

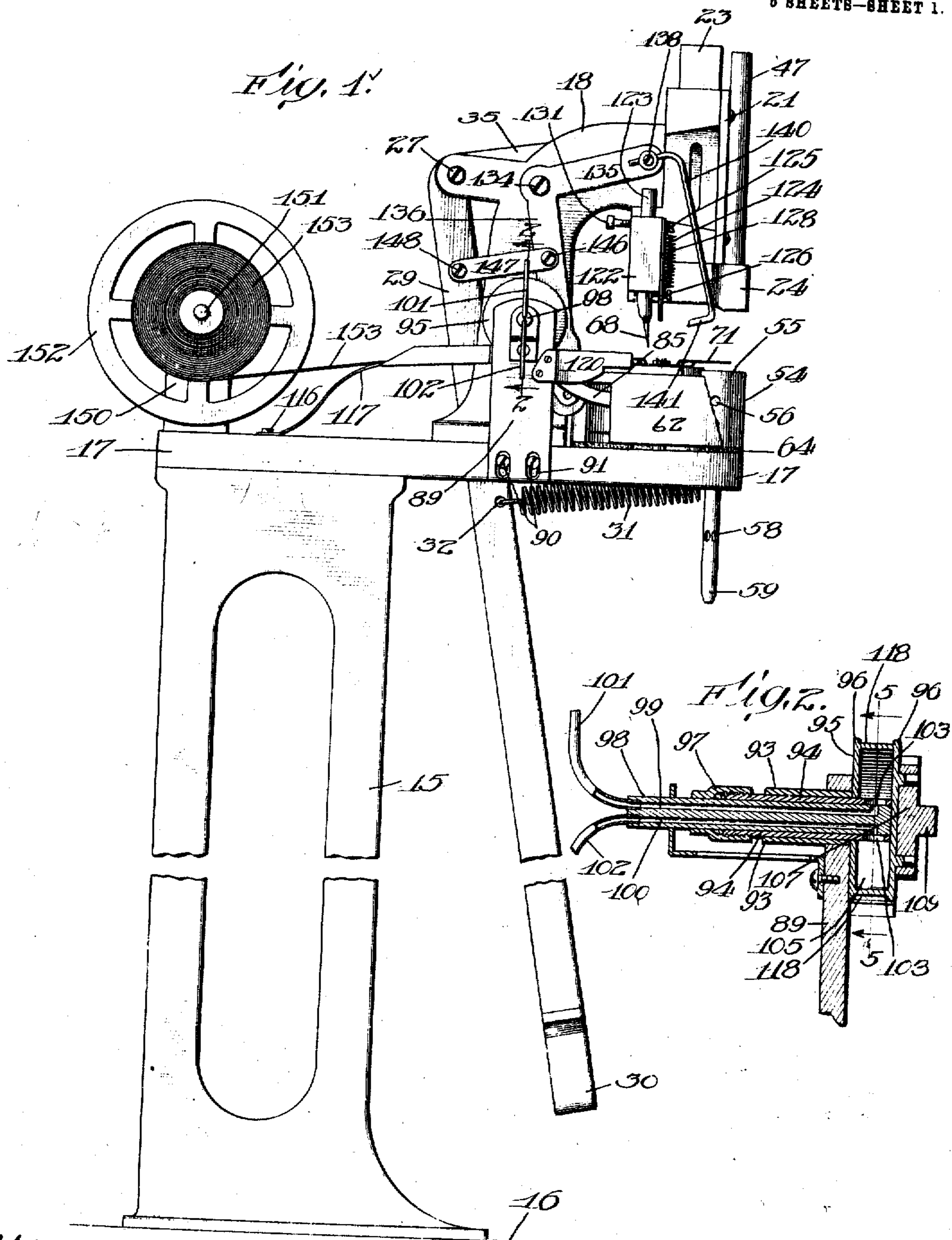
No. 835,176.

PATENTED NOV. 6, 1906.

J. L. BURGARD.
AUTOMATIC TAGGING MACHINE.

APPLICATION FILED DEC. 11, 1906.

5 SHEETS—SHEET 1.



Witnesses:
Robert H. Klein
Bullein

Inventor:
Jacob L. Burgard
By Cheever & Coe
Attys

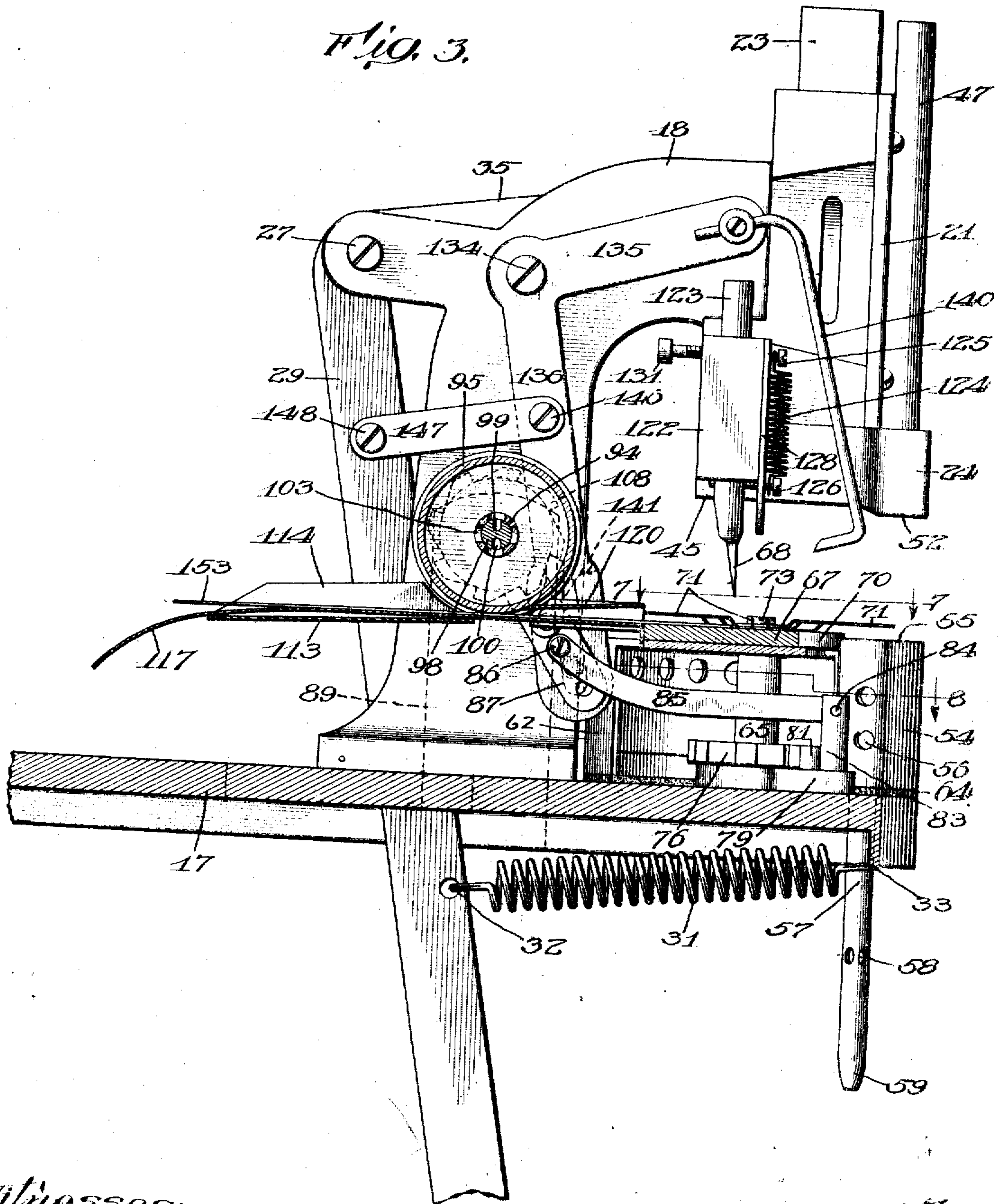
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6 SHEETS—SHEET 2.



Witnesses:
Robert H. Weir
J. B. Weir

Inventor
Jacob L. Burgard
By Cheever & Co.
Atty's

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6 SHEETS—SHEET 3.

Fig. 4.

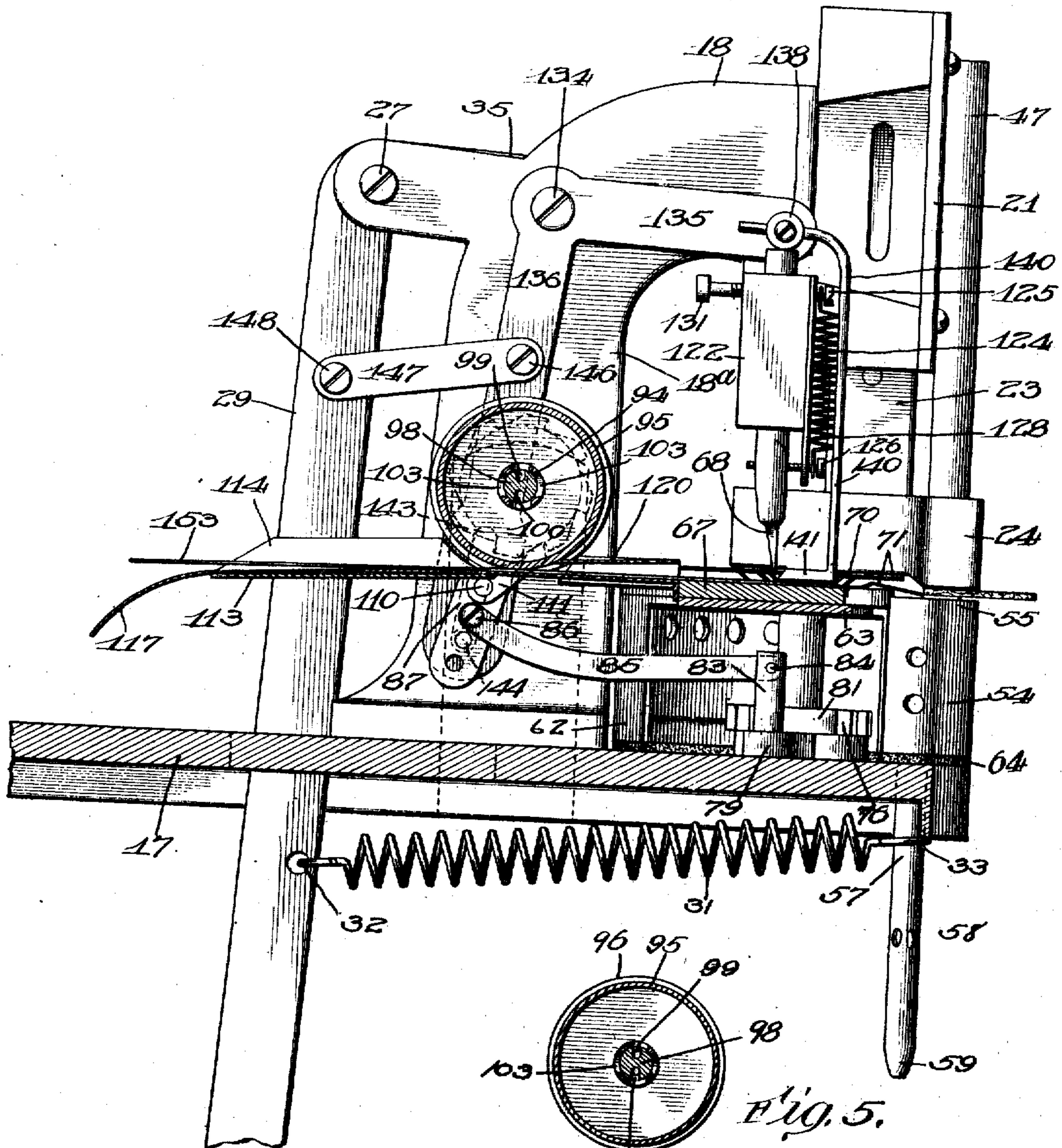


Fig. 5.

Witnesses:
Robert H. Weir
J. B. Weir

Inventor:
Jacob L. Burgard
By Cheever & Co.
Atty.

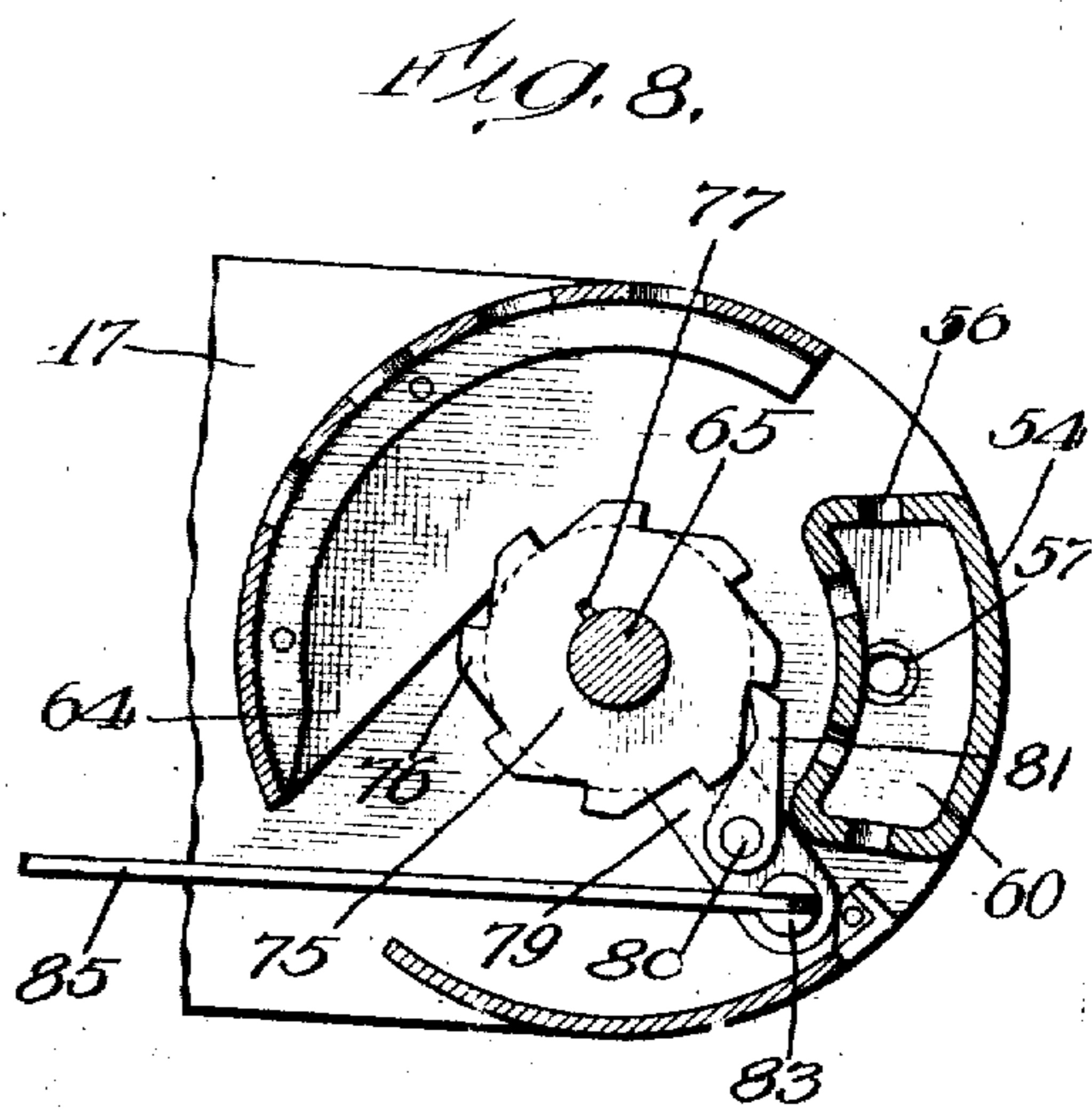
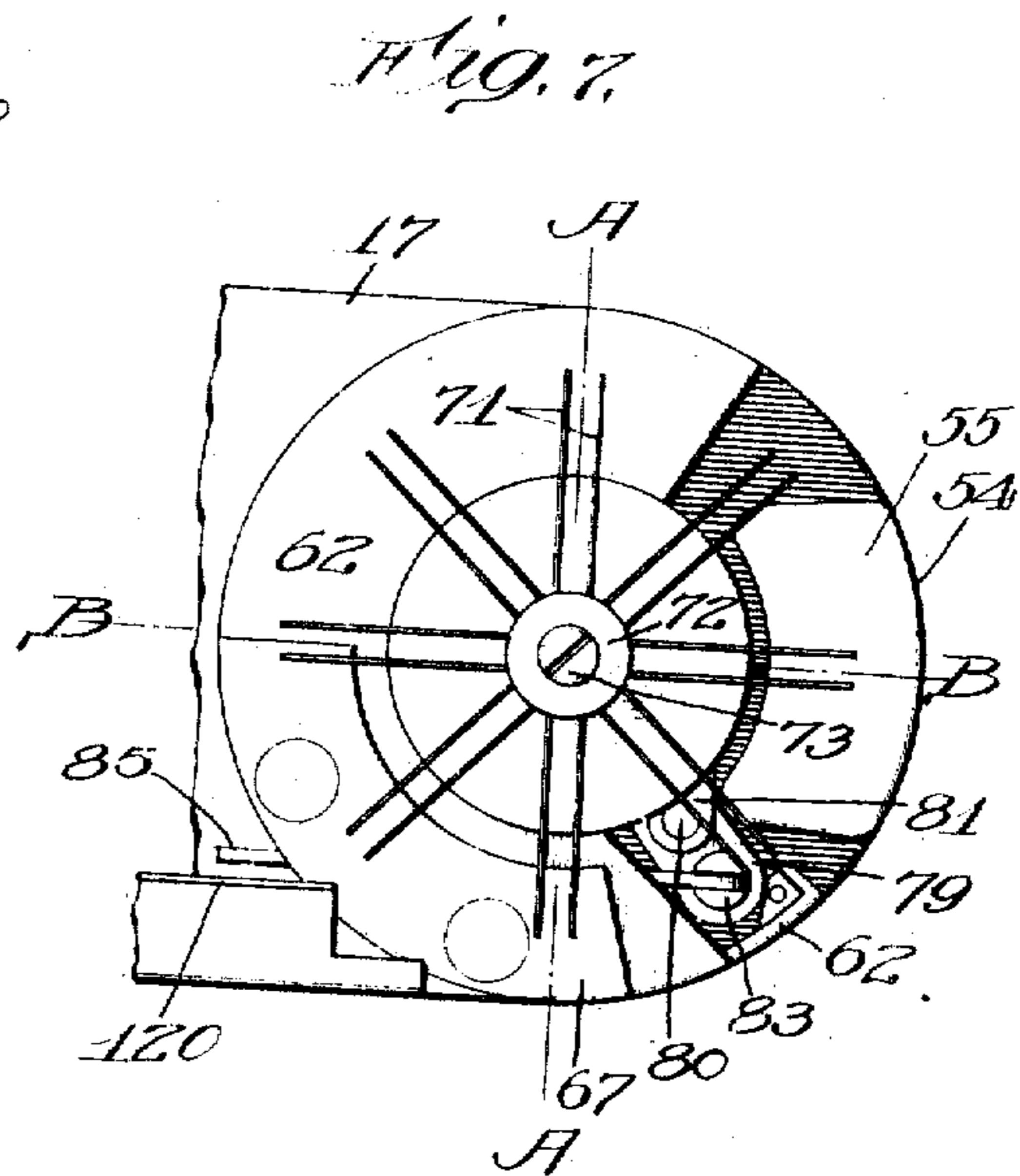
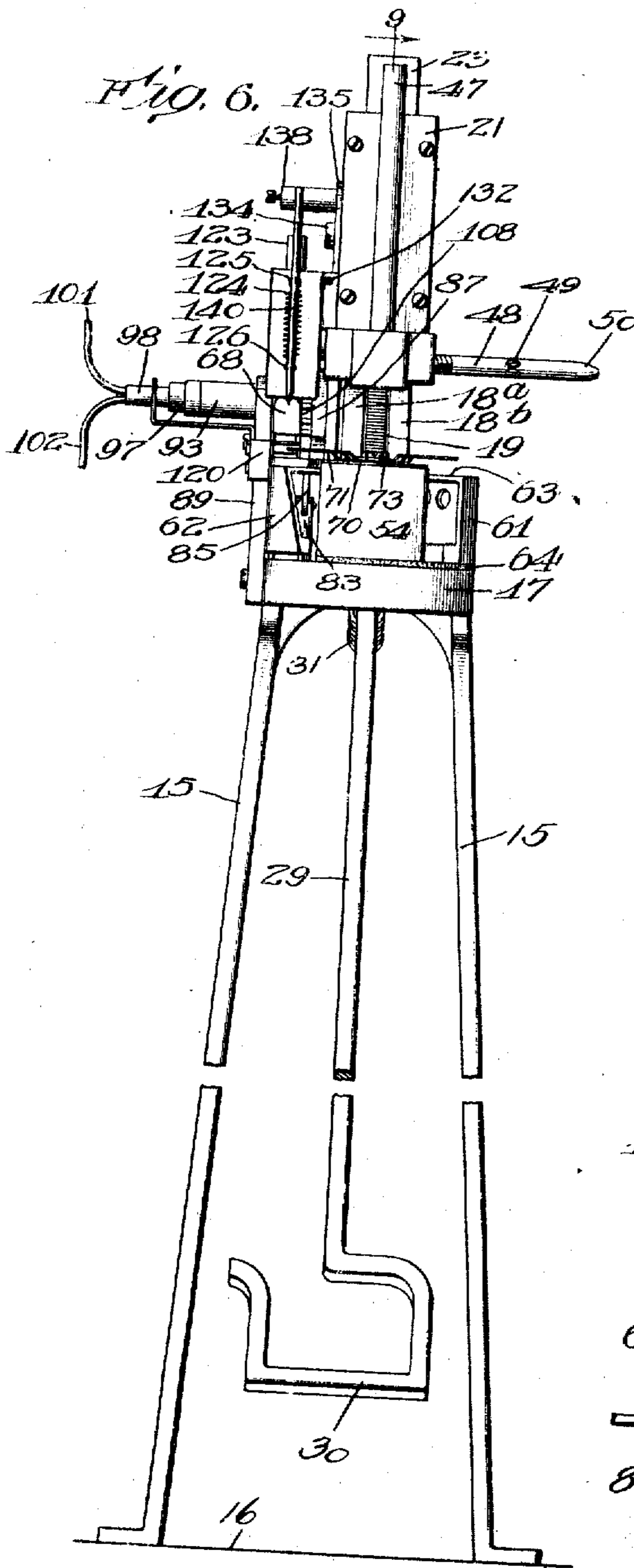
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5 SHEETS—SHEET 4.



Witnesses:
Robert H. Weir
J. B. Weir

Inventor:
Jacob L. Burgard
By Cheever & Co.
Atty

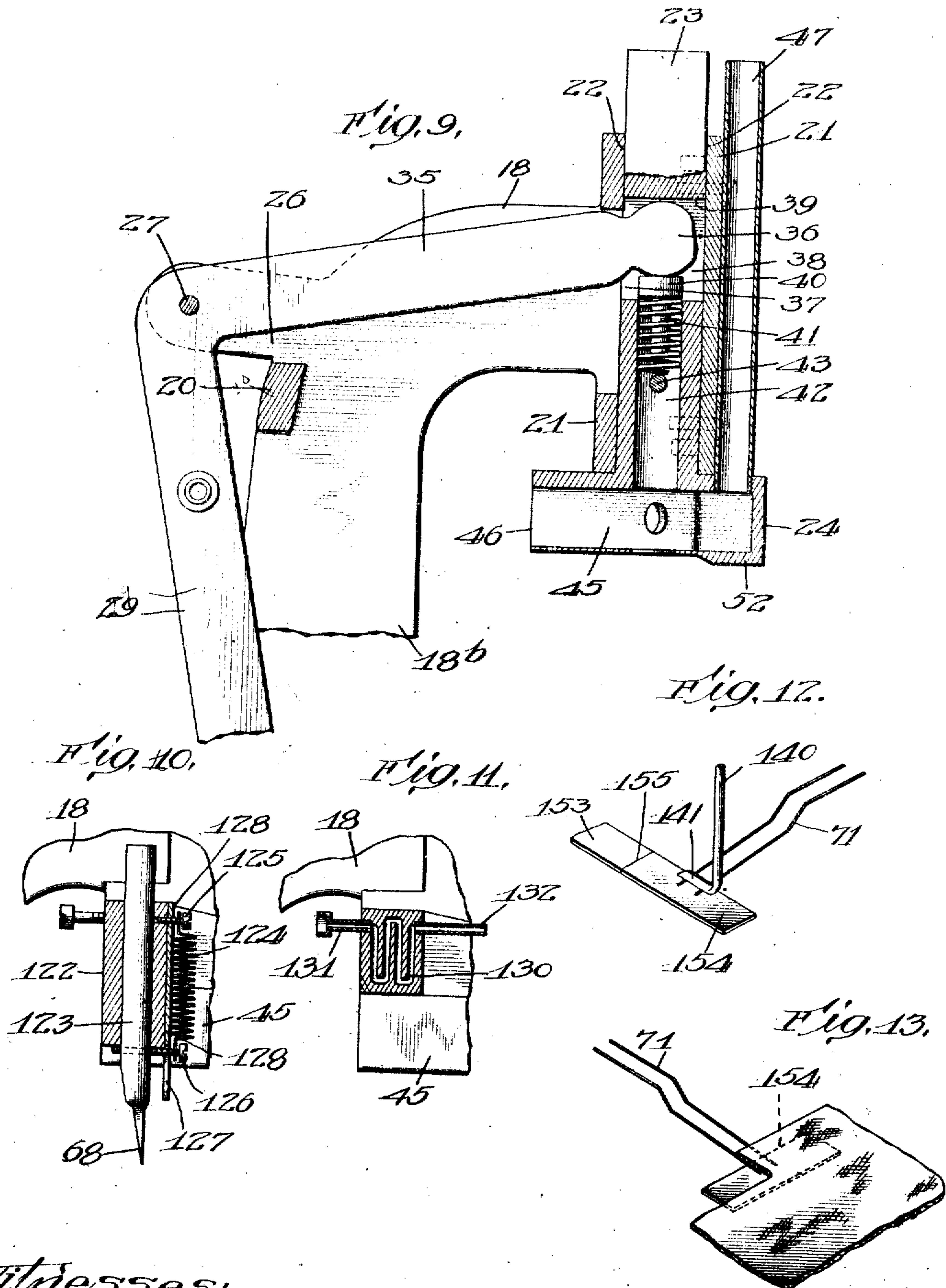
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APPLICATION FILED DEC. 11, 1905.

6 SHEETS—SHEET 6.



Witnesses:
Robert H. Weir
J. B. Weir

Inventor
Jacob L. Burgard
By Cheever Cox
Atty

UNITED STATES PATENT OFFICE.

JACOB L. BURGARD, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JAMES M. CONNEL, OF TOPEKA, KANSAS.

AUTOMATIC TAGGING-MACHINE.

No. 835,176.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed December 11, 1905. Serial No. 291,292.

To all whom it may concern:

Be it known that I, JACOB L. BURGARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Automatic Tagging-Machine, of which the following is a specification.

My invention is an automatic tagging-machine suitable for the purpose of applying a tag or label, usually a small one, to an article, usually of cloth, so that either prices or names or initials may be applied to the tag for the purpose of marking the article.

While my invention is capable of use for applying a tag to any article, it is especially designed for applying tags to articles of clothing about to be washed.

The object of my invention is to provide an automatic machine which will apply a tag to an object to be marked, preferably by vulcanizing the tag to the article.

It consists in an automatic machine for doing this work which occupies a comparatively compact space, which can be reasonably economically constructed, which is efficient in operation, and which when in operation is not readily liable to get out of order.

My invention primarily consists in mechanism capable of accomplishing the above objects.

In the specific embodiment of my invention here presented it consists, broadly, in automatic means for taking a roll of gummed tag material, cutting off a portion of suitable size for the tag hereinafter referred to as the "tag" or "tag portion," applying it to the article to be tagged, and for then vulcanizing the tag to the article. More in detail, it consists in means for keeping the cutting-off mechanism cool, so that the roll of tag material will not become heated, and thereby useless, before the tag is cut off, and in means for applying heat to the vulcanizing mechanism without heating the cutting-off mechanism.

Still more in detail, my invention consists in details of construction which will more clearly appear as the specification proceeds.

Referring to the drawings, Figure 1 is a side elevation of mechanism illustrating my invention in its preferred form. Fig. 2 is a vertical sectional detail view through the roller for feeding the tag material, showing the details of the roller and the mechanism

for cooling it, taken on line 2 of Fig. 1. Fig. 3 is a detail view of the operative parts of my machine corresponding to Fig. 1, the same being enlarged and removed from the supporting-standard, the parts appearing at the left of the line 5 5 in Fig. 2 being removed. Fig. 4 is the same view as Fig. 3, the parts being moved from normal position of Fig. 3 to their opposite extreme position. Fig. 5 is a sectional detail view of the interior of the tag-material-feed roll, taken on line 5 5 of Fig. 2. Fig. 6 is a front view of the machine corresponding to Fig. 1. Fig. 7 is a detail plan view of the carrier mechanism, taken on lines 7 7 of Fig. 3. Fig. 8 is a sectional detail view of the feeding mechanism for the carrier shown in Fig. 7, taken on line 8 of Fig. 3. Fig. 9 is a vertical sectional detail view of the plunger carrying the upper vulcanizing-iron, taken on line 9 of Fig. 6. Fig. 10 is a side view of the knife for cutting off the tag material, the supporting-frame being partially cut away and shown in section. Fig. 11 is a vertical sectional detail view taken just behind that of Fig. 10, showing the mechanism for carrying the cutting-off knife. Fig. 12 is a detail perspective view of the presser-bar in the act of pressing the carrier-fingers into the tag. Fig. 13 is a detail perspective view of the ends of the carrier-fingers, the tag, and a portion of the material, usually cloth, to which the tag is applied.

Referring to the drawings and to Fig. 1, the reader sees a suitable standard 15 rising from the floor 16, upon the upper end of which is mounted the base or table proper, 17, of my machine. Rigidly secured to the base or table 17 and rising therefrom is an inverted-L-shaped frame 18, made, preferably, in two parallel parts 18^a and 18^b, having between them a space 19, through which the operating-lever, to be hereinafter described, is adapted to pass. The two parts 18^a and 18^b are spaced apart and braced together by means of the connecting-piece 20. (Best shown in Fig. 9.) The upper horizontal end of the frame 18 terminates to an elongated head 21, in which there are formed vertical, preferably polished, guides 22, in which the rectangular bar 23 of the plunger 24 is adapted to slidably fit and move up and down to give the plunger an up-and-down motion.

Extending from the rear of the two portions of the frame 18 heretofore described

are horizontal arms 26, carrying a pivot-pin 27, on which is pivotally mounted an operating-lever 29, which extends downward through a suitable slot in the table 17 and has upon its lower-end a foot rest or lever 30, adapted to be engaged by the foot of the operator to move the lever backward and forward between the positions of Figs. 3 and 4. This lever is normally held in the position of Figs. 1 and 3 by a coiled spring 31, attached at one end 32 to the lever and at the opposite end 33 to the base or table 17 at any suitable point and by any suitable means.

Extending from the upper end of the lever 29 just described and preferably made integral with it is a horizontal arm 35, (best shown in Fig. 9,) having at its end a curved head 36, entering through a suitable elongated slot 37 the space 38 in the interior of the vertical bar 23. The upper portion of this head 36 bears against the horizontal flat surface 39 in the interior of the bar 23, as is best shown in Fig. 9, while the lower portion of the head bears upon a plunger 40, resting upon and carried by a coiled spring 41, suitably mounted in a circular hole 42 in the bar 23, the lower end of the spring 41 engaging a pin or other support 43, (best shown in Fig. 9,) with the result that the plunger 24 and attached bar 23 have an adjustable up-and-down motion in the guide-surfaces 22, controlled and limited by the spring 41 with reference to the head 36. In other words, the operator may by taking hold of the plunger 24 move the bar 23 upward a short distance against the action of the spring 41 (the spring being thereby compressed), without moving the head 36 and attached lever-arm 35 and lever 29. This adjustment is desirable so that different thicknesses of cloth or other material to be tagged may be used without interfering with the operation of other parts of the machine.

As one of the functions of the machine is to vulcanize the tag to the material to be marked, I make the plunger 24, which is intended to press the tag upon the material to be marked, with a hollow space or fire-box 45, open at its rear 46 and having at its forward end a vertical flue or chimney 47. Entering the side of this fire-box, as is best shown in Fig. 6, is a horizontal gas-burner 48, having Bunsen-burner openings 49. The opposite end 50 of the gas-burner is adapted to have a flexible hose or other suitable flexible connection with a source of gas-supply attached thereto. In the operation of this part of the device gas is admitted from a source of gas-supply connected, as described, to the burner 48, is ignited, and burns within the fire-box 45, taking the necessary air through the opening 46, thereby in so doing heating the whole of the plunger 24, and particularly the lower surface 52 of the plunger, hereinafter referred to as the "upper vulcan-

izing-iron 52." The products of combustion pass from the fire-box 45 out of the chimney 47 into the open air.

Mounted upon the base 17 directly below the upper vulcanizing-iron, is a hollow casting 54, the upper end of which is the lower vulcanizing-iron 55. This casting 54 has in its opposite sides openings 56 and is entered at its lower portion by a gas-burner 57, (not shown in detail,) having Bunsen-burner openings 58, and its lower end 59 adapted to be connected to any suitable source of gas-supply. In the operation of this part of the device gas is turned on through the burner 57 and enters the lower fire-box (space 60, best shown in Fig. 8) formed within the casting 54, where it is ignited, thereby heating the lower vulcanizing-iron 55, the necessary air for combustion passing in through the lower openings 56 and the products of combustion passing out through the upper openings 56.

The two vulcanizing-irons 52 and 55 are so proportioned and located with reference to each other that when the parts of the machine are moved into the position of Fig. 4 there is just enough space between them for the material to be tagged, and the tag and the carrier-fingers, to be hereinafter described, to lie between their operative surfaces, adjustment for thicker pieces of material to be tagged being made by means of the springs 41 in the manner hereinafter described.

Rising from the base or table 17 on opposite sides of the machine are two vertical supporting members 61 and 62, connected across their top by a flat plate 63, in the particular instance here illustrated made integral with the supports. These supports 61 and 62 are made clear of and independent from the casting 54, hereinafter described, of the lower vulcanizing-iron, so that heat is not as readily transmitted from the iron 55 to the remainder of the machine, about to be described, as it would be did the supports come in contact with the casting 54. The transmission of heat from the lower vulcanizing-iron to these supports is at least checked by a sheet of asbestos 64, inserted, as shown, above the base 17. Journaled in this flat plate 64 and in the base or table 17 is a short vertical shaft 65. (Best shown in Figs. 3, 4, and 8.) On the upper portion of the flat plate 63, heretofore described, and at the left-hand side, as viewed in Fig. 6, there is attached by any suitable means a cutting-base 67, on which the knife 68 is adapted to engage for the purpose of cutting off the tag material in the manner to be hereinafter described. This base 67 is made removable from the plate 63 by any suitable means to allow replacement when worn by the knife. The shaft 65, heretofore referred to, is mounted back of this cutting-base 67 and in the center line of the machine when viewed as in Fig. 6. On the upper end of this shaft 65, above the plate 63,

is a circular disk 70, above which are mounted a plurality of carrier-fingers 71, arranged like the spokes of a wheel, as is best shown in Fig. 7. In the particular instance here shown these carrier-fingers 71 are arranged in pairs extending from the center of the shaft 65 in eight equi-angular positions. These fingers 71 are of sufficient length so that, as shown in Fig. 7, they extend to the position shown, in which, as will more clearly appear hereinafter, they lap about one-eighth of an inch over the line of travel of the tag material. Above these carrier-fingers 71 is a suitable washer 72, through which a screw 73 is inserted into the upper end of the shaft 65 for the purpose of securing the disk 70 and the carrier-fingers 71 to the upper end of the shaft, so that as the shaft is rotated the carrier-fingers will be rotated. Near the lower end of the shaft 65 is a ratchet-wheel 75, having ratchet-teeth 76, as best shown in Fig. 8. This ratchet-wheel is rigidly secured to the shaft 65 by means of a key 77 or other suitable means. Below the ratchet-wheel 75, secured to the shaft 65, is a lever-arm 79. Pivotally mounted upon this lever-arm 79 at 80 is a ratchet tooth or dog 81, engaging the teeth 76 in such way that as the lever 79 is moved in one direction the dog 81 will click over the ratchet-teeth without rotating the wheel 75 and that when the lever-arm 79 is moved in the opposite direction the dog 81 will engage a tooth 76 of the ratchet-wheel 75 and give said wheel a partial rotation. Inside of the dog 81 is a spring (not shown) which engages the lever-arm 79 in such way that the ratchet-dog is held in contact with the ratchet-teeth 76 at all points in the revolution of the wheel 75. This spring does not form any part of my invention, and any of the common forms of such device may be substituted without departing from my invention.

Rising from the outer end of the lever-arm 79 is a vertical post 83, to the upper end of which, at 84, is pivotally attached a horizontal connecting-rod 85. As best shown in Fig. 8, this rod at its pivotal connection 84 fits in a vertical slot in the post 83. The opposite end of this connecting-rod 85 is pivotally mounted upon a screw or pin 86, rigidly connected to a lever 87, which will be hereinafter more fully described.

Rising from the side of the base 11 and directly viewed in Fig. 1 is a vertical support 89, the same being adjustably connected to the base by means of screws, 90 passing through slots 91 in the support, so that adjustment of the support up and down with reference to the base 17 may be made in the ordinary manner where such slots are used. At the upper end of this support 89 is a bearing 93, made integral with the support or not, as desired, in which a hollow shaft 94 is rotatably mounted. On the inner end of

this shaft 94 is a hollow feed-wheel 95, having on its periphery flanges 96, between which the tape material 153, to be hereinafter described, is adapted to bear. At the outer end of this shaft 94 is a stuffing-box 97, of ordinary construction, adapted to prevent leakage between the shaft and the stationary rod 98, which passes through the interior of the shaft 94 and on which the shaft 94 is adapted to turn. This rod 98 has through it two holes or passage-ways 99 and 100, having connected to their respective outer ends hose or other piping 101 and 102. The inner ends of these passage-ways 99 and 100 connect with an annular opening 103, leading through the shaft 94 into the interior 105 of the feed-wheel 95, from which it will be seen that when water or other cooling liquid is fed through the hose 101 and the passage-way 99 into the wheel 95, rotating with the shaft 94 on the rod 98, it can and will flow back through the passage-way 100 and out through the hose 102, with the result that if a continuous flow of water or other cooling liquid is supplied in the manner just described the wheel 95 will be kept cool continuously, which is essential to the operation of the machine upon a tag material which is of a gummy or sticky nature, such as soft rubber, in a state suitable for vulcanization.

Rigidly secured to the inner end of the feed-wheel 95 is a ratchet-wheel 107, having on its face ratchet-teeth 108. Extending from the rear of the ratchet-wheel 107 just described is a lug or stub-shaft 109, on which is journaled the lever 87, heretofore referred to. Pivoted at 110 on this lever 87 is a ratchet-pawl 111, held against the ratchet-teeth 108 by any suitable spring mechanism, so that the pawl 111 engages the ratchet-teeth at all points in the revolution of the ratchet-wheel 107 in the usual manner, so that when the lever 87 is moved in one direction the pawl 111 will slip over a tooth 108 on the ratchet-wheel and that when the lever is moved in the opposite direction the pawl will engage a tooth and thereby cause the ratchet-wheel, and consequently the wheel 95, to move through a partial revolution.

Below the wheel 95 and in line with it and also approximately in line with the ends of one set of carrier-fingers 71 is a track or passage-way 113, having upwardly-turned flanges 114, adapted to act as guides for the tag material 153 as it passes over the track and under the wheel 95 toward the carrier-fingers 71, which are in line with the track. Attached to the base 17 by means of a screw 116 or other suitable means is a flexible spring 117, extending up onto the track 113 and between the flanges 114, and thence under the face 118 on the wheel 95, so that when tag material is fed along the track 113 over the top of this spring 117 this spring serves to hold said tag material in contact with the face 118 of the

wheel 95, thereby giving it a grip upon the tag material, so that it can feed it along. On the opposite side of the wheel 95 toward the carrier-fingers 71 I mount a horizontal scraper 120, (best shown in Figs. 3 and 4,) having one end bearing against the surface 118 of the wheel 95, so that as the tag material is fed along to the wheel 95 against the action of spring 117, as just described, the tag material cannot adhere to the surface 118 of the wheel, and thus be wound upon it, but must pass along (to the right of Figs. 3 and 4) toward the knife 68 and the carrier-fingers 71.

Extending from the side of the machine on which the wheel 95 is located and approximately in line with it is a knife-supporting bearing 122, in which the rod 123, carrying at its lower end the knife 68, is adapted to slidably move up and down. This bearing is so located that this knife 68 is in line with the track 113 and the face 118 of the wheel 95, as clearly appears in Fig. 6. This rod 123 and the knife upon it are normally held in raised position by a coiled spring 124, attached at its upper end to a screw 125 or other suitable projection upon the outside of the bearing-support 122 and attached at its lower end to a screw 126, entering the rod 123, said screw 126 sliding in an elongated slot 127 in a plate 128, attached to the bearing-support 122, the upper end of this slot 127 acting as a stop in conjunction with the lower end of the bearing, so that the knife cannot be raised too far by the spring 124. In the bearing-support 122 just described adjacent to the rod 123 is cut a zigzag passage-way 130, connected at one end to a hollow screw 131 and at its other end to a tube 132, to each of which hose or other suitable connections may be made, so that water may pass in a constant stream through this zigzag passage-way 130, thereby cooling the bearing-support 122, and consequently cooling the rod 123 and the knife 68.

Pivoted to the frame 18 upon a pivot-screw 134 is a bell-crank having a horizontal arm 135 and a depending vertical arm 136. On the outer end of the horizontal arm 135 is a stud 138, so located that it will, as shown in Fig. 4, engage the upper end of the rod 123 to depress it, with the knife upon it, against the action of spring 124, as heretofore described. Also rigidly secured to the outer end of this horizontal bell-crank arm 135 by any suitable means and depending therefrom is a rod or wire 140, carrying on its lower end a horizontal presser-bar 141. This wire or rod 140 is so located that the presser-bar 141 will when moved to the position of Fig. 4 just engage the outer ends of one pair of carrier-fingers, as shown in Fig. 12.

In the lower end of the depending bell-crank arm 136 there is cut an elongated slot 143, in which a stud or pin 144 on the lever 87 is adapted to slidably fit. Pivotally connected to the bell-crank arm 136 by means of a

screw 146 is a connecting-rod 147, pivotally connected at its opposite end to a screw or stud 148, mounted upon the operating-lever 29, so that the motion of the lever 29 will be communicated to the bell-crank arm 136 and through it to the various parts attached to the bell-crank.

Rising from the rear of the base 17 is a suitable support 150, having journaled upon it at 151 a wheel 152, adapted to carry a roll of tag material 153, made in the form of a continuous tape, band, or strip, preferably of soft rubber, with a cloth covering on one side suitable to receive ink, writing, or other markings. This wheel 152 is so located that the tape or tag material 153 upon it is in line with the flanges 114 of the track 113 and in line with the knife 68 and the ends of one pair of carrier-fingers 71.

All of the parts of the mechanism are so arranged and proportioned that the machine will operate substantially as follows: Assume the parts in the position of Figs. 1 and 3, with the tape material 153 extending over the track 113 and the spring 117 upon it between the flanges 114 under the surface 118 of the wheel 95 and under the scraper-bar 120 to a position in which a tag length of tag material, preferably about three-fourths of an inch long, as shown in Fig. 12, is at the right of the knife 68 in Figs. 1 and 3 and under two carrier-fingers adjacent to said knives. Assume also that the gas has been lighted and that the two vulcanizing-irons 52 and 55 are sufficiently warm. The operator now places his foot upon the foot-lever 30 and moves the lever 29 from the position of Figs. 1 and 3 to that of Fig. 4, thereby moving the knife 68 downward and cutting off a tag length of tag material upon the line 155, Fig. 12, and at the same time causing the presser-bar 141 to press the ends of the carrier-fingers into the gummed upturned face of the tag length 154 of tag material, as shown in Fig. 12. The operator now removes his foot from the foot-lever 30 and allows the parts to return to the position of Figs. 1 and 3. In so doing the bell-crank arm 136 causes the lever 87 to, by means of its ratchet mechanism, heretofore described, feed another tag length of material along under the knife 68, and it also causes the connecting-rod 85 to move the ratchet-wheel 75, and thereby rotate the shaft 65 through one-eighth of a revolution, or one-half of the way from the position indicated by the lines A A in Fig. 7 to the position indicated by the lines B B in Fig. 7. The operator now puts his foot upon the lever 30 and repeats the operation, thereby cutting off a second portion of tag material and applying it to the next adjacent set of carrier-fingers 71, which now occupy the former position of the first set. On now releasing the foot-lever 30 the parts again return to the position of Figs. 1 and 3.

and carry the first cut-off portion of tag material to the position of the line B B in Fig. 7, in which it is directly in line with the two vulcanizing-irons. The operator now takes the article to which the tag is to be applied and stretches it over the lower face of the upper vulcanizing-iron and again depresses the lever 30, thereby depressing the upper vulcanizing-iron with the goods to be marked upon it onto the cut-off portion of tag material in position B, Fig. 7, and the heat of the two irons vulcanizes the tag upon the article to be tagged. As soon as this is done the operator releases the lever again and taking hold of the material with the tag now upon it pulls it horizontally away from the machine to the right in Figs. 1, 3, and 4, thereby pulling the tag out of its slight contact with the ends of the carrier-fingers, which carried it from position A, Fig. 7, to position B of that figure. The operator now takes another article to be marked and continues to repeat the operation as long as there are any articles to be marked.

As heretofore described, the spring 41 allows the upper vulcanizing-iron to adjust itself to varying thicknesses of material to be marked during this operation without effecting the actual cutting of the knife, which is controlled by the same lever and which in order to cut must come down to the same point at every stroke. During this operation the cooling of both the knife and the feed-wheel 95 has been going on, as described, so that the tag material has been kept cool and is therefore in condition to be cut off and transferred by the mechanism described to the position in which it can be vulcanized.

The tape from which my tags are made consists of a strip of cloth or other material capable of being marked or written upon, usually linen having a coating of raw stock, rubber-gum, or other rubber prepared for vulcanizing applied thereto, the thickness of gum being about one one-hundredth of an inch thick.

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

1. In mechanism of the class described, in combination with a suitable support; vulcanizing mechanism; means for carrying a tag into the proximity of said vulcanizing mechanism; and mechanism for operating said vulcanizing mechanism to secure the tag upon an article to be marked.

2. In mechanism of the class described, in combination with a suitable support; mechanism for pressing a tag on an article to be marked; means for feeding the tag into said pressing mechanism; and means for applying heat to the pressing mechanism to vulcanize the tag upon the article to be marked.

3. In mechanism of the class described, in combination with a suitable support; a vul-

canizing mechanism; means for feeding a continuous supply of tag material into the machine; means for cutting off a tag from said tag material; means for feeding said tag into the vulcanizing mechanism and for operating the vulcanizing mechanism to vulcanize it upon an article to be marked.

4. In mechanism of the class described, in combination with a suitable support; a pair of vulcanizing-irons, one movable with reference to the other; means for feeding a tag between said vulcanizing-irons; means for moving said movable iron toward the other iron, whereby the tag is vulcanized upon the article to be marked.

5. In mechanism of the class described, in combination with a suitable support; two vulcanizing-irons one movable with reference to the other; means for applying heat to each of said irons; means for feeding a tag in between said irons; and means for moving said movable iron toward the other iron to vulcanize said tag upon the article to be marked.

6. In mechanism of the class described, in combination with a suitable support; a pair of vulcanizing-irons one movable with reference to the other; a knife; means for operating said knife to cut a tag from a supply of tag material; means for moving said cut-off tag in between said vulcanizing-irons; and means for then causing said irons to vulcanize the tag upon the material to be marked.

7. In mechanism of the class described, in combination with a suitable support; a vulcanizing mechanism, a pivotally-mounted carrier-arm, mounted in such a position that it is adapted to carry a tag from a position adjacent to said vulcanizing mechanism into said mechanism; means for feeding a tag up to said first position of the carrier-arm, means for causing said carrier to engage said tag and means for automatically operating the whole.

8. In mechanism of the class described, in combination with a suitable support, a vulcanizing mechanism, a pivotally-mounted carrier-arm mounted in such a position that it is adapted to carry a tag from a position adjacent to said vulcanizing mechanism into said mechanism means for feeding a strip of tag material up to said first position of the carrier-arm, means for cutting a tag from said material; means for causing said carrier to engage said tag and means for automatically operating the whole.

9. In mechanism of the class described, in combination with a suitable support; a pair of vulcanizing-irons, one of them movable with reference to the other; means for supplying heat to said irons; a carrier-wheel mounted in such a position that it is adapted to carry a portion of tag material from a position distant from said irons to a position in which it is between said irons; means for feeding a continuous strip of tag material up

to a point adjacent to said carrier-wheel, means for cutting off a portion of said tag material and putting it into carrying engagement with said wheel; and means for then rotating said wheel to a position in which said portion of tag material is between the vulcanizing-irons, so that it may be vulcanized upon an article to be marked.

10. In mechanism of the class described, in combination with a suitable support; a stationary vulcanizing-iron secured to said support; an operating-lever; a movable vulcanizing-iron carried by said operating-lever adapted to be moved by it into contact with said stationary iron; and an adjustable connection between said lever and said movable iron, whereby different thicknesses of material may be placed between the vulcanizing-irons.

11. In mechanism of the class described, in combination with a suitable support; a stationary vulcanizing-iron mounted upon the support; an operating-lever pivotally mounted upon the frame of the machine; a vulcanizing-iron adapted to be moved by said lever to and from said stationary iron; a knife also adapted to be moved by said lever to cut off a portion of tag material from a supply; and a flexible connection between said movable iron and said lever whereby different thicknesses of material to be tagged may be placed between the vulcanizing-irons without disturbing the operation of the knife.

12. In mechanism of the class described, in combination with a suitable support; a stationary vulcanizing-iron secured thereto; a movable vulcanizing-iron mounted adjacent to said stationary iron; a lever adapted to move said movable iron to and from the stationary iron; means for feeding a continuous supply of tag material into the machine; mechanism connecting the feeding mechanism for said tag material to the operating-lever; a knife adapted to cut off portions of tag material from the supply; mechanism operated by the main lever for operating said knife; and a carrier mechanism also operated by the main lever adapted to carry portions of tag material cut off by the knife in between the vulcanizing-irons.

13. In mechanism of the class described, in combination with a suitable support; a stationary vulcanizing-iron secured thereto; a frame rising from said support; a vertically-movable vulcanizing-iron mounted in said support above said stationary iron; a carrier-wheel pivotally mounted adjacent to said irons having horizontal carrier-fingers adapted to pass between said vulcanizing-irons; a knife at one side of said vulcanizing-irons and said wheel adapted to cut off a portion of tag material from a continuous supply; and automatic means for successively feeding tag material to said knife, for pressing it

into engagement with said carrier-wheel, and for causing said wheel to then transport it between the vulcanizing-irons and for then depressing the movable vulcanizing-iron upon the stationary iron, whereby the tag is vulcanized upon an article placed between the irons.

14. In mechanism of the class described, in combination with a suitable support; a vulcanizing mechanism for securing a tag upon an article; a support for a roll of vulcanizing material; a feed-roll for feeding said material into the machine; and mechanism for conducting a flow of cooling liquid through the feed-roll for the purpose of cooling the same.

15. In mechanism of the class described, in combination with a suitable support; a vulcanizing mechanism for securing a tag upon an article; a support for a roll of vulcanizing material; a feed-roll for feeding said material into the machine; mechanism for conducting a flow of cooling liquid through the feed-roll for the purpose of cooling the same; a knife adapted to cut off a portion of the tag material from that fed into the machine; and mechanism for conducting a continuous flow of cooling liquid adjacent to the knife, whereby it is kept cool, as described.

16. In mechanism of the class described, in combination with a suitable support; a stationary and a movable vulcanizing-iron; an L-shaped lever pivoted to the frame of the machine having one arm adapted to be engaged by the foot of the operator and the other arm engaging the movable vulcanizing-iron; a knife movable parallel to the movable vulcanizing-iron adapted to cut off portions of tag material from a continuous supply fed into the machine; a carrier member mounted adjacent to the blade of the knife adapted to carry said portions of cut-off material between the vulcanizing-irons; a bell-crank pivoted to the frame of the machine having a link connection with the operating-lever; mechanism by means of which one arm of said bell-crank operates said knife and a presser-bar to press portions of cut-off material upon the carrier mechanism; and mechanisms connected to the other arm of the bell-crank for operating said feed mechanism; for feeding the tag material into the machine and for operating the carrier mechanism for carrying the material between the knife and the vulcanizers.

17. In mechanism of the class described, in combination with a suitable support and vulcanizing mechanism; a hollow feed-roller mounted upon a hollow shaft; a rod on which said hollow shaft is rotatably mounted there being an entrance and an exit passage leading through said hollow rod into said feed-roller, through which cooling liquid may be passed into and out of said feed-roller.

18. In mechanism of the class described,

the combination with a suitable support and vulcanizing mechanism; a support for a knife adjacent to said vulcanizing mechanism there being a passage-way for water through said knife-support adjacent to the knife so that cooling liquid may be passed near the knife for the purpose of cooling the same.

19. In mechanism of the class described in combination with a suitable support and a vulcanizing mechanism; a flexible carrier arm or arms or fingers mounted adjacent to the vulcanizing mechanism adapted to carry a tag from outside the vulcanizing mechanism into it and a pressure-bar mechanism adapted to press said flexible fingers into a tag to cause said finger or fingers to take hold of said tag to carry it as described.

20. In mechanism of the class described, in combination with a suitable support; a vulcanizing mechanism a wheel comprising a plurality of flexible fingers pivotally mounted adjacent to said vulcanizing mechanism having the end of at least one finger entering said vulcanizing mechanism; means for rotating said wheel and mechanism out-

side the vulcanizing mechanism for pressing the end of one of said fingers into a tag whereby as said wheel is rotated said finger carries said tag into said vulcanizing mechanism.

21. In mechanism of the class described, in combination with a suitable support and a vulcanizing mechanism, means for feeding a strip of tag material up to a point adjacent to the vulcanizing mechanism; a knife slidably mounted adjacent to the vulcanizing mechanism in such a position that it is adapted to cut off a tag from said tag material, a spring normally holding said knife in released position and automatic mechanism for operating the feed mechanism and the vulcanizing mechanism engaging at the proper time said knife to cause it to cut off a tag.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

JACOB L. BURGARD.

Witnesses:

DWIGHT B. CHEEVER,
CAROLYN RAFFERTY.