

No. 814,368.

PATENTED MAR. 6, 1906.

J. GREGORY.
DELIVERY DEVICE.
APPLICATION FILED MAY 11, 1905.

3 SHEETS—SHEET 2.

Fig. 2.

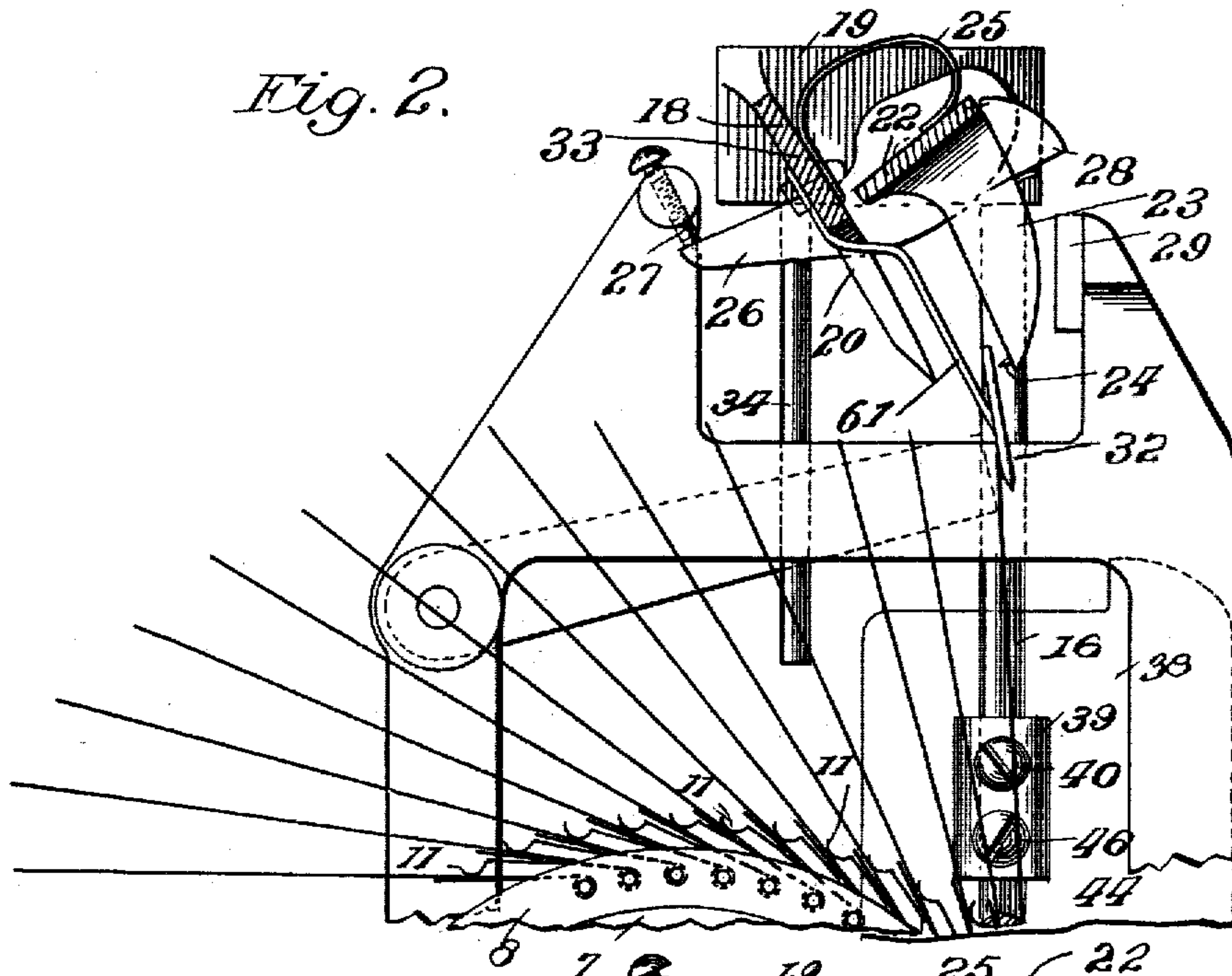
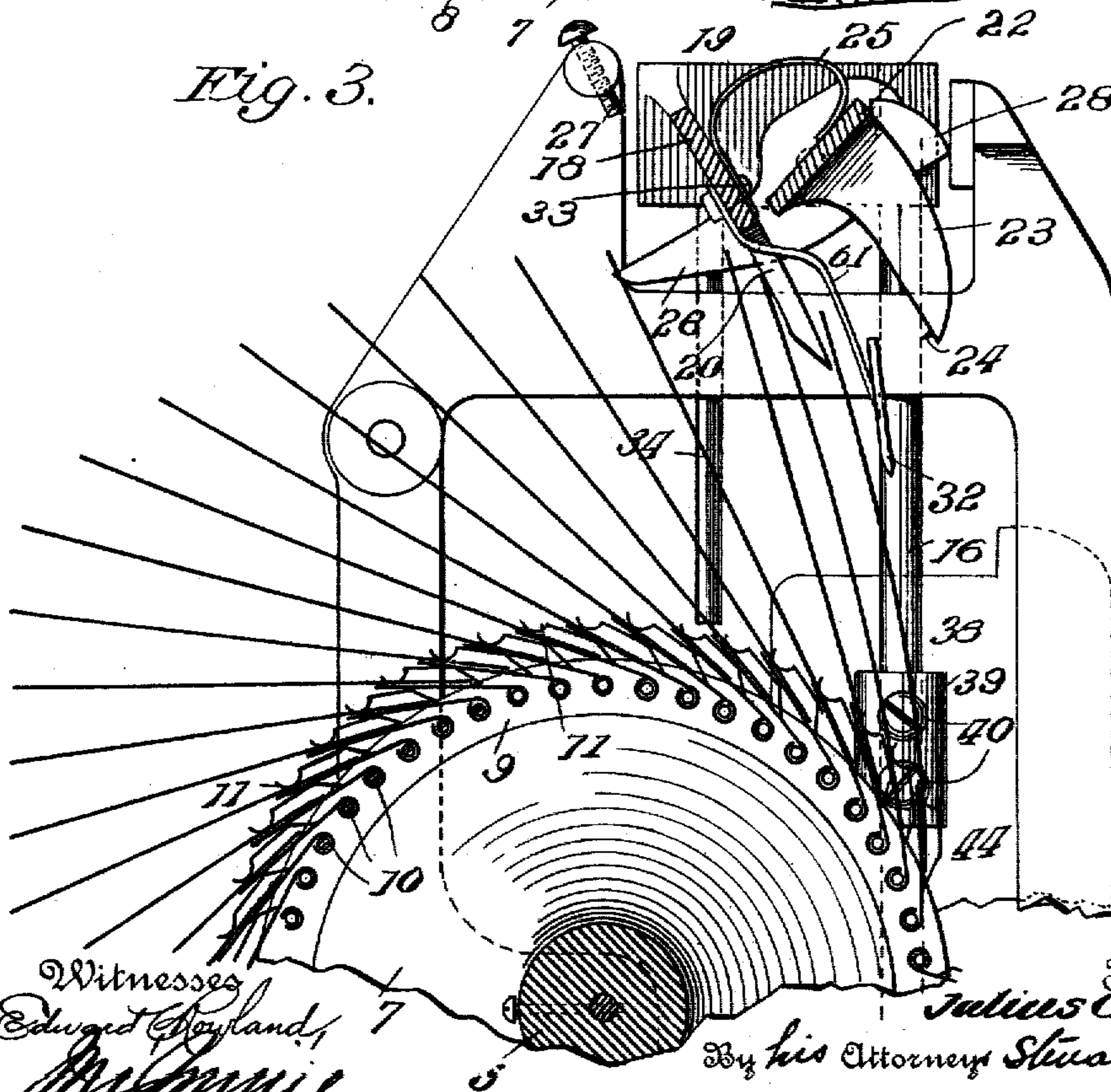


