

No. 770,928.

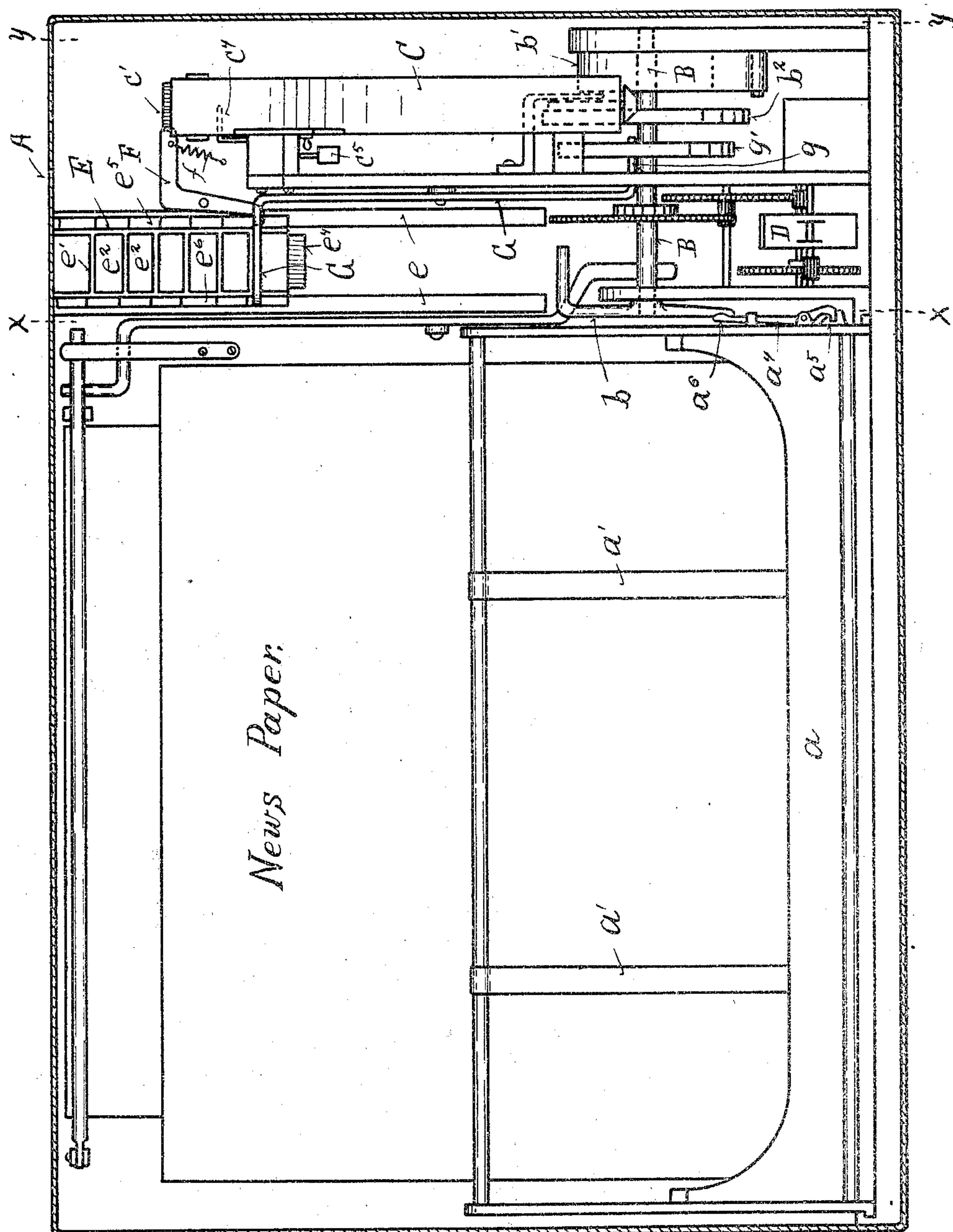
PATENTED SEPT. 27, 1904.

J. A. RULE.
COIN OPERATED VENDING MACHINE.

APPLIOATION FILED AUG. 14, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

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7-19-74

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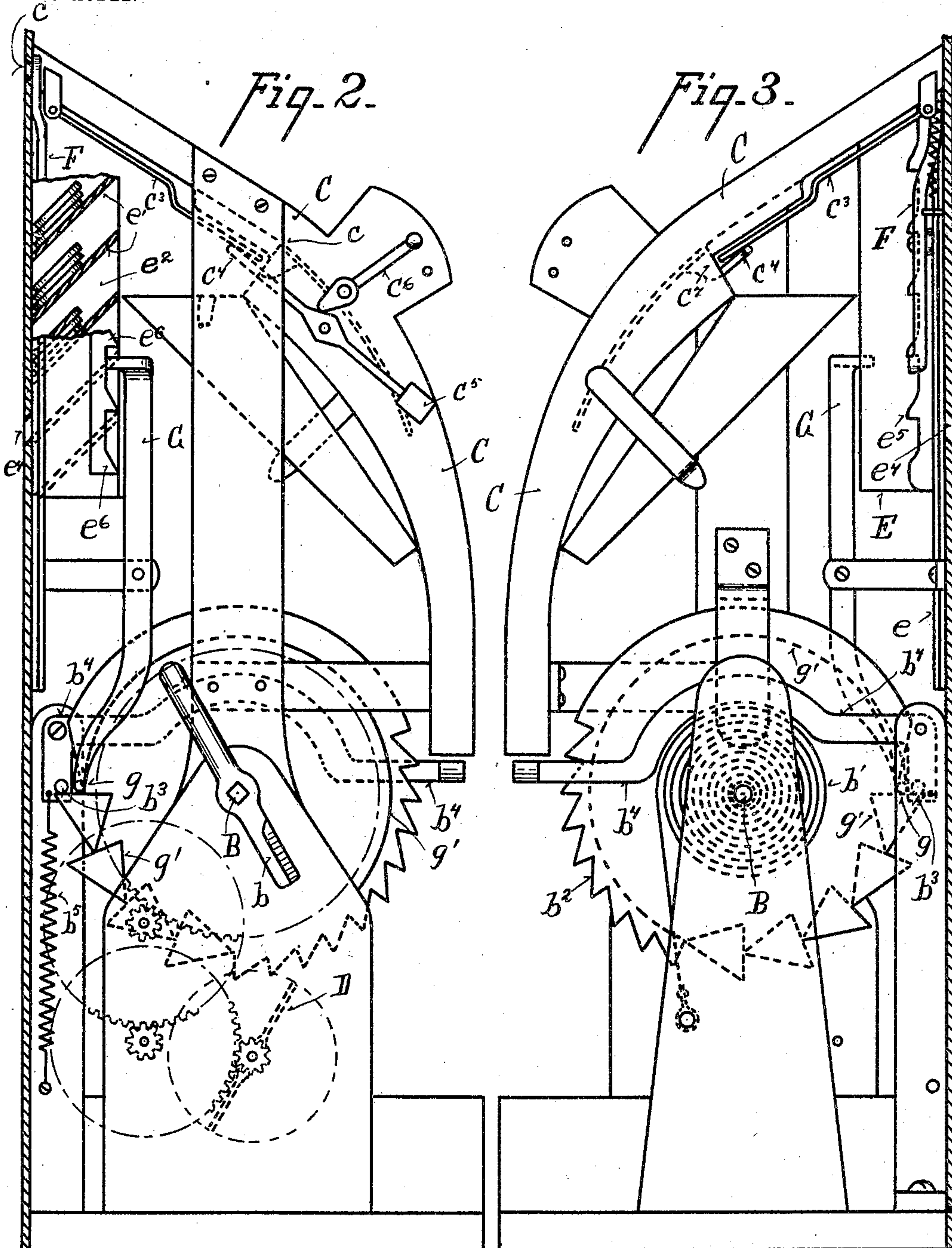
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WITNESSES:

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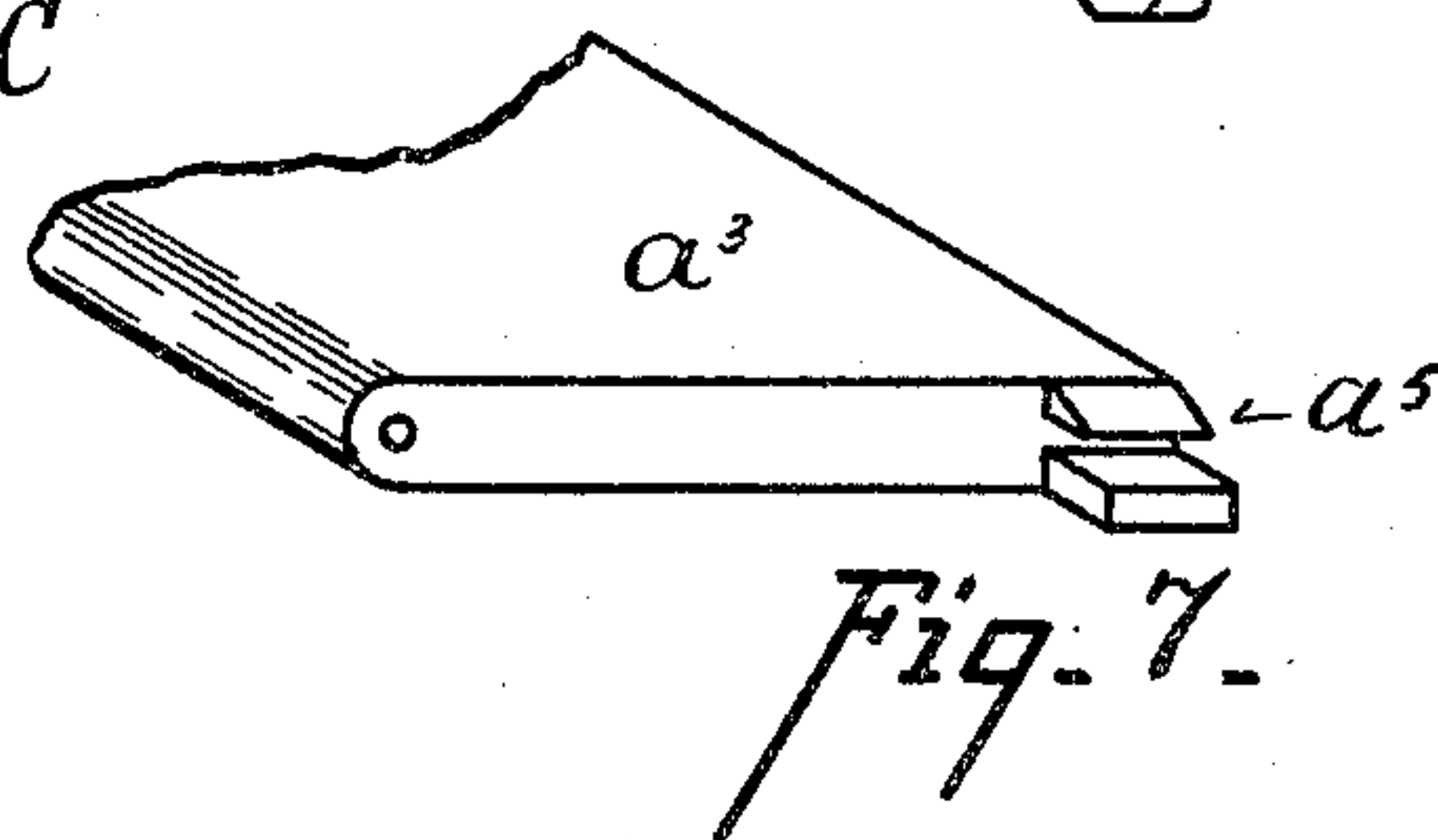
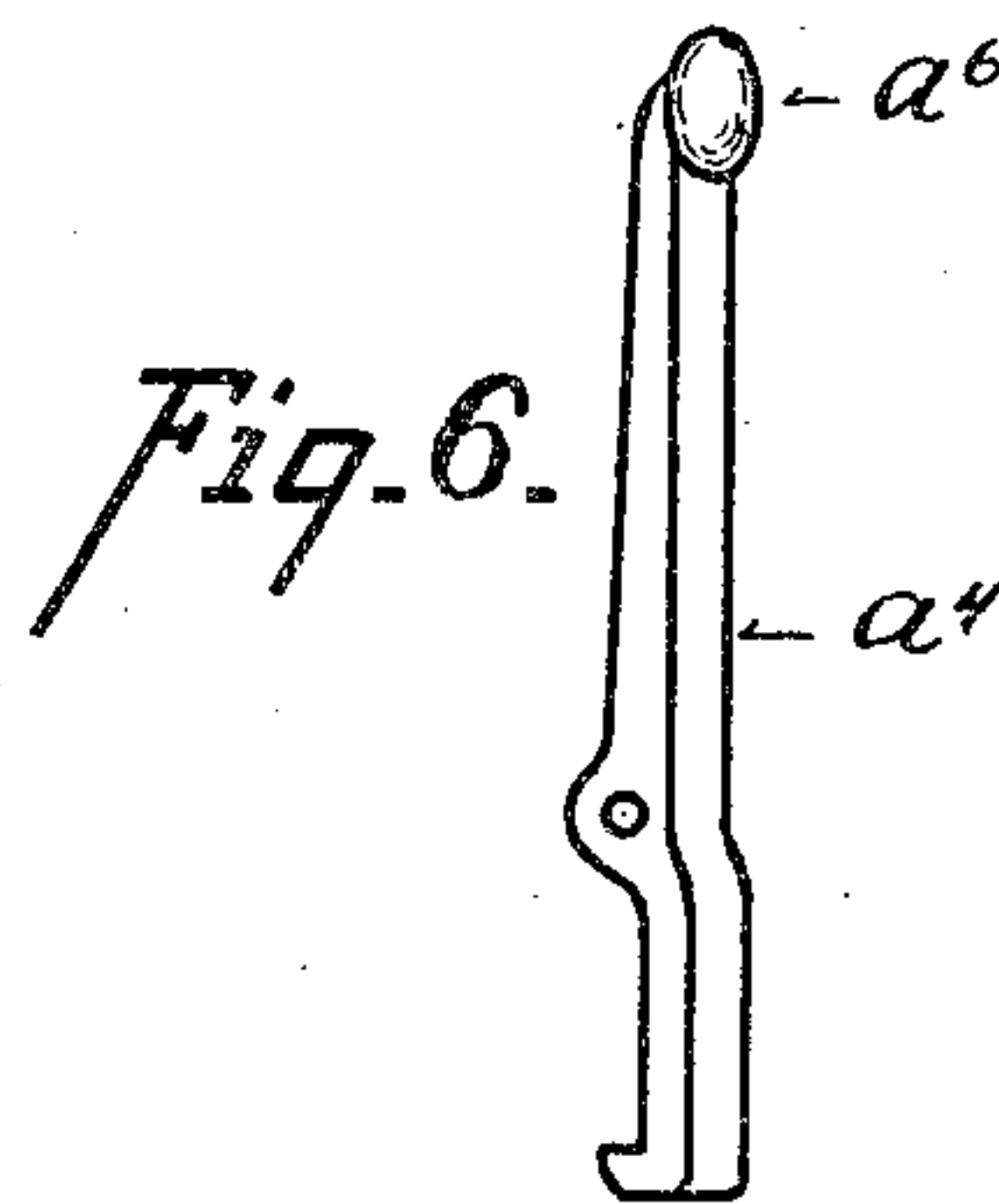
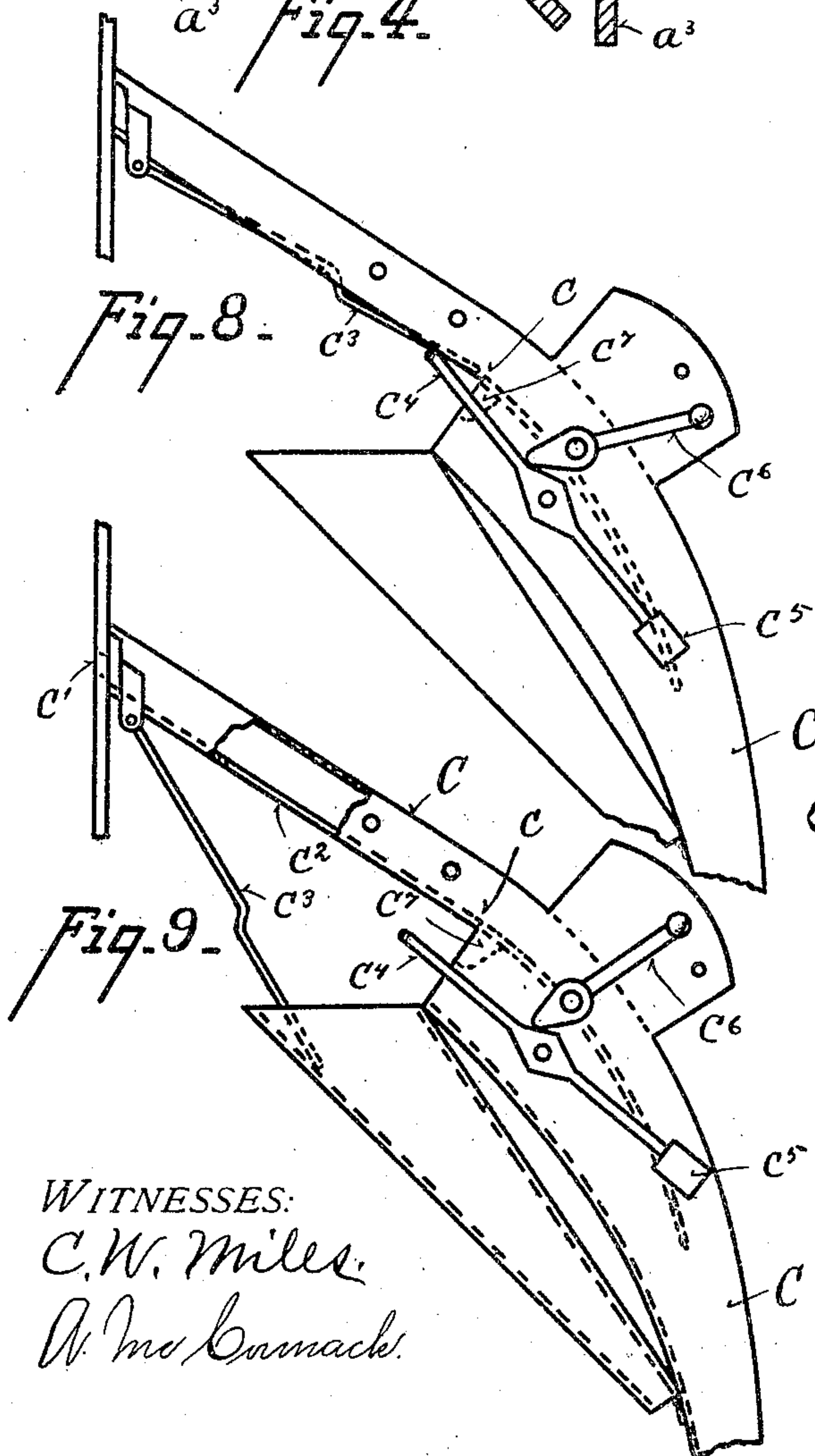
