

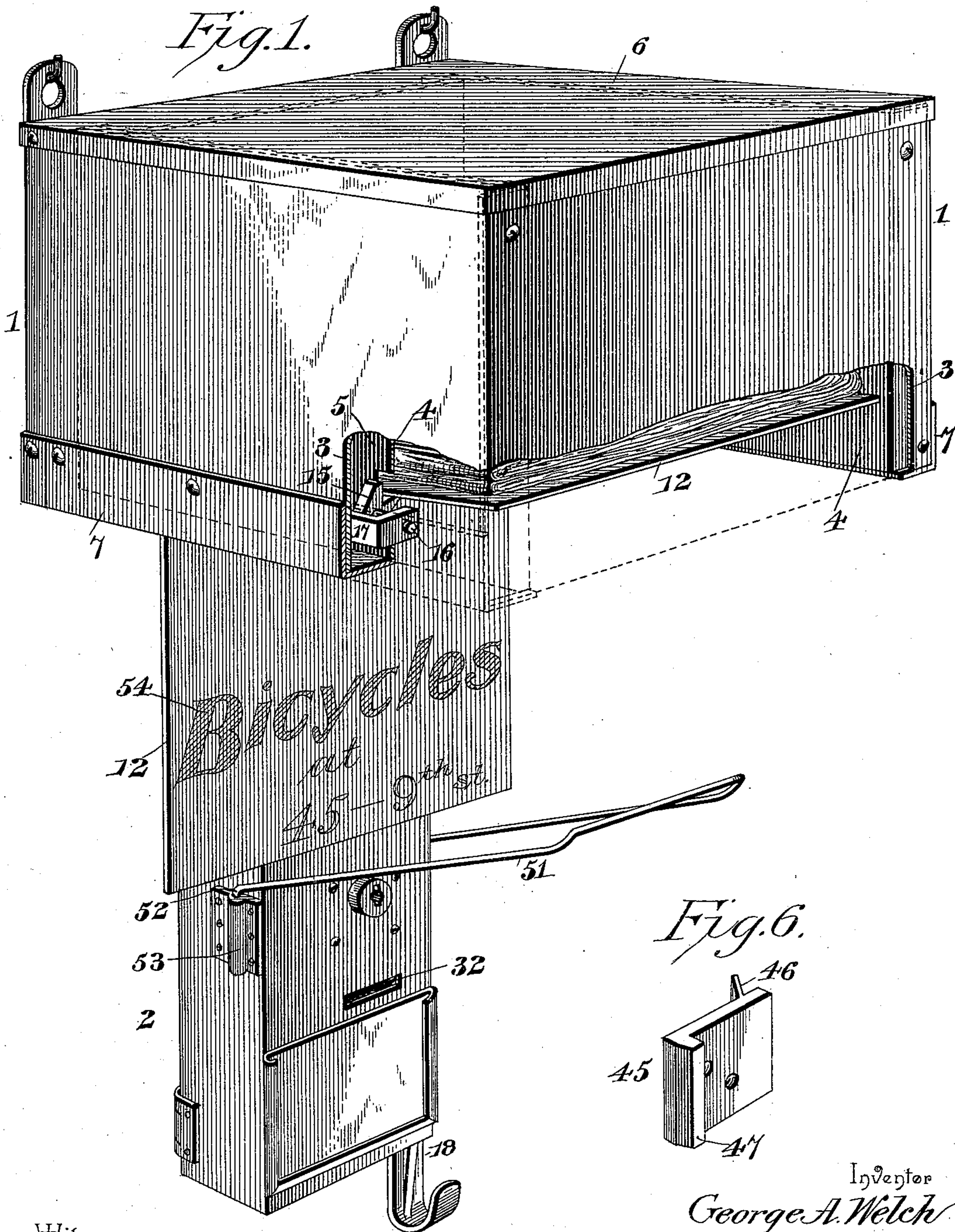
(No Model.)

3 Sheets—Sheet 1.

G. A. WELCH.
NEWSPAPER VENDING MACHINE.

No. 601,189.

Patented Mar. 22, 1898.



Witnesses

James K. McLaughlin

H. A. Beuchert

By his Attorneys,

C. A. Snow & Co.

Inventor

George A. Welch

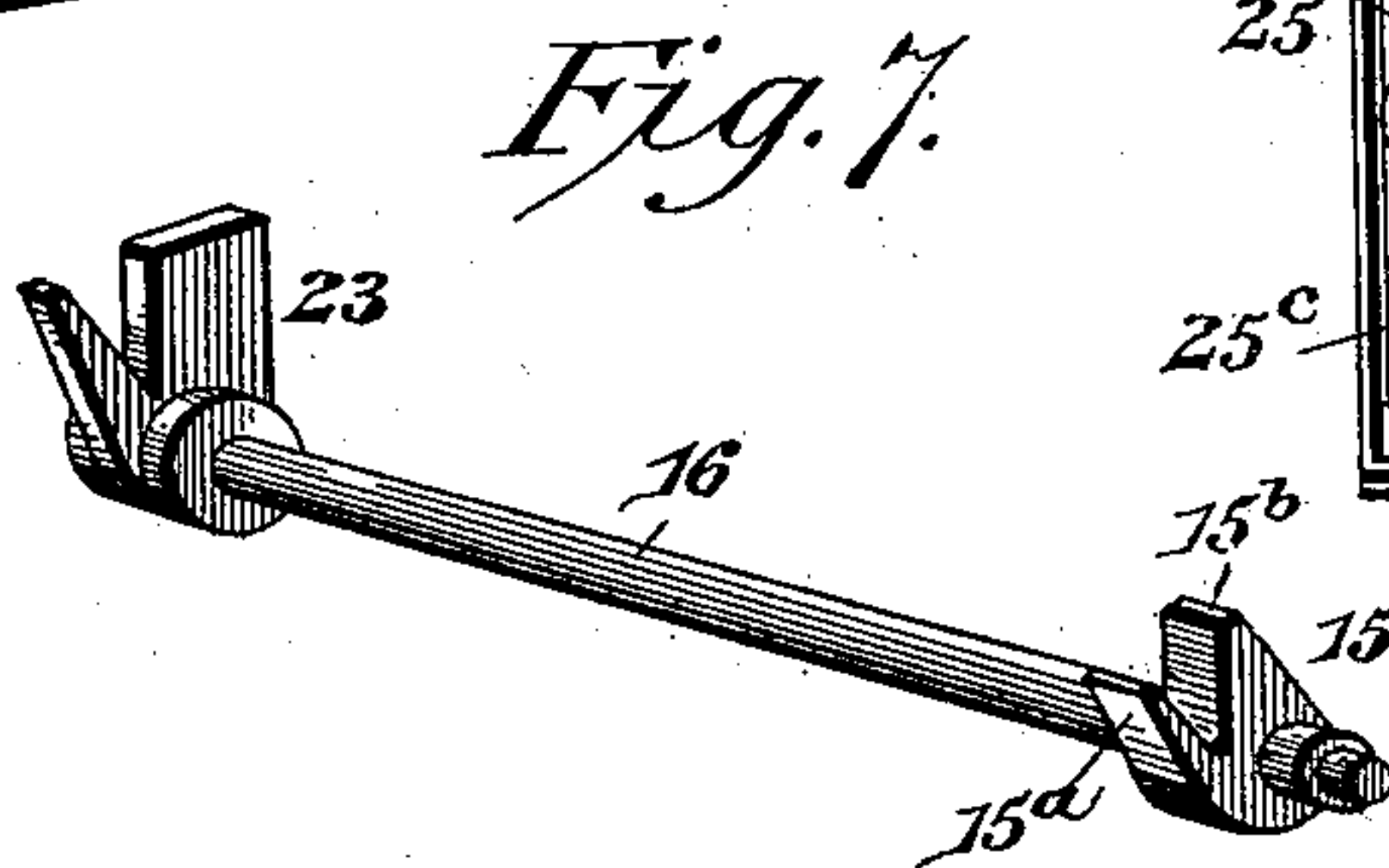
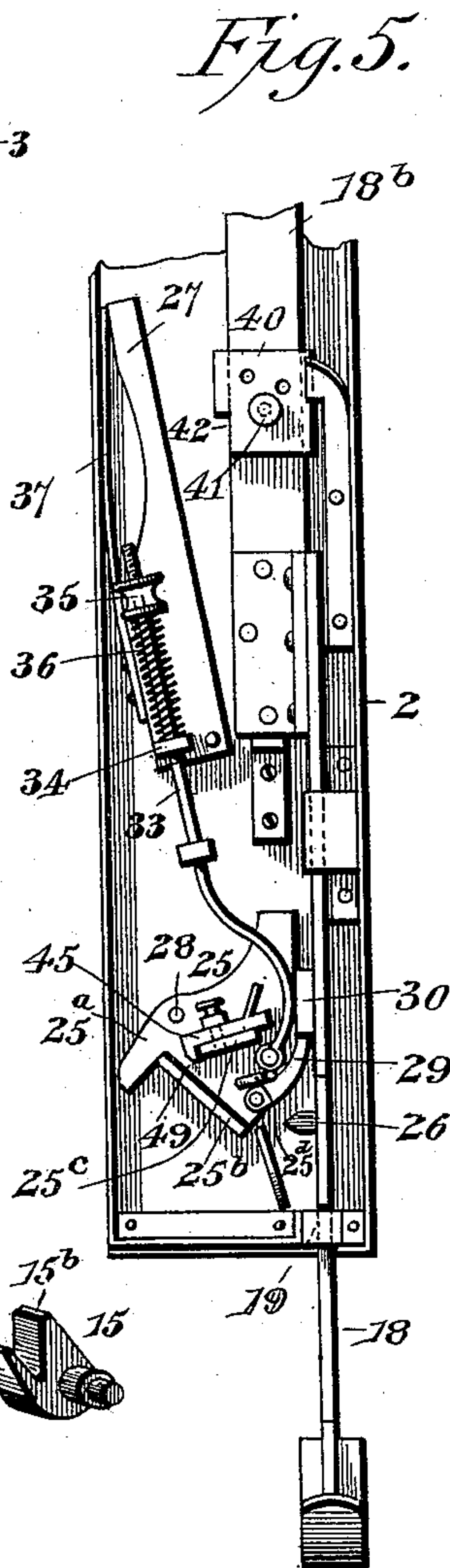
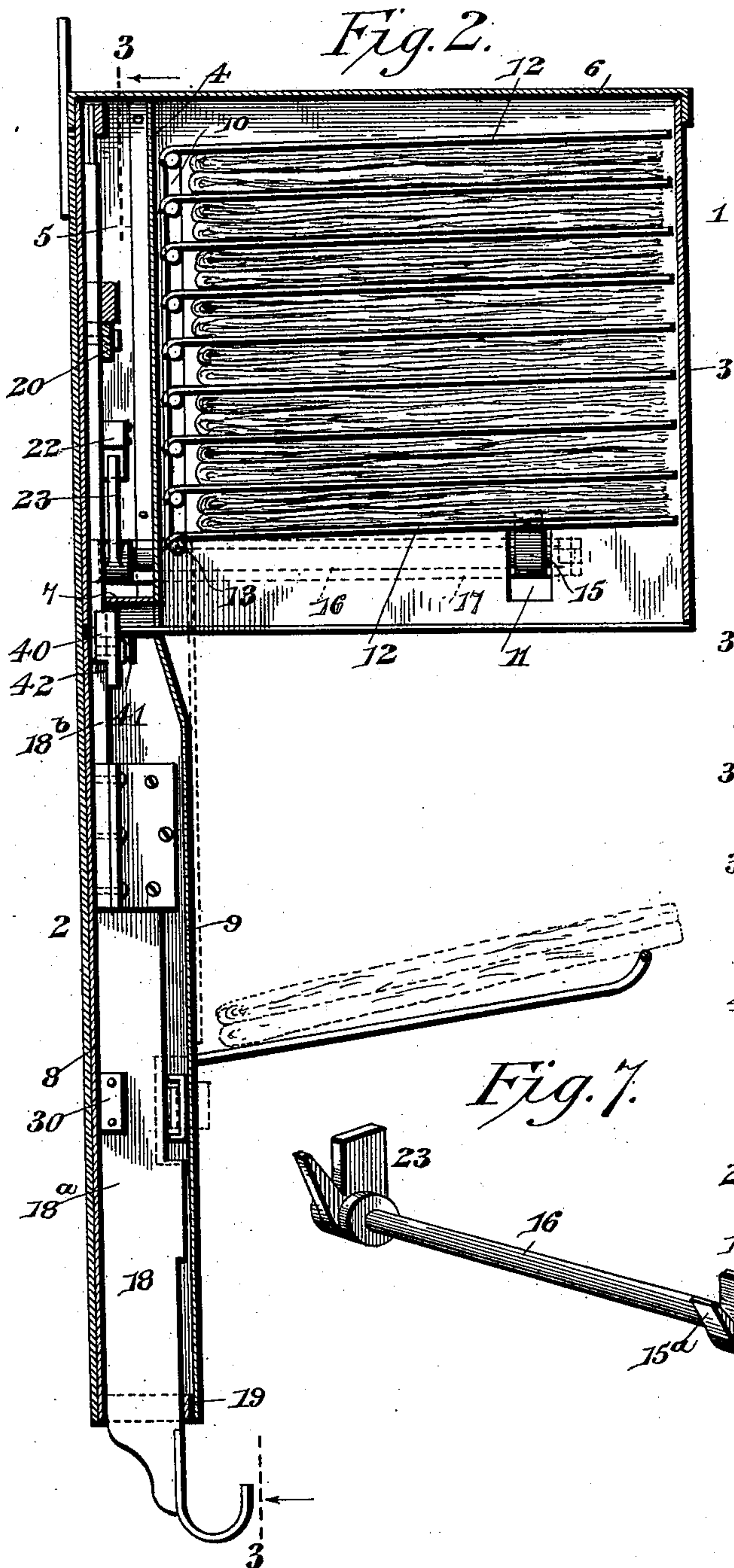
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Inventor
George A. Welch

Witnesses
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H. J. Benchof

By His Attorneys,

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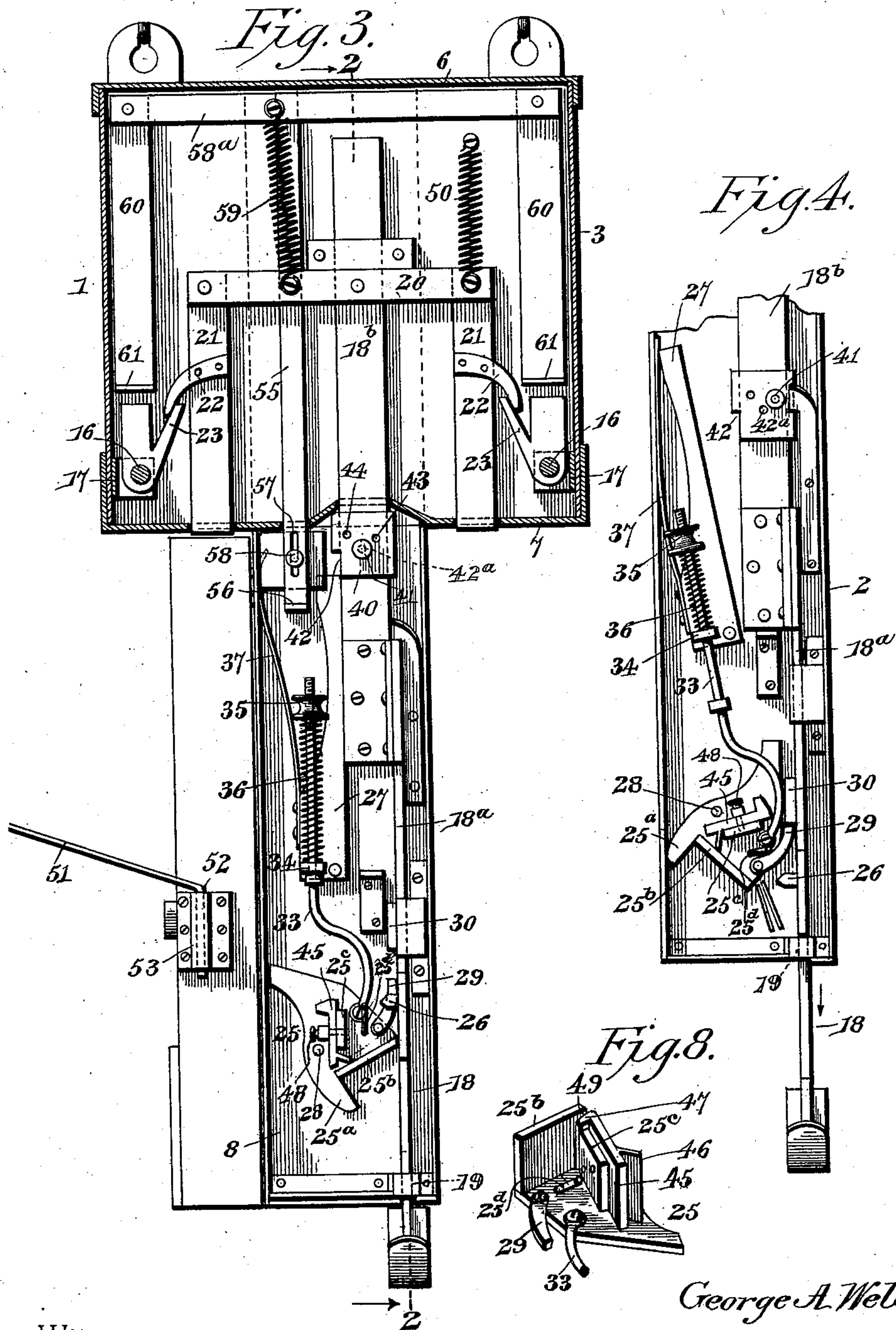
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3 Sheets—Sheet 3.

G. A. WELCH.
NEWSPAPER VENDING MACHINE.

No. 601,189.

Patented Mar. 22, 1898.



Witnesses
Jas E. McArthur
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UNITED STATES PATENT OFFICE.

GEORGE A. WELCH, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF
TO WILLIAM G. DAUGHERTY, OF SAME PLACE.

NEWSPAPER-VENDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 601,189, dated March 22, 1898.

Application filed August 6, 1897. Serial No. 647,357. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WELCH, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Newspaper-Vending Machine, of which the following is a specification.

My invention relates to improvements in coin-controlled vending-machines especially designed for the purpose of vending newspapers on the deposit of a proper coin in the coin-slot and the pulling out of a slide by the purchaser.

The primary object of the present invention is to provide a simple, compact, and easily-operated machine especially designed for use in the cars of street-railways for automatically selling newspapers, although the machine is equally susceptible of use in other places than street-cars—such as, for instance, in stores, hotels, and any other place.

A further object of the invention is to utilize the force of gravity as the medium for feeding the newspapers to the delivery-opening of the machine and to provide the latter with automatically-operating mechanism which serves to prevent the delivery of the contents of the machine until the proper coin shall have been deposited therein and the slide pulled out, such delivery mechanism also serving the important purpose of preventing in a positive manner the delivery of more than one newspaper at a time.

A further object of the invention is to provide an improved type of mechanism for the feed-slide in which I have so constructed and arranged the parts that the slide may be used in conjunction with coins of different denominations or with one, two, or more coins of the same denomination.

The object of the invention is, finally, to improve the machine in various ways with a view to promoting its simplicity and durability of construction, increase its efficiency and precision of operation, and reduce to a minimum the number of working parts to enable the machine to be manufactured without involving any great expense.

With these ends in view my invention consists in the novel combination of elements and in the construction and organization of parts,

which will be hereinafter fully described and claimed.

To enable others to understand the invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a coin-controlled machine especially adapted for vending newspapers and constructed in accordance with my invention. Fig. 2 is a vertical sectional view taken centrally through the machine and on the plane indicated by the dotted line 2 2 of Fig. 3. Fig. 3 is a transverse sectional view on the plane indicated by the irregular and dotted line 3 3 of Fig. 2. Fig. 4 is a face view of the coin-freed mechanism, showing the position of the parts when the slide is pulled out in the act of releasing the dogs that serve to retain the followers or plates. Fig. 5 is a face view of the coin-freed mechanism, showing the parts adjusted to adapt the machine to be operated on the deposit of a nickel in the machine. Fig. 6 is a detail perspective view of the removable and adjustable plate which is employed in connection with the coin-freed mechanism to enable the same to be used in connection with one or more pennies or with nickels. Fig. 7 is a detail view of one of the rock-shafts which carries the dog to retain and release the followers or plates of the machine. Fig. 8 is a detail perspective view of the coin-carrier detached from the machine.

Like numerals of reference denote corresponding parts in all the figures of the drawings, referring to which—

1 designates the casing in which are contained the followers or plates and the articles to be vended, and 2 is an extended stem made in the form of a box or casing and projecting from the back part of the casing 1, at the middle thereof, to inclose and protect the coin-freed slide and its coacting devices. The casing 1 is constructed in a simple and compact manner, and it consists of an outer shell 3 of square or rectangular form and an inner shell 4, composed of three sides or walls arranged within the outer shell to provide a space or chamber 5, which extends continu-

ously around the two sides and rear of the casing. The front of the casing 1 is closed, preferably, by a single wall formed by the outer shell 3, and the upper end of the casing 5 is closed by a solid head 6, which is suitably fastened in place. The lower part of the casing has a continuous band or strip 7, which is attached to the two shells 3 4 to close the lower side of the space 5 between said shells; 10 but the inner shell 4 is open at its lower side or end, so as to provide a delivery-opening through which the contents of the casing 1 may be discharged and through which the followers or plates may drop as they are suc-

cessively brought into position to engage with the retaining-dogs.

The box-like casing forming the stem 2 of the machine is constructed in a manner to provide a back plate 8, on which the operative parts of the coin-freed mechanism are mounted, and a cover 9, hinged to the back-plate 8, so as to be thrown or moved to one side and to expose to view the coin-freed mechanism for the purpose of having ready access 25 thereto to change the machine according to the coins which may be used for its successful operation. The lower end of the box-like stem 2 also serves as a receptacle for the coins after they have been discharged from the coin-carrier, and by providing the box-like stem with a hinged cover provision is made 30 for easy access to the coins for collecting or removing the same.

The inner shell 4 of the casing 1 is provided 35 in opposite walls near the rear of the case with vertical slots or ways 10, and the side walls of the inner shell are provided with the short slots or openings 11 for a purpose which will hereinafter appear.

40 Within the inner shell of the casing 1 is arranged a series of followers or plates 12, arranged one above the other and adapted to drop or descend through the open lower end of the casing, so as to travel therein by 45 gravity. These plates or followers are separated one from the other by interposing between them the articles to be delivered or vended by the machine, and it will thus be seen that I have the merchandise and the fol- 50 lowers stacked in alternate relation within the casing of the machine.

I have especially designed the machine shown in the accompanying drawings for the purpose of vending newspapers, and to enable the machine to be constructed in a compact form when used for this purpose I con- 55 template folding the newspapers into a small compass and placing each newspaper between two adjacent followers. In the drawings I have shown the followers as consisting of single continuous metallic plates, preferably stamped or struck from sheet metal; but I do not limit myself to the use of followers of this nature, because I am aware that bail-like 65 wires or frames may be used and that the followers may be constructed in other ways without departing from the spirit of my in-

vention. The followers or plates 12 are provided with the rods or stems 13 near or at the rear edges thereof, and these stems or rods are loosely fitted in the vertical slots 10 70 in the opposite side walls of the inner shell 4 of the casing 1, whereby the rods or stems 13 serve as the means for suspending the followers from the machine after the followers have 75 dropped through the delivery-opening of the casing 1 in discharging the merchandise or newspapers from the machine. These rods also serve to sustain one edge of the followers in the machine, while the other edge of 80 the lowermost follower is sustained by engagement with the retaining-dogs 15, which project through the slots 11 in the inner shell 4 of the casing 1. It will be understood that the lowermost follower 12 of the stack or se- 85 ries in the machine is held in the casing 1 by its rod 13 and by engaging with the retaining-dogs 15; but when this bottom follower is dropped by withdrawing the dogs from en- 90 gagement with the edges of the follower the latter is free to drop by swinging through the delivery-opening in the lower end of the casing, the rod 13 serving as the pivot for the follower during this pivotal movement and 95 as the means for suspending the follower in its dropped vertical position. As the follower turns from its normal horizontal position to a suspended position below the casing it pre- 100 cipitates or lets fall the newspaper resting thereon, thus discharging the newspaper di- rectly from the machine; but the next fol- 105 lower is not allowed to drop or escape through the machine-casing 1, because the retaining-dogs 15 engage with said succeeding follower to sustain the latter, its newspaper, and all 110 the rest of the newspapers and followers until the necessary coins shall have been deposited and the pull-slide operated in succession the corresponding number of times. The followers are adapted to engage successively 115 with the retaining-dogs, to be released one after the other thereby, and the followers and the newspapers supported thereby travel by gravity through the casing, thus dispensing with springs or any other devices for 120 ejecting the merchandise from the machine.

The holding or retaining dogs 15 are situated on opposite sides of the inner shell of the casing 1, and they project slightly through the slots 11 therein, so as to engage with op- 120 posite side edges of the followers. I prefer to make each dog in the form of a casting with spaced fingers or prongs 15^a 15^b, and the dogs are mounted in the casing to have a limited rocking movement therein in a pe- 125 culiar manner. The retaining-dogs are so controlled by the operating mechanism of the machine that they will be held in locked positions when the fingers 15^a of the dogs en- 130 gage with the edges of the lowermost follower of the series in the machine; but when the pull-slide is released and pulled outward the dogs are rocked a certain distance to move the fingers 15^a sufficiently to free themselves

from the bottom follower and to bring the fingers 15^b into position for the latter to sustain the next follower until on the return movement of the dogs the follower so engaged will be lifted sufficiently to enter the spaces between the fingers on the dogs and thus be held by the fingers 15^a of the dogs, whereby the dogs operate to automatically release the lower follower and to restrain the next follower from escaping during the release of the bottom follower. These dogs 15 are carried by the rock-shafts 16 16, arranged in the space 5 between the side walls of the inner and outer shells, and said shafts are journaled in the bearings of suitable brackets or plates 17, fastened within the casing 1, at the sides thereof.

The mechanism for operating the rock-shafts and the retaining-dogs will be presently described in detail.

The pull-slide is designated by the numeral 18 in the drawings, and it is composed of two members or sections 18^a 18^b, the former of which is arranged in suitable guides within the box-like stem 2, while the latter lies within the space or chamber 5 at the rear of the casing 1. The members of the slide are arranged at right angles to each other and preferably out of alinement, and they are fastened or coupled together in any suitable way—as, for example, by the angle-plate shown in the drawings. The member 18^a of the pull-slide extends through a slot in a guide 19 at the lower extremity of the box-like casing, and the protruding end of said pull-slide is provided with a hook, loop, or other suitable device by which the slide may be conveniently operated by hand. The member 18^b of the pull-slide carries or is attached to a cross-head 20, which is situated within the rear space or chamber of the casing 1, and to the ends of this cross-head 20 are attached the guide bars or stems 21, which are loosely fitted in suitable guides within the casing and which are movable with the pull-slide in its reciprocating movements within the casing. These guide-bars 21 carry the arms 22, which project laterally from opposite sides of the guide-bars toward the sides of the casing 1, and said arms 22 have their free ends fitted in the forked connecting-fingers 23, which are rigidly attached to the rock-shafts 16, that carry the retaining-dogs 15, whereby the forked fingers, the arms, and the guide-bars serve as the means for operatively connecting the pull-slide with the retaining-dogs to actuate the latter simultaneously with the movements of the pull-slide.

25 is the coin-carrier, which is movably mounted within the box-like stem 2 for operation in connection with a coin-stud 26, carried by the member 18^a of the pull-slide; and these elements—i. e., the coin-carrier and the coin-stud—are arranged in such relation to each other that when a coin of proper denomination and thickness or two or more coins of proper denomination, according to the ad-

justment of the machine, are deposited in the coin-slot the stud 26 operates to move the coin-carrier with the movement of the pull-slide. The movement of the coin-carrier and the slide depend, however, upon a coin or coins of proper denomination being deposited between the coin-stud and the carrier, and under these circumstances the coin-carrier actuates a locking-lever 27, that serves to normally lock the pull-slide against movement endwise within the machine to such an extent as to move the dogs 15 to release the followers.

The coin-carrier 25 preferably consists of a single casting having a base-plate 25^a, a web 25^b, and a post 25^c. The coin-carrier is pivoted to the base-plate of the box-like stem 2 at a point adjacent to the member 18^a of the pull-slide, as indicated by the bolt or pin 28, and this carrier is arranged and held to have its web 25^b normally in the path of the coin-stud 26 on the pull-slide. The post 25^c of the coin-carrier is adapted for use in connection with a detachable and reversible plate, by which the mechanism is adapted for use in connection with coins of different denominations, as will hereinafter appear.

The coin-carrier 25 is provided with an arm or finger 29, which projects from the base-plate of said carrier. This finger 29 is rigidly attached to the carrier, and it lies in the path of a lug or flange 30, rigid with the pull-slide. This lug or flange 30 of the pull-slide is so positioned thereon that it will only engage with the finger 29 when the coin of proper denomination has been placed between the coin-stud 26 and the web 25^b of the carrier; and said flange or lug 30 and the finger 29 operate in conjunction with the coin-stud, the coin, and the web 25^b to move or swing the carrier on its pivot as the pull-slide is drawn outward. The coin-carrier is also provided with a coin-retaining finger 25^d, which is attached to the base-plate of said coin-carrier and which operates as a guide to prevent the coin when deposited in the coin-slot 32 of the box-like stem from moving out of position.

The coin-carrier is normally held in operative relation to the coin-stud 26 of the pull-slide by means of a spring-actuated rod 33, which is bent, as shown by the drawings, one end of this rod being pivotally attached to the base-plate of the coin-carrier. The straight length of this rod 33 passes through an eye or perforation in a stud or lug 34 on the heel or pivoted end of the locking-latch 27, and the free end of said stem 33 is externally screw-threaded to receive a tension-adjusting nut 35. A coiled spring 36 is fitted loosely on the straight length of the stem 33, and one end of this spring is seated against the stud 34 of the locking-lever 27, and its other end bears against the adjusting-nut 35, whereby the spring-controlled rod is operatively connected with the coin-carrier and with the locking-lever to serve as a means for connecting the two elements 25 27 and to support the spring by which the coin-carrier is normally

held in its operative position with relation to the pull-slide. The locking-lever 27 is pivoted at its heel to the base-plate of the box-like stem by means of a pivot-pin which passes through the lever near one angle or corner thereof and to one side of the stud or lug 34 of said lever. The lever is normally pressed in a lateral direction toward the member 18^b of the pull-slide by means of a spring 37, and the free end of said locking-lever is arranged in the path of a shouldered stop 40, carried by the member 18^b of the pull-slide. This locking lever or latch 27 and the stop 40 act in conjunction with each other to restrain the pull-slide from being moved endwise in the machine a sufficient distance to deliver its merchandise or newspapers, except when the latch or lever 27 is thrown by the coin-carrier 25 out of the path of the stop 40. Said stop 40 is constructed to embrace the member 18^b of the pull-slide in a manner to have a limited play or adjustment thereon; but normally the stop is clamped rigidly to the pull-slide by means of a set-screw 41 or other equivalent holding device. The stop is constructed with a projecting shoulder 42, and the lever or latch 27 is held to lie normally in the path of the shoulder 42 for the latter to abut squarely against the end of the latch and thus limit or arrest the outward movement of the pull-slide should the latter be pulled out or tampered with without the coin having been deposited in the machine or a coin of improper denomination placed therein.

The coin-slot 32 is provided in the hinged cover of the box-like stem at a point between the web of the coin-carrier and the coin-stud 26. When a proper coin or coins are deposited in the slot, the coin or coins are received between the web 25^b of the coin-carrier 25 and the coin-stud 26, and when the pull-slide is drawn outwardly the pressure of the coin-stud 26 and the coin or coins upon the web of the carrier 25 operates in conjunction with the finger 29 and the lug or flange 30 to move the carrier in an arc of a circle on its pivot. This swinging movement of the carrier is transmitted through the rod to the locking-latch 33 and the latter is moved side-wise out of the path of the shouldered stop just prior to the engagement of the stop with the lever when the pull-slide is drawn outward. Should a coin of improper denomination be placed in the machine, its thickness will be such that the coin-stud 26 and the carrier will not be moved before the shouldered stop engages with the latch, and the slide 18 cannot be drawn out.

My coin-actuated mechanism is adapted for service in connection with coins of different denominations or with two or more coins of the same denomination. Some newspapers sell for a penny, others for two and three cents, while others retail for five cents per copy. To meet these requirements in the service of vending newspapers, I have constructed the

coin-actuated mechanism with adjustable elements, whereby it is adapted for service, under proper adjustment of the parts, to operate in connection with one, two, or three pennies, or with nickels or five-cent pieces.

The machine is adapted for use in connection with one or more pennies by making the stop 40 adjustable on the slide and attaching it rigidly thereto by the set-screw 41. As shown, the stop is provided with three apertures or openings, (designated at 42^a, 43, and 44,) through either of which the screw 41 may be passed to adjust the stop to different positions on the member 18^b of the slide and with reference to the free end of the locking lever or latch 27. The member 18^b of the slide is provided with threaded or tapped apertures corresponding to the openings in the stop 40, and the set-screw is adapted under different adjustments of the stop to enter either of these threaded openings in the slide to fasten the stop thereto. I also provide the coin-actuated mechanism with an adjustable and reversible plate 45, which is adapted to be applied to the post 25^c of the coin-carrier. This plate 45 is provided at its opposite edges with flanges 46 47, which are arranged to stand at different angles to the plate and to project from opposite sides thereof, and said plate is adapted to be clamped firmly to the stud of the coin-carrier by means of a set-screw 48.

When the coin mechanism is used for the reception of one or more pennies, the plate 45 is adjusted on the post of the coin-carrier to have its flange 46 close the opening or space between the web 25^b and the post 25^c of said coin-carrier, and the plate thus serves in connection with the web 25^b to deflect the coins and to cause them to be discharged from the carrier when the latter is moved on its pivot by the outward pull of the slide. The plate 45, however, may be reversed when the mechanism is to be used in connection with nickels or five-cent pieces to present its flange 47 opposite to the web of the coin-carrier, so as to form an opening or throat 49 between said flange 47 of the plate and the web of the coin-carrier, which opening or throat 49 is not of sufficient width to permit of the passage of a nickel or five-cent piece, but will permit the passage of a penny, a half-dime, or a dime.

To adjust the coin mechanism for use in connection with a single penny, the plate 45 is clamped to the coin-carrier to have its flange 46 close the space between the web and the post of the coin-carrier, and the stop 40 is adjusted on the slide by passing the set-screw 41 through the opening 42^a in the slide.

To adapt the mechanism for use in connection with two pennies, the stop 40 is moved on the slide to have its set-screw pass through the opening 43 and a corresponding opening on the slide, the stop being thus moved on the slide toward the lever or latch 27 a dis-

tance equal to the width of the extra penny, but the plate 45 is not disturbed.

To provide for the use of three pennies to release the coin mechanism, the stop 40 is moved still farther toward the lever or latch 27 to have the set-screw fit in the opening 44 and a corresponding opening in the slide; but, as in the previous adjustments, the plate 45 is not disturbed.

When the mechanism is to be used in connection with nickels or five-cent pieces, the plate 45 is detached and reversed to bring its flange 47 opposite to the web of the coin-carrier to provide the opening or throat 49 between the parts, and the stop 40 is moved on the slide toward the lever or latch 27 to occupy the same position with relation thereto that it occupies when the machine is adapted for service by a single penny. A penny cannot, however, actuate the coin-carrier, because it will slide on the web of said carrier through the throat or space 49.

This being the construction of my machine, the operation may be described briefly, as follows: The pull-slide is normally drawn inwardly or to a raised position by means of the coiled spring 50, which is attached to the cross-head at the upper end of the slide, and the lever or latch 27 is in the path of the stop 40 to permit the slide to have a limited play, but to prevent the outward movement of the slide sufficiently to actuate the dogs 15. The machine having been properly charged or filled with newspapers or other merchandise, a coin or coins of the proper denomination, according to the adjustment of the coin-actuated mechanism, are deposited in the coin-slot 32 and received on the web of the coin-carrier between said web and the stud 26. As the slide is pulled outward the pressure of the stud 26 upon the coins and the pressure of the coins against the web of the carrier operate, in conjunction with the finger 29 and the flange 30, to impart movement on its pivot to the coin-carrier, thus moving the latter and actuating the stem to move the latch 27 out of the path of the stop 40 on the slide.

The continued outward movement of the slide holds the coin-carrier and the latch out of the way of the slide, and the cross-head is thus moved to pull down on the arms attached to the guide-bars, which arms in turn serve to move the forked fingers and rock the shafts 16 to actuate the dogs 15, so as to release the lowermost follower and discharge its contents from the casing 1 of the machine. When the slide is released, it is withdrawn into the machine by the spring 50 to return the dogs back to normal positions, where they sustain the stack of followers and the merchandise, and the carrier and the latch are also returned to their normal positions by the action of their holding-springs.

I prefer to provide the machine with a shelf 51, which is attached to the box-like stem 2 below the casing 1 to receive the newspapers

as they are dropped by the followers, from which shelf the newspapers can be easily removed by hand. As shown, this shelf is formed of a piece of wire bent into the form of a bail and provided with prongs 52, adapted to fit in keepers 53, attached to the stem 2; but the construction of the shelf and the means for holding it in place are not material, and may be changed without departing from the spirit of the invention.

One of the important features of my improved vending-machine is the use of the swinging followers adapted to be sustained in the casing by their rods and the retaining-dogs and arranged to drop down into a vertical position to have one of their faces exposed to view after the newspaper is delivered. This arrangement of the followers in vertical suspended positions beneath the casing 1 of the machine provides for the use of advertising matter on the exposed faces of the followers. The advertising matter is represented at 54 in Fig. 1 of the drawings, which shows one of the followers in its lowered or dropped positions to expose its advertising matter to view. The advertising matter may be of any desired character.

I have also provided the machine with a supplemental slide 55, which is fitted in suitable guides within the machine-casing to have its upturned end 56 exposed to view when the box-like stem is opened, said upturned end 56 providing for the convenient adjustment of the slide by hand when the hinged cover of the box-like stem is opened. This supplemental slide is provided with a slot 57, adjacent to its upturned end, and through this slot passes a binding-screw 58. The upper end of the slide has a cross-head 58^a, to which is attached a coiled spring 59, the other end of which is attached to the cross-head of the pull-slide 18. This cross-head of the supplemental slide carries the arms 60, which lie close to the sides of the machine-casing, and the arms extend toward the forked fingers on the rock-shafts 16, said ends of the arms being turned up to provide the flanges 61, which lie adjacent to the forked fingers of said rock-shafts.

The purpose of the supplemental slide and the bars 60, carried thereby, is to lock the rock-shafts and the forked dogs 15 under certain conditions—as, for instance, when the machine is to be refilled or recharged with the merchandise to be vended.

To charge the machine, the cover of the box-like stem is opened and the slide 55 is adjusted by hand to move the bars 60 into position behind the fingers 23 to hold the dogs of the rock-shafts from being pushed up in the slots of the casing and prevent said dogs from coming down unless they are adjusted on the inside of the machine.

Any number of machines may be used for vending newspapers, magazines, &c. When the contents are all sold, the machine dis-

plays a notice to that effect—as, for instance, by having the last follower provided with an inscription something like “All sold.”

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

1. The combination with a casing, of a series of followers therein, a pull-slide, detaining devices operatively connected with said pull-slide and arranged to engage with said followers, and a coin-freed locking mechanism, substantially as described.

2. The combination with a casing having an open lower end, of a series of followers each having pivotal connection with the casing to suspend the follower at the lower open end of said casing, a detaining mechanism for said followers, a pull-slide operatively connected with said detaining mechanism, and a locking mechanism, substantially as described.

3. In a coin-controlled vending-machine, the combination with a casing, of a series of followers having means for slidably connecting the same to the casing and for suspending the latter from said casing after the merchandise has been discharged therefrom, a pull-slide, retaining devices operatively connected with the pull-slide and arranged in position to be engaged successively by said followers, and coin-freed locking mechanism operatively engaging with the slide, for the purposes described, substantially as set forth.

4. In a coin-controlled vending-machine, the combination with a pull-slide, of a coin-carrier constructed for operation by coins of different denominations or by a series of coins of the same denomination, an adjustable stop, and a latch mechanism, substantially as and for the purposes described.

5. In a coin-controlled vending-machine, the combination with a pull-slide, of a locking-latch, a swinging coin-carrier operatively connected with said latch, and means carried by the slide to actuate the coin-carrier in accordance with the thickness of the coin or coins deposited in said carrier, as and for the purposes described.

6. In a coin-controlled vending-machine, the combination with a pull-slide, a coin-carrier, and locking devices, of means, substantially as described, adjustable on the slide and the coin-carrier to enable the mechanism to be used in connection with coins of different thicknesses or with two or more coins of the same denomination, as and for the purposes described.

7. In a coin-controlled vending-machine, the combination with a pull-slide, of a stop carried thereby, a swinging latch, a pivoted coin-carrier, and detents on the slide to actuate the coin-carrier and the latch only when a coin or coins of the proper denomination are deposited in the machine, as and for the purposes described.

8. In a coin-controlled vending-machine, the combination with a pull-slide, a coin-car-

rier, and a locking device, of an adjustable stop carried by the slide, as and for the purposes described.

9. In a coin-controlled vending-machine, the combination with a slide, a coin-carrier, and a locking device, of an adjustable stop, and an adjustable plate carried by the coin-carrier, as and for the purposes described.

10. In a coin-controlled vending-machine, the combination with a pull-slide, a coin-carrier, and a locking device, of a flanged plate reversibly fitted to the coin-carrier to provide, in one of its adjustments thereon, a throat or opening for the passage of a coin of improper denomination, and an adjustable stop carried by the slide, as and for the purposes described.

11. In a coin-controlled vending-machine, the combination with a pull-slide, of a shouldered stop carried thereby, a pivoted coin-carrier provided with a rigid finger, a lug or flange on the slide to act in connection with said finger, a coin-stud on the slide to move the coin-carrier by exerting pressure thereon through the interposition of a coin between said stud and the carrier, a pivoted latch, and a spring-controlled stem operatively connecting the carrier with the latch, as and for the purposes described.

12. In a coin-controlled vending-machine, the combination with a casing, of rock-shafts journaled therein and carrying the rocking dogs, a pull-slide, connections between said slide and the rock-shafts, a series of gravity-followers fitted in the casing to engage successively with said dogs, and a coin-freed locking mechanism operatively connected with said slide, as and for the purposes described.

13. In a coin-controlled vending-machine, the combination of a casing open at its lower end and provided with guideways, of a series of gravity-followers arranged in said casing and provided with rods which travel in said guideways and which serve to suspend the followers from the casing after the followers have been dropped to discharge the contents thereof, and mechanism for sustaining and for releasing said followers, whereby the followers are suspended in view to display matter inscribed on their faces, as and for the purposes described.

14. In a coin-controlled vending-machine, the combination with a casing having a delivery-opening at its lower side and provided with a shelf below said opening, of a series of gravity-followers fitted in said casing, retaining-dogs with which the followers are adapted to engage successively, a pull-slide operatively connected with said dogs, and coin-freed mechanism to restrain the slide from movement, as and for the purposes described.

15. In a coin-controlled vending-machine, the combination with a casing, of gravity-followers slidably connected thereto at one edge, rocking dogs supported within the casing to engage with the other edge of each follower successively as the followers are presented to the dogs, a pull-slide operatively

connected with the rocking dogs, and a coin-freed mechanism, as and for the purposes described.

16. In a coin-controlled vending-machine, 5 the combination with a casing, and a series of followers, of rock-shafts journaled in the casing and provided with the forked fingers, retaining-dogs carried by said shafts, a pull-slide having arms that operatively connect 10 with the forked fingers of the rock-shafts, a supplemental slide provided with arms adjacent to the forked fingers of the rock-shafts, tension-springs connected to said slides, and a coin-freed mechanism, as and for the purposes 15 described.

17. In a vending-machine, a casing provided with an open lower end and with longitudinal guideways, of followers fitted in the casing to travel therein and each having pivots 20 adapted to the guideways for suspending the follower at the open lower end of the casing,

ing, a detaining mechanism for said followers, and a coin-actuated locking mechanism, substantially as and for the purposes described.

18. In a vending-machine, the combination 25 with a casing, of a series of followers having pivots at one end slidably fitted to the casing and adapted to suspend the same from the casing, detaining-dogs supported at opposite 30 sides of the casing from the engagement of the follower-pivots therewith and arranged to engage successively with said followers, a pull-slide operatively connected with the dogs to actuate the same, and a coin-freed locking 35 mechanism, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE A. WELCH.

Witnesses:

A. P. SCHELL,
HAROLD H. SIMMS.