Fig. 3.



Witnesses
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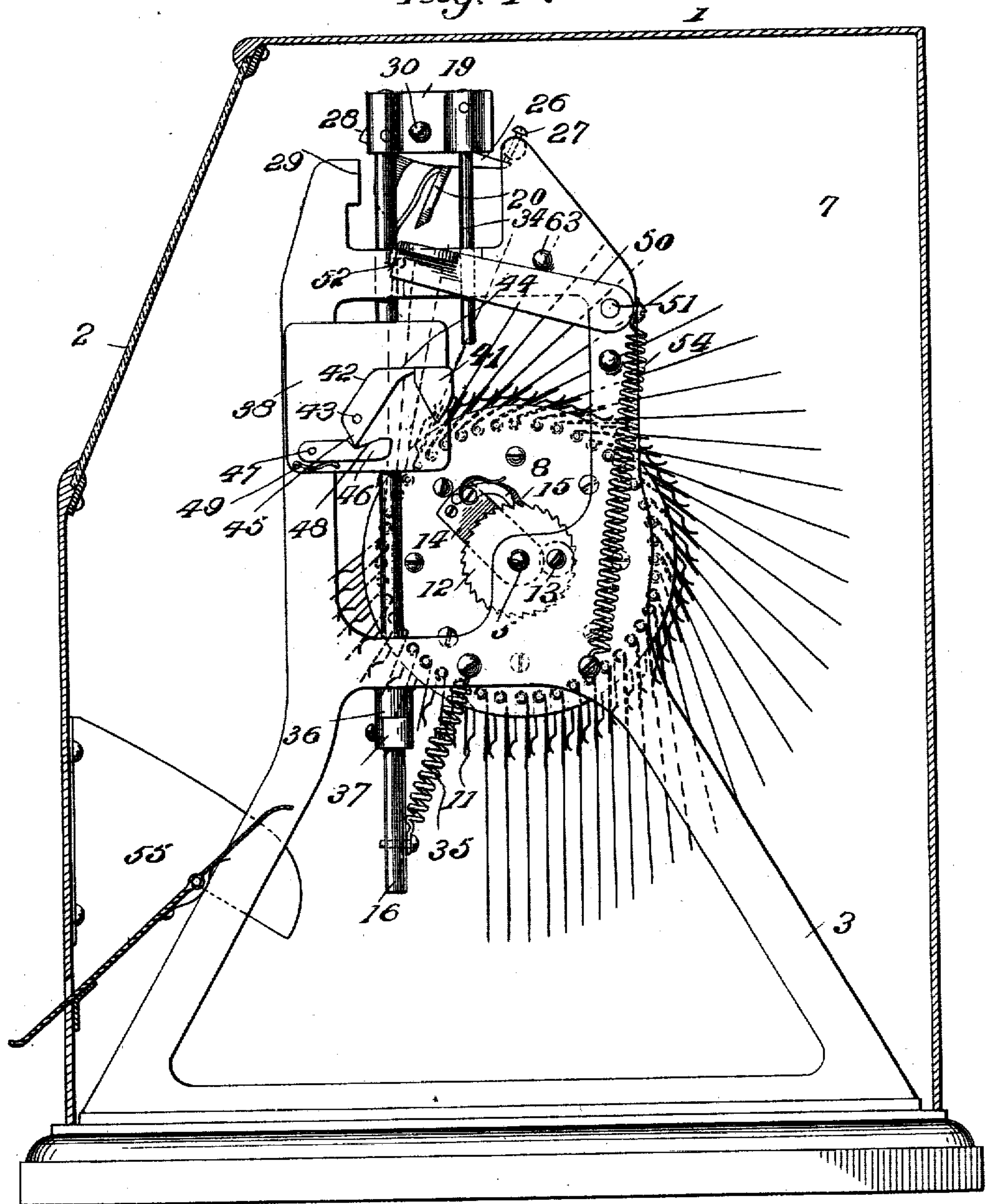
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3 SHEETS—SHEET 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

JULIUS GREGORY, OF WEEHAWKEN, NEW JERSEY.

DELIVERY DEVICE.

No. 814,368.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed May 11, 1905. Serial No. 260,181.

To all whom it may concern:

Be it known that I, JULIUS GREGORY, a citizen of the United States of America, and a resident of Weehawken, State of New Jersey, have invented certain new and useful Improvements in Delivery Devices, of which the following is a specification.

My invention relates to certain new and useful improvements in delivery devices; and the object of my invention is to produce a device whereby all the articles contained therein can be exhibited by being brought successively into a position from which they can be seen, so that a person can choose the articles which he desires and by the operation of the machine obtain the article so chosen.

I have shown my invention as adapted for use in connection with the delivery of postal cards, and in this form a series of postal cards may be placed in the device and brought successively into view to enable the card desired to be chosen, and then upon the operation of the machine the card which is in view may be delivered from the machine.

My invention consists of means for supporting a plurality of articles to be delivered, means for bringing the articles successively into view, and means for delivering the article which is exposed.

My invention also consists in means whereby any one of a series of articles may be delivered by the operation of the machine in any order desired.

My invention also consists in certain details of construction and combination of parts, the preferred form of which will be first described in connection with the accompanying drawings, wherein the same part is designated by the same reference-numeral wherever it occurs.

Figure 1 is a front view of a device made in accordance with my invention, showing the operating mechanism in perspective and the casing in section. Fig. 2 is a side elevation of a device, showing the operating mechanism in perspective and the casing in section. Fig. 3 is a detail side view, partly in section, showing the card-delivery mechanism in normal position. Fig. 4 is a similar view showing, however, the parts as they appear during the operation of the device.

1 designates a casing in which the delivery mechanism is preferably mounted, and preferably this casing is provided with a transparent portion 2, through which the articles adapted to be delivered may be viewed.

3 is a side frame upon which the operating mechanism is supported, and 4 is a second frame, which supports one end of the article-carrying mechanism. This article-delivery mechanism in the form of invention shown consists of a shaft 5, which is journaled in bearings formed in the side frames 3 and 4. One end of this shaft extends through the side of the casing 1 and is provided with an operating-handle 6.

7 designates a drum fastened on the shaft and adapted to support the cards or other articles to be delivered by the machine. In the form of invention shown this drum is provided with the heads 8, and just within the heads are located the rings 9, which are provided with a series of holes extending around the same. The holes and rings 9 are located in alinement with each other, and in these holes are loosely mounted a series of wires 10, and each wire is provided with a number of clips all adapted to engage the edge of the card and support the same. It will be seen from the drawings that the cards extend out from the drum, being held by the clips, and that upon the rotation of the drum they may be brought successively up into an upright position, and as soon as they have passed this position they will fall down successively, revealing the card immediately behind, whereby each card in succession will be exposed by the card in front thereof falling.

The transparent portion 2 of the casing is so situated in relation to the card-supporting means that the cards will stand exposed in a position to be seen through the transparent portion, as clearly indicated in Fig. 2.

In order to prevent the backward rotation of the drum and to cause the cards to be properly positioned to be delivered, I provide a ratchet-wheel 12, through which the shaft 5 loosely passes. The ratchet-wheel is securely held in position by means of the screw 13, passing through the side frame 3. 14 is an arm fastened on the shaft 5 and carrying a number of pawls 15, which are adapted to engage the position of the ratchet 12. It will thus be seen that as the shaft and drum are rotated by the handle 6 the pawls will be caused to travel around the ratchet-wheel and the backward rotation of the drum prevented.

By the mechanism just described it will be seen that I have provided a means whereby postal cards or other articles may be brought around successively into position and exhib-

ited. It is to be of course understood that many different mechanisms might be used for accomplishing this result.

In order to deliver any desired article or card, I provide means which preferably are located over the holding means, which means are adapted to remove any article from the holding means, and preferably this means is adapted to remove an article which is exposed to view.

In the form of invention shown the means for removing the desired article from the holding means consists of a gripper mechanism which is located over the fore portion of the top of the drum in position to engage the exposed card, these grippers being adapted to be moved toward and away from the drum and to close when adjacent to the drum and to open when they have moved away therefrom. In the form of my invention illustrated this gripper mechanism is constructed as follows: 16 designate a rod which is guided in bearing 17 on the side frame 3 and in which the rod is adapted to slide vertically. 18 is a gripper-bar provided at one end with a projection 19 at right angles thereto, the outer end of the projection being secured to the upward end of the rod 16. The bar 18 is provided with the outwardly-projecting jaws 20, which form the stationary jaws of the grippers. 21 is the projection located at the end of the bar 18 opposite that at which the projection 19 is located, and 22 is a bar journaled in bearings formed in the projections 19 and 21. This bar 22 carries the gripper-jaws 23, which are adapted to coact with the jaws 20 in the removal of the card. The movable jaw 23 is shown as being provided with a pin 24, which enables the grippers to positively engage the card or other article to be delivered. In the construction shown the bars 18 and 22 extend at an angle to each other, as is best shown in Figs. 3 and 4, and in the angle thus formed is placed a spring 25, which is secured to the side of the bar 18 by means of the bolt 33 passing through one end of the spring and the bar 18. The free end of the spring rests against the side of the bar 22, consequently tending to force the bars apart and the gripper-jaws together. 26 is an arm extending back from the pivoted bar 22, and 27 is an adjustable stop carried by the side frame 3, with which the end of the arm 26 is adapted to engage when the parts are in their normal or raised position, as shown in Figs. 2 and 3, this stop acting when the parts are in this position to hold the grippers open against the spring 25. 28 is a cam which is pivoted at 30 to the bar 22, and 31 is a spring which holds the cam in its normal position against the edge of the bar, as shown in Fig. 3. 29 is a plate with which the cam is adapted to coact and which is mounted on the frame 3 in position to be struck by the cam when grippers are reciprocated. The cam 28 is formed with

an angular end, as shown, which contacts with the plate 29, and this angle is so formed that when once the cam has come in contact with the face of the plate 29 the angular edge of the cam will cause the cam to act as a pawl and prevent the gripper mechanism returning to its normal position until after the gripper has been given its full throw, which carries the edge of the cam below the plate 29. This cam operates to hold the grippers open after the arm 26 leaves the stop 27, and the grippers are held open until the cam has passed the lower end of the plate 29, when the cam passing off the plate will permit the spring 25 to close the grippers. Upon the return movement of the grippers they will remain closed until the arm 26 strikes the stop 27 and opens them. By pivoting the cam as described the spring will allow the same to yield during this return movement and prevent the opening of the grippers until they have nearly completed their return movement and the arm 26 come in contact with the stop 27. 61 is an arm formed of wire, which carries at its lower end a pointer 32. This arm is secured to the bar 18 by means of the bolt 33, which also, as it will be remembered, secured the spring 25 to the arm. This arm extends somewhat in front of the stationary grippers 20 and holds the pointer 32 in the path of the upper edges of the cards, so as to hold the card which is in exposed position upright in order that it may be viewed. This arm also acts to guide the card between the gripper-jaws when the delivery mechanism is operated. 34 is a depending rod, which extends through the opening in the side frame 3 and guides the gripper-bar in its reciprocation and maintains the grippers in proper alinement. 35 is a spring, one end of which is connected to the side frame 3 and the other end to the rod 16 to hold the grippers in their raised position and also to return the same after they have been depressed and depressing mechanism released. 36 is a rubber cushion which is interposed between the adjustable stop 37 and the lower side of the lug 17 in order to cushion the grippers on their return movement under the action of the spring 25. In order to actuate this mechanism, any suitable means may be employed, and for the sake of illustration I have shown an actuating mechanism which consists of a plate 38, provided with a rearwardly-projecting lug 39, through which the rod 16 passes. The plate is secured to the rod by the screws 40, which pass through the rod, and the rod is thus caused to move with the plate. 41 designates a lug which extends outwardly from the face of the plate 38, and 42 designates a switch, which is pivoted at 43 to the plate and is provided with a toe 44, adapted to rest against the side of the lug 41. This switch is provided at its lower end below the pivot 43 with an end 45, which comes to an edge. 46

is an arm pivoted at 47 and provided with a V-notch 48, in which the end 45 is adapted to rest. 49 is a spring adapted to hold the V 48 in engagement with the end 45. 50 is a lever fastened on the shaft 51, journaled in the side frame 3, and at its free end the lever carries the projecting pin 52, which is adapted to engage the toe 44 when the lever is swung down. The shaft 52 is preferably extended outside the casing and at its end is provided with an operating-lever 53.

In the operation of the form of the invention shown and described the clips on the drum are filled with cards or other articles which are to be delivered. When it is desired to obtain a card from the machine, the drum is rotated by means of the handle 6, which causes the cards to pass successively under the pointer 32, the pointer retaining each card in an upright position until it has sprung sufficiently for its edge to pass under the pointer. When the card which is desired has been brought into position under the pointer, the lever 53 is pressed down. This causes the lever 50 to swing down, carrying the pin 52 into engagement with the toe 44, and upon further movement of the lever the grippers are drawn down. The pin 52 passes off the toe of the plate 42 and onto the top of the lug 41, and this movement carries the grippers down until they stand on each side of the card and are in position to grip the card as soon as the cam 28 has passed the face of the plate 29. This occurs just before the pin 52 passes off the edge of the lug 41. As soon as the cam 28 has passed the plate 29 the spring 25 operates the grippers to engage the card. As soon as the pin passes off the end of the lug, which, as before stated, is just after the card is engaged, the spring 35 operates to return the grippers to their normal position, the grippers during their upward movement remaining closed, as before described, until the arm 36 comes in contact with the arm 27, which causes the grippers to open and drop the card, which may be allowed to fall upon the plate 55, located in position to receive the card and extending through the casing in order to deliver the card.

While I have shown and described what I believe to be the preferred form of my invention, I desire to have it understood that I am not to be limited to the construction herein shown and described, as many changes may be made in the form, construction, and arrangement of parts without departing from the spirit of my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a delivery mechanism, the combination with means for holding a plurality of articles independently of each other, means for bringing any of the articles into an exposed position, and means for removing from the holding means the article exposed.

2. In a delivery mechanism, the combination with means for holding a plurality of articles independently of each other, means for moving the articles so as to bring them successively into an exposed position to permit of the selection of any one of the articles and means for delivering the selected article.

3. In a delivery mechanism, the combination with means for holding a plurality of articles independently of each other, of means for engaging the articles and removing them from the holding means, and means for moving any of the articles carried by the holding means into position to be taken by the removing means, the article which is in position to be removed being exposed to view.

4. In a delivery mechanism, the combination with means for holding a plurality of articles independently of each other, of grippers, means for operating the grippers, and means for bringing any of the articles to be delivered into position to be taken by the grippers.

5. In a delivery mechanism, the combination with an endless carrier, of means for supporting a series of articles on the carrier independently of each other, means adapted to engage the articles and means for operating the engaging means whereby they may be caused to engage any desired article carried by the carrier.

6. In a delivery mechanism, the combination with means for supporting a series of articles independently of each other on the carrier, grippers, means for operating the grippers, and means whereby the grippers may be caused to take any desired article carried by the carrier.

7. In a delivery mechanism, the combination with a rotatable drum, of means for supporting a series of articles on the drum independently of each other, grippers, means for operating the grippers, and means whereby the grippers may be caused to take any desired article carried by the drum.

8. In a delivery mechanism, the combination with an endless carrier, of means for supporting a series of articles on the carrier independently of each other, means for moving the carrier, grippers adapted to be moved toward and away from the carrier, means for operating the grippers and means whereby the grippers may be caused to take any desired article carried by the carrier.

9. In a delivery mechanism, the combination with a drum, of means for supporting a series of articles on the drum independently of each other, grippers adapted to be moved toward and away from the drum, means for operating the gripper and means whereby the grippers may be caused to take any desired article carried by the drum.

10. In a delivery mechanism, the combination with a carrier, of a plurality of clips pivotally mounted in the carrier and adapted

to support a plurality of articles, means for operating the carrier to bring the articles carried by the clips successively to view, and means for removing from the clips the article which is exposed to view.

11. In a delivery mechanism, the combination with a drum provided with a plurality of clips adapted to hold different articles, means for bringing the articles successively into view and means whereby the article exposed to view may be removed.

12. In a delivery mechanism, the combination with a drum of a plurality of rods arranged circumferentially around the drum, clips mounted on the rods adapted to support articles to be delivered, means for rotating the drum to bring the articles successively into view and means adapted to deliver the exposed article.

13. In a delivery mechanism, the combination with means for holding a plurality of articles independently of each other, means whereby any one of the articles may be brought to a predetermined position, and a gripper mechanism adapted to engage the article which is in the predetermined position.

14. In a delivery mechanism, the combination with means for holding a plurality of articles and means whereby any one of the articles may be brought to a predetermined position, of a gripper mechanism adapted to engage the article which is in a predetermined position and means carried by the

grippers for supporting the article in its predetermined position and guiding the same into the grippers.

15. A gripper mechanism comprising a bar carrying a gripper-jaw, a second bar pivoted to the first bar and carrying the other jaw, a spring tending to press the bars apart and the jaws together, an arm carried by the pivoted bar, a stationary stop with which the arm is adapted to contact when the gripper is in its normal position, a cam carried by the pivoted bar and adapted to contact with a fixed part, when the gripper is moved to hold the gripper open during part of its movement and means for reciprocating the gripper.

16. A gripper comprising a bar carrying the fixed gripper-jaws, a second bar pivoted to the first bar carrying the movable jaws, a spring normally tending to force the jaws together, a cam carried by the movable jaw and adapted to contact with a fixed plate to hold the jaws open against the action of the spring, said cam being pointed to prevent the return of jaws during their operating movement while the cam is in contact with the cam-plate.

Signed by me at New York city, county and State of New York, this 8th day of May, 1905.

JULIUS GREGORY.

Witnesses:

JACOB I. BERGEN,
FRANCIS M. PHELPS.