

No. 866,891.

E. D. SCHMITT.

PATENTED SEPT. 24, 1907.

STAMP OR TICKET VENDING MACHINE.

APPLICATION FILED JUNE 29, 1906.

3 SHEETS—SHEET 1.

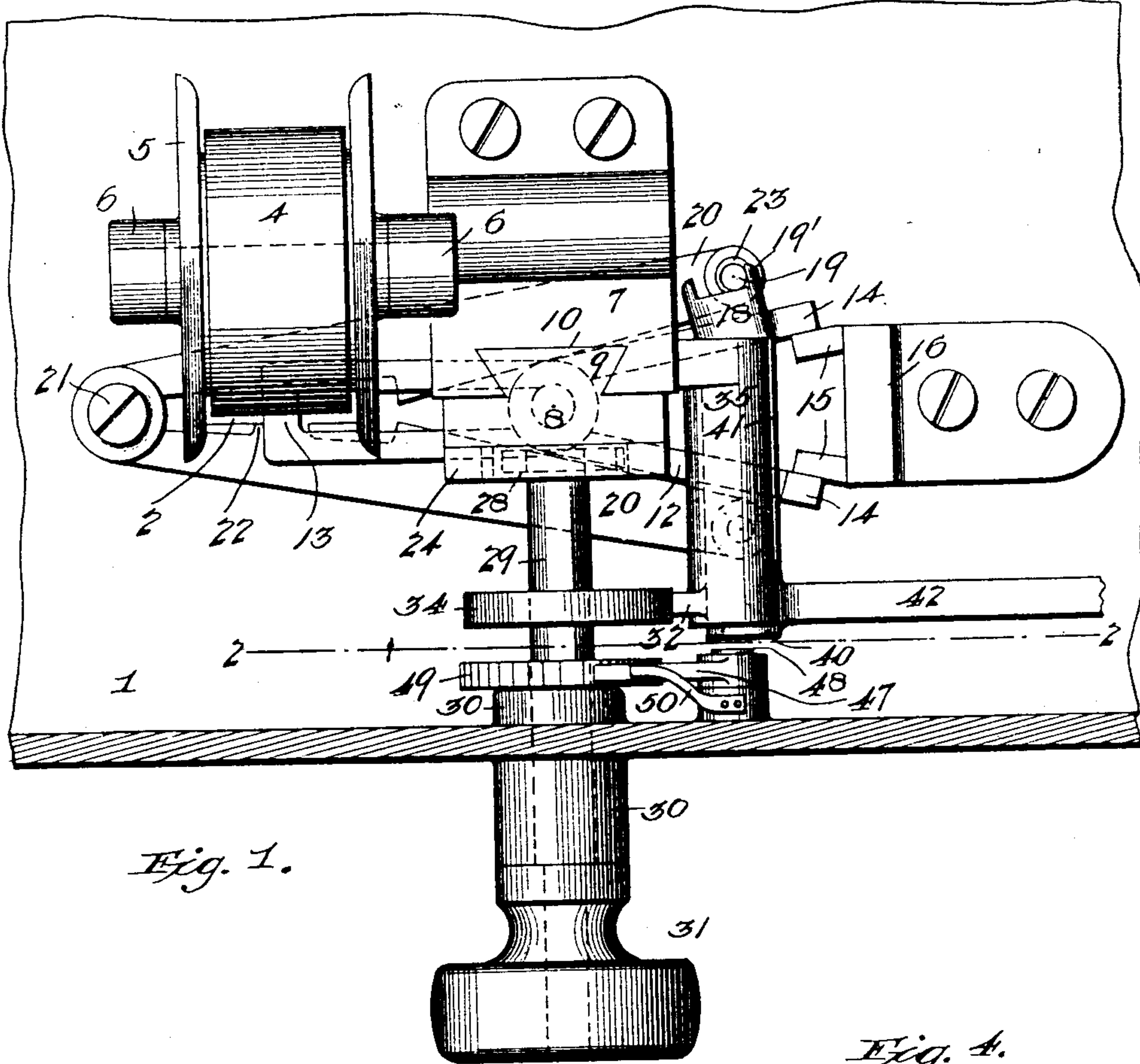


Fig. 1.

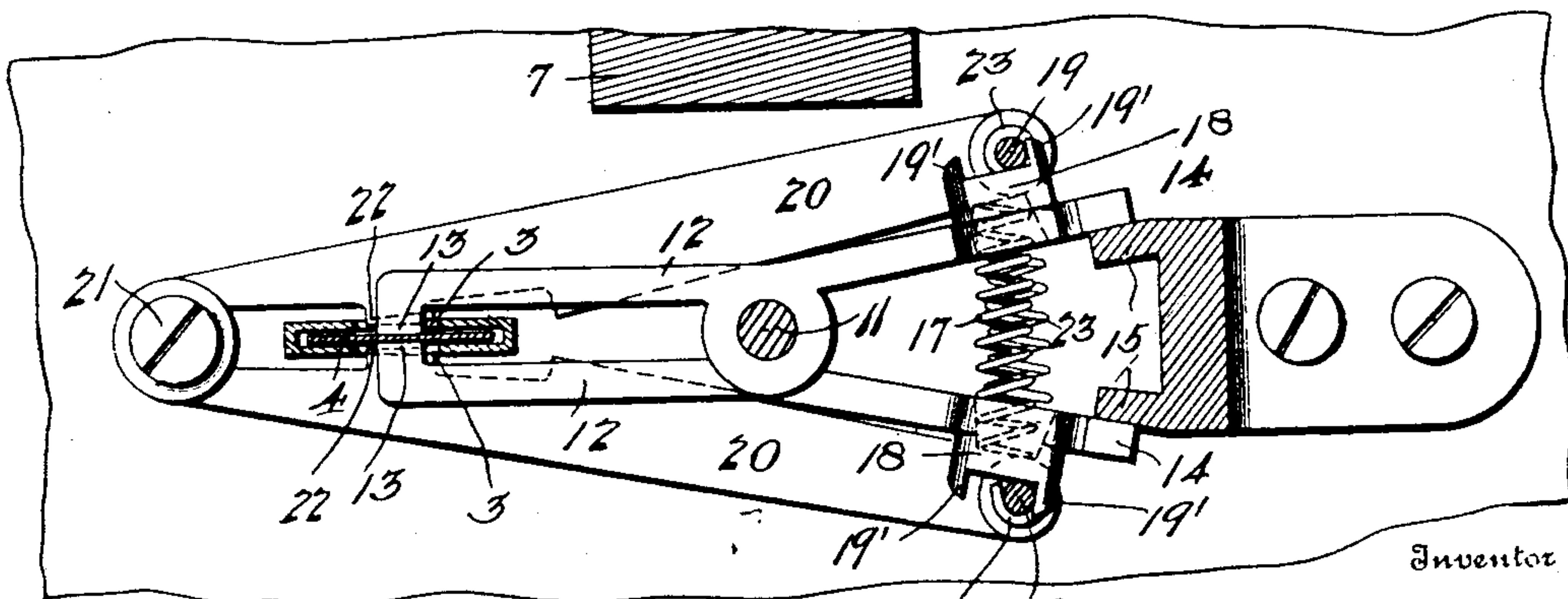


Fig. 4.

Witnesses

T. L. Mochane
James F. Brown

Inventor

Edward D. Schmitt,
334
John W. Johnson
Attorney

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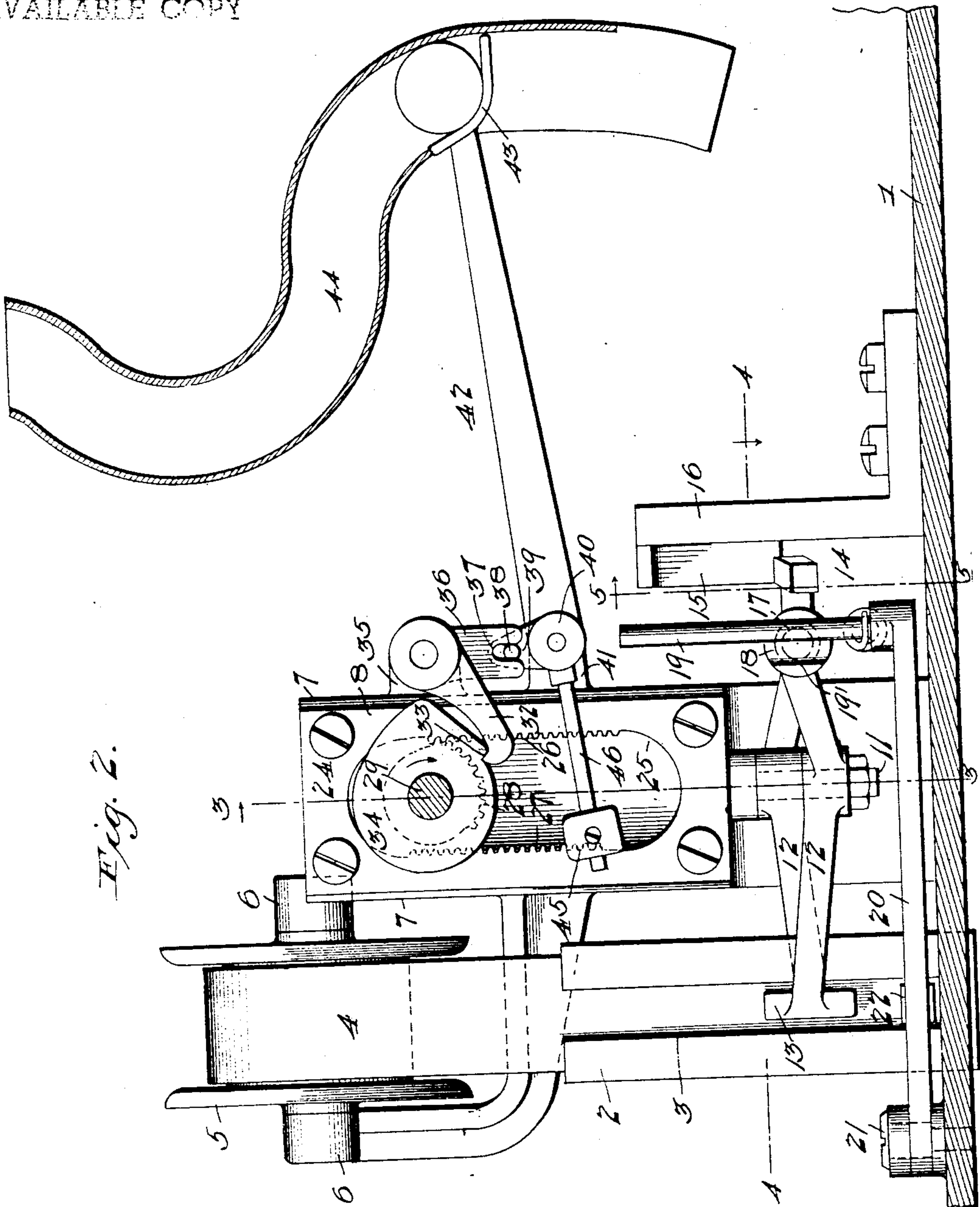
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3 SHEETS—SHEET 2.

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Fig. 2.



Inventor

Edward D. Schmitt,
By *Wm. H. Schmitt*
Attorney

Witnesses

J. L. Mockner
James F. Crown

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3 SHEETS—SHEET 3.

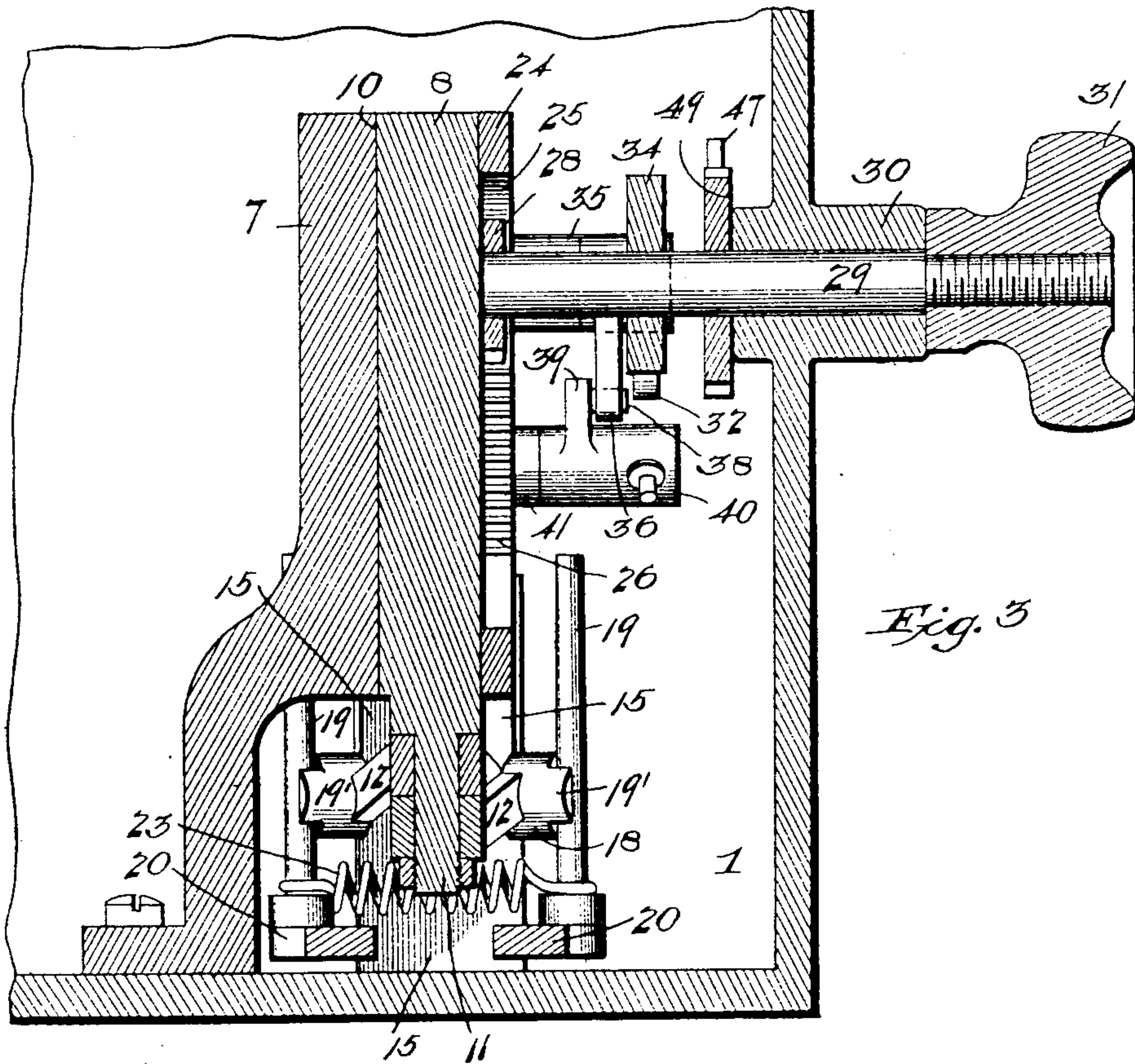


Fig. 3

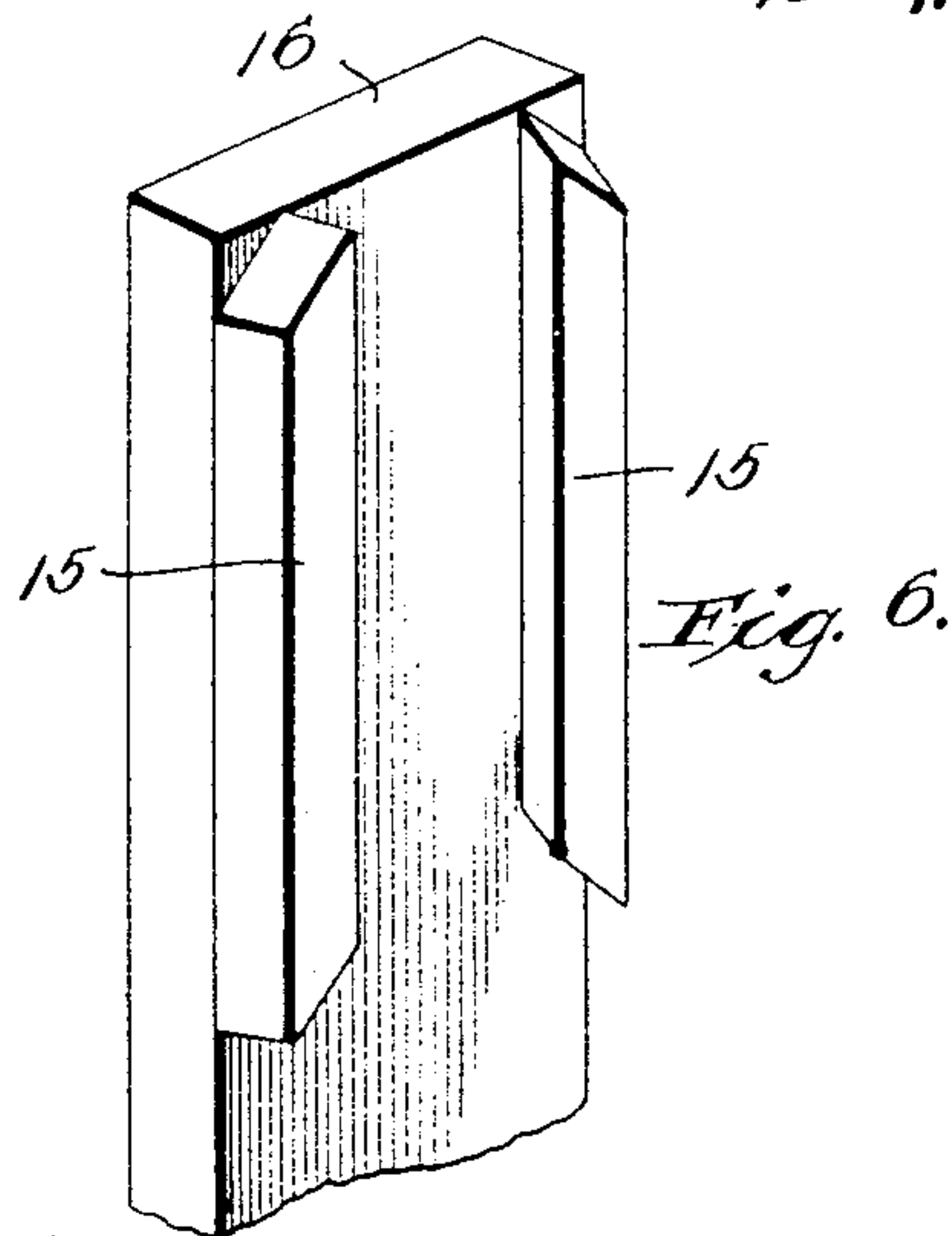


Fig. 6.

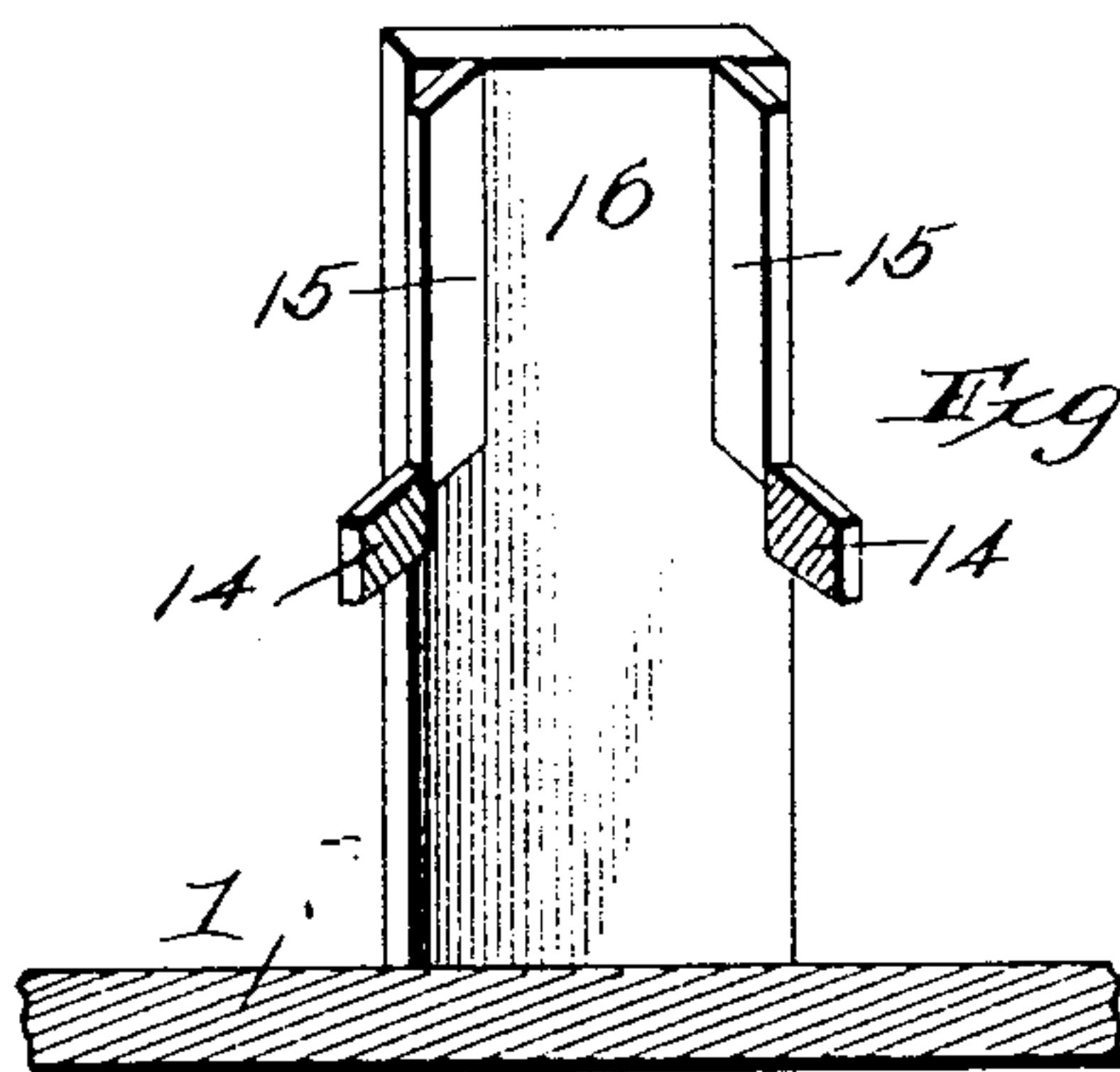


Fig. 5.

Witnesses

O. L. Kocher
James F. Crown

Inventor

Edward D. Schmitt,

By

Wm. Johnson

Attorney

UNITED STATES PATENT OFFICE.

EDWARD D. SCHMITT, OF BROOKLYN, NEW YORK, ASSIGNOR OF TWO-THIRDS TO ROBERT H. POLLOCK AND W. FRANK THOMAS, OF BALTIMORE, MARYLAND.

STAMP OR TICKET VENDING MACHINE.

No. 866,891.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed June 29, 1906. Serial No. 324,092.

To all whom it may concern:

Be it known that I, EDWARD D. SCHMITT, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Stamp or Ticket Vending Machines, of which the following is a specification.

The invention relates to a check-controlled machine for vending postage stamps, tickets or other articles, and consists in a machine of this character, which, upon the deposit of a coin of proper denomination into the coin chute, and upon the operation of an end wheel, will force the article, which may be a postage stamp, ticket or something similar, through the delivery tube to the outside of the casing.

The object of the invention is to produce a machine, which is simple in construction, efficient in operation, durable in use, and comparatively inexpensive of manufacture.

With this and other objects in view, the invention consists in certain details of construction and combination of parts, which will hereinafter be fully described and set forth in the appended claims.

In the drawings: Figure 1, is a horizontal sectional view through the casing, showing the mechanism in top plan. Fig. 2, is a vertical sectional view through the casing on the line 2—2 of Fig. 1, showing the mechanism in front elevation. Fig. 3, is a vertical sectional view, taken on the line 3—3 of Fig. 2, and looking in the direction of the arrow. Fig. 4, is a horizontal sectional view, taken on the line 4—4 of Fig. 2, illustrating the two gripping devices. Fig. 5, is a detail section, taken on the line 5—5 of Fig. 2. Fig. 6, is a detail perspective view of the upper end of the guide for the feed gripper.

Referring more particularly to the drawings, the numeral 1 denotes a suitable box or casing to inclose the mechanism, and 2, denotes the delivery tube projecting through the bottom of said casing. The said tube has its side walls cut away to form slots 3, which permit the jaws of a suitable gripper to engage the postage stamps, tickets or other articles passing through said tube.

The postage stamps or tickets 4, are put in a continuous strip, which is rolled upon a reel or drum 5, journaled in bearings 6, projecting from a vertical standard or bracket 7. The said standard 7 is secured to the bottom of the casing and supports a sliding block or carriage 8, the dove-tailed rib 9 formed upon the rear of said block engages a similarly shaped groove 10, in the front face of the bracket to permit said block to slide upon the standard. Projecting downwardly from the bottom of said block, is a stem 11, upon which the feed gripper 12 is pivoted. One end of said gripper

is formed with jaws 13, which may be faced with rubber or similar material and which are adapted to engage the strip of stamps through the slots 3, in the delivery tube 2.

The opposite ends of said gripper are formed with beveled ends or blocks 14, which are adapted to contact with the guide flanges 15, projecting from the side of an upright bracket 16, secured to the bottom of the casing. The said guide flanges 15 have their upper ends beveled outwardly in opposite directions, and their lower ends beveled inwardly toward each other. A coil spring 17 having its ends seated in sockets, formed in the outer ends of the feed gripper adjacent to the beveled ends 14, exerts its energy to hold said ends apart and to force the jaws 13 together to engage the strip of stamps.

The said spring 17 holds the outer ends of the gripper 12 at all times in contact with the vertical pins 19, secured upon the free ends of the check or safety gripper 20, which has its members pivoted together at their opposite ends to the bottom of the casing at 21. The said pins 19 are guided between the ears 19' upon the outer faces of the sockets 18. The said check gripper 20 is provided with jaws 22, faced with rubber and adapted to engage the strip of stamps through the slots 3, in the delivery tube 2, which passes between the jaws of said check gripper, adjacent to their pivot point. A coil spring 23 of greater strength than the spring 17, has its ends secured to the vertical pins 19, to hold the jaws 22, of said gripper 20 in engagement with the strip of stamps, at all times, excepting when the feed gripper forces them apart, in order to permit a stamp to be fed out of the delivery tube.

Secured upon the front face of the sliding block 8, is a plate 24, formed with a central slot or opening 25, the side walls of which are provided with rack teeth 26 and 27. A mutilated gear 28 is adapted to engage, alternately, said racks 26 and 27, to move the sliding block up and down. The gear 28 is fixed upon the inner end of a horizontal shaft 29, journaled in the bearing 30, formed upon the side wall of the casing, and projecting through the same, and carrying upon its outer end an operating handle or knob 31, by means of which said shaft may be rotated, when unlocked by the deposit of a coin or check into the coin chute.

The shaft 29 is locked from forward rotation by a pawl 32 engaging a shoulder 33, formed upon the cam 34, which is secured upon said shaft. The pawl 32 is pivoted upon the forward end of a bracket 35, projecting from one side of the standard 7. Said pawl is formed with a depending arm 36, which is bifurcated to form a slot 37, which is adapted to engage a pin 38, upon an arm 39, projecting from a sleeve or hub 40, journaled upon the forward end of a bracket 41, which also pro-

jects from one side of the standard 7. Projecting later-
ally from said sleeve or hub 40, is a lever 42, formed
with a coin cup 43, upon its free ends, which extends
into the coin chute 44. The lever is balanced by a
5 weight 45, adjustably secured upon an arm 46, project-
ing from said hub or sleeve in the opposite direction.

The shaft 29 is prevented from retrograde rotation
by a pawl 47, pivoted at 48 to the side wall of the casing,
and engaging a ratchet wheel 49, fixed upon said shaft.
10 A spring 50 holds said pawl in contact with the teeth
upon said ratchet wheel.

In the operation of the machine, a coin of the proper
denomination is dropped into the upper end of the coin
chute 44, which projects upon the outside of the cas-
15 ing through the top or cover. When the coin falls into
the coin cup 43, the balance of the lever 42 is de-
stroyed, and said lever, owing to the weight of the coin,
moves downwardly sufficient to disengage the pawl
32, from the shoulder 33, upon the cam 34. The mo-
20 tion of said lever is imparted to the pawl through the
pin 38 upon the arm 39, engaging the bifurcated end
of the arm 36, formed upon the pawl. As soon as the
pawl unlocks the shaft 29, the operating handle or knob
31, upon the front of the casing is turned to rotate the
25 shaft 29 and the mutilated gear 28.

With the parts in the position illustrated in the
drawings, which is their normal position, it will be
noted that a few teeth of the mutilated gear are in mesh
with the upper end of the rack 26, the beveled ends 14
30 of the feed grippers 12 are spread apart and engage the
outer faces of the guide flanges 15 in order to force the
jaws 13 toward each other to engage the strip of stamps,
and the jaws of the check gripper 20 are spread apart
by the separated ends of the feed gripper. When the
35 parts are in this position, and the shaft 29 rotates in the
direction of the arrow in Fig. 2, the sliding block 8,
which carries the feed gripper will be moved down
sufficiently to allow the beveled ends 14 of said gripper
to disengage from the lower ends of the flanges 15, when
40 the tension of the coil spring 23 will draw the free ends
of the check gripper 20, and the beveled ends 14 of the
feed gripper toward each other, to release the jaws of
the feed gripper from the strip of stamps and to force
the jaws of the check gripper into engagement with the
45 same. At the same instant that this takes place, the
teeth on the mutilated gear 28 will engage the rack
teeth 27 upon the opposite side of the slot in the plate
24, and as the shaft is rotated, will move the sliding
block 8, and feed gripper 12 up to permit them to take
50 a fresh hold upon the strip of stamps. As the feed grip-
per is raised, the beveled ends 14 will ride upon the
inner faces of the guide flanges 15, and upon the
bracket 16, and upon reaching the upper ends of said
flanges, the coil spring 17 will force the jaws of said
55 gripper apart sufficiently to allow the bevel upon the
lower faces of the ends or blocks 14, to engage the bev-
eled upper surfaces of the flanges 15. As soon as this
has occurred, the teeth on the mutilated gear will dis-
engage from the rack teeth 27, and mesh with the rack
60 26. As the sliding block 8 and the feed gripper 12
move downwardly upon the continued rotation of the
gear, the beveled ends 14 will be forced apart and will
ride upon the outer faces of the guide flanges 15, the
jaws of the check gripper will be forced apart by the
65 spreading apart of the beveled ends 14, and the jaws

13 of the feed gripper will be in engagement with the
strip of stamps forcing the same downwardly and out
of the delivery tube 2, as said feed gripper moves down-
wardly. It is, of course, understood the downward
movement of the feed gripper is equal to the length of 70
the stamp, ticket or the article to be vended and if de-
sired, the downward feed may be made to correspond
to the length of two, three, or any desired number of
stamps or tickets, which are separated by rows of perfor-
75 ations to allow them to be easily severed from the
continuous strip as they are fed out of the delivery tube
in the bottom of the casing.

When the sliding block and feed gripper have moved
down the proper distance, the pawl 32 will drop into
engagement with the shoulder 33, upon the cam 34 and 80
prevent the further rotation of the shaft 29.

As the weight of the coin may not be sufficient to
pull the lever 42 down far enough to permit the coin to
discharge from the coin cup 43, upon its end, the cam
34, as it is rotated by the shaft 29, forces said pawl 85
downwardly as it rides over the surface of the cam, and
the movement of said pawl will be imparted to the
lever, through the bifurcated arm 36 and the pin 38,
to force said lever down sufficiently to allow the coin
to roll out of the cup. The weight 45 will then restore 90
the lever and pawl to their proper positions.

In the drawing, the mechanism illustrated is adapt-
ed to vend stamps of one denomination, for instance one
cent stamps. It is of course understood that this mech-
anism may be repeated with slight changes and inclosed 95
in the same casing, to vend stamps of various other
values or denominations.

From the foregoing description taken in connection
with the accompanying drawings, the construction and
operation of the invention will be readily understood, 100
without requiring a more extended explanation.

Various changes in the form, proportion and the minor
details of construction may be resorted to without de-
parting from the principle or sacrificing any of the ad-
105 vantages of this invention.

Claims.

1. In a vending-machine, an automatic feed-mechanism
composed of a vertically-reciprocatory feed-gripper, a fixed
check or safety-gripper adapted to be opened by the clos-
ing of the reciprocatory-gripper, and means closing said 110
reciprocatory-gripper and thereby opening the check-
gripper.

2. In a vending machine, an automatic feed-mechanism
composed of a vertically-reciprocatory feed-gripper, a fixed
check-gripper, arranged below said reciprocatory-gripper 115
and adapted to be opened by the closing of the reciproca-
tory-gripper, and means alternately opening and closing
both grippers.

3. In a vending-machine, an automatic feed-mechanism
composed of a feed-gripper pivotally-mounted on a verti-
cally-reciprocatory block or carriage, a fixed check-gripper, 120
pivoted below said feed-gripper and adapted to be opened
by the closing of the feed-gripper, and means closing said
feed-gripper to cause the check-gripper to release its grip
on the article being fed.

4. In a vending machine, the combination of pivotally
mounted check grippers having a fixed pivot, reciprocatory
pivotally mounted feed grippers, means to impart recipro-
cating motion to the feed grippers, means to alternately 125
open and close them, and connections between the feed
grippers and the check grippers, whereby the latter are
operated by the former, substantially as described.

5. In a vending-machine, an automatic feed-mechanism
composed of a feed-gripper pivotally-mounted on a verti-
cally-reciprocatory block or carriage, a fixed check-gripper, 135

arranged below said feed-gripper and adapted to be operated by the feed-gripper, and means alternately opening and closing both grippers.

5 6. In a vending-machine, the combination of a feed-gripper pivotally-mounted on a vertical block or carriage, a check-gripper, connections between the two grippers, whereby the check-gripper is opened by the closing of the feed-gripper, means reciprocating the block or carriage and thereby the feed-gripper, and means alternately opening and closing both grippers.

10 7. In a vending-machine, the combination of a reciprocating feed-gripper, a check-gripper arranged below the feed-gripper, means automatically opening said feed-gripper and connections between the two grippers, whereby the opening of the feed-gripper will cause the closing of the check-gripper.

20 8. In a vending-machine, the combination of a vertically-movable feed-gripper, a fixed check-gripper arranged below the feed-gripper and connected therewith, and means alternately closing the movable or feed-gripper and the check-gripper.

25 9. In a vending-machine, the combination of a vertically-movable feed-gripper, a fixed check-gripper arranged below the feed-gripper, connections between the grippers, and co-acting cams and tappets alternately closing and opening the movable feed-gripper and the check-gripper.

30 10. In a vending machine, the combination of a check gripper having a fixed pivot and guides 19, a reciprocating element, a pivoted feed gripper carried thereby and engaging said guides, whereby the check and feed grippers are slidably connected together, and means to operate one of said grippers, and thereby cause the other gripper to be operated, substantially as described.

35 11. In a vending machine, the combination of a relatively fixed check gripper, a reciprocating element, a feed gripper carried thereby, means to operate the feed and check grippers in alternation, a revoluble element and racks, and a mutilated gear to convey power from said revoluble to said reciprocating element, substantially as described.

40 12. The combination in a vending machine, of a check gripper having a fixed pivot, a reciprocating element, a pivotally mounted feed gripper carried thereby, means to slidably connect the feed gripper to the check gripper, and coacting cams, tappets and springs to operate the check and feed grippers in alternation, substantially as described.

45 13. In a vending-machine, the combination of a spring-

pressed movable-gripper, a relatively fixed spring-restrained check-gripper, a guide element, means operating the feed-gripper to alternately open and close both grippers, and controlling-means to permit the feed-gripper to be operated so as to deliver the article. 50

14. In a vending machine, the combination of a relatively fixed check gripper, a movable feed gripper, a guide element, means for operating the feed and check grippers alternately, a locking-device to lock the grippers against movement, and controlling means having connection with the locking-device and adapted to be operated to permit a movement of the feed gripper to deliver the merchandise. 55 60

15. In a vending machine, the combination of a relatively fixed check gripper, a movable feed gripper, a guide element, means for operating the feed gripper and to alternately open and close the feed and check grippers, a locking-device to normally prevent a movement of the grippers, an operating lever having connection with the locking-device and adapted to unlock and permit a movement of the mechanism to deliver the merchandise. 65

16. In a vending-machine, the combination of a vertically-movable block or carriage, a feed-gripper pivoted to said block, a check-gripper pivoted below the feed-gripper, connections between the grippers, a guide element, and means reciprocating the block to operate the grippers. 70

17. In a vending-machine, the combination of a vertically-movable block or carriage, a spring-pressed feed-gripper pivoted to said block, a spring-restrained check-gripper pivoted below the feed-gripper, connections between the grippers, whereby the check-gripper is caused to open by the closing of the feed-gripper, a guide element, and means reciprocating the block to operate the feed-gripper. 75 80

18. In a vending-machine, the combination of a vertically-movable block or carriage, a feed-gripper pivoted to said block, a relatively fixed check-gripper, pins carried by the check-gripper, guides carried by the feed-gripper and adapted to act against said pins, a spring arranged to close the jaws of the feed-gripper, a spring arranged to close the jaws of the check-gripper, a guide element, and means reciprocating the block to operate the feed-gripper. 85 90

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD D. SCHMITT.

Witnesses:

HERMAN DANEMAN,

H. W. WELCH.