on the backward motion of the carriage.

The successive folds of the wrappers and the finally assembled package are shown in Figs. 22, 23, 24 and 25 respectively.

I claim as my invention:—

1. Package wrapping apparatus adapted to wrap articles in labels cut from a continuous web, comprising the combination of electro magnetically controlled web severing devices adapted to automatically sever the web at determined points between the labels, mechanically operated means for actuating the web severing devices immediately after the time when they should be actuated by the electro magnetic devices, and means for wrapping articles in the labels.

2. Package wrapping apparatus, comprising the combination of means for feeding the article to be wrapped upon a web of wrapping material, means for folding the web upon the article and drawing them both forward, web severing devices, electro magnetic means for setting them in operation controlled by the web, and mechanically operated means adapted to set said devices in operation immediately following the time when they should be set in operation by the electro magnetic devices.

3. Package wrapping apparatus adapted to wrap articles in labels supplied in the form of a continuous web, comprising the combination of web tension devices consisting of a cross bar spring pressed upon the web, a guide way in which the bar is free to move and a detent acting to prevent back-draft of the web, means for severing labels from the web and means for wrapping articles in the labels.

4. Package wrapping apparatus, comprising the combination of a base plate, a reciprocating carriage, a wrapper folding shoe 19 carried by the carriage, a hinged platform 40 mounted in an opening in the base plate and adapted to co-operate with the folding shoe and means whereby on reciprocation of the carriage the platform is raised and lowered as required.

5. Package wrapping apparatus, comprising the combination with means for folding the front and rear ends of the wrapper upon the article to be wrapped, a package receptacle and means for delivering the articles so partly wrapped over said receptacle, perforated side folders adapted to then fold the wrapper at the sides of the articles, package depressing devices adapted to pass through such perforations and force the package into

the receptacle and retaining devices located at the mouth of the receptacle and serving to hold the package therein and retain the said folds in folded position.

5 6. Package wrapping apparatus, comprising the combination of mechanism for wrapping articles or cakes in wrappers, a receptacle to which the completed packages are successively delivered as completed and in which
10 they accumulate, a yielding bottom depressed by the accumulation of packages, means for periodically removing from the accumulation or stack of packages a predetermined number or group thereof and an elongated
15 chute or passage way to which such groups of packages are successively delivered.

7. Package wrapping apparatus, comprising the combination of mechanism for wrap-

ping articles or cakes in wrappers, a receptacle to which the completed packages are successively delivered as completed and in which
20 they accumulate, a yielding bottom depressed by the accumulation of packages, means for periodically removing from the accumulation or stack of packages a predetermined number or group thereof, and a horizontal passage way or chute, having an open front and recessed upper and lower walls, to which such
25 groups of packages are successively delivered.

30 In testimony whereof, I have hereunto subscribed my name.

JAMES HENRY BRADY.

Witnesses:

DAVID A. KELLER,
WILLIAM COLGAN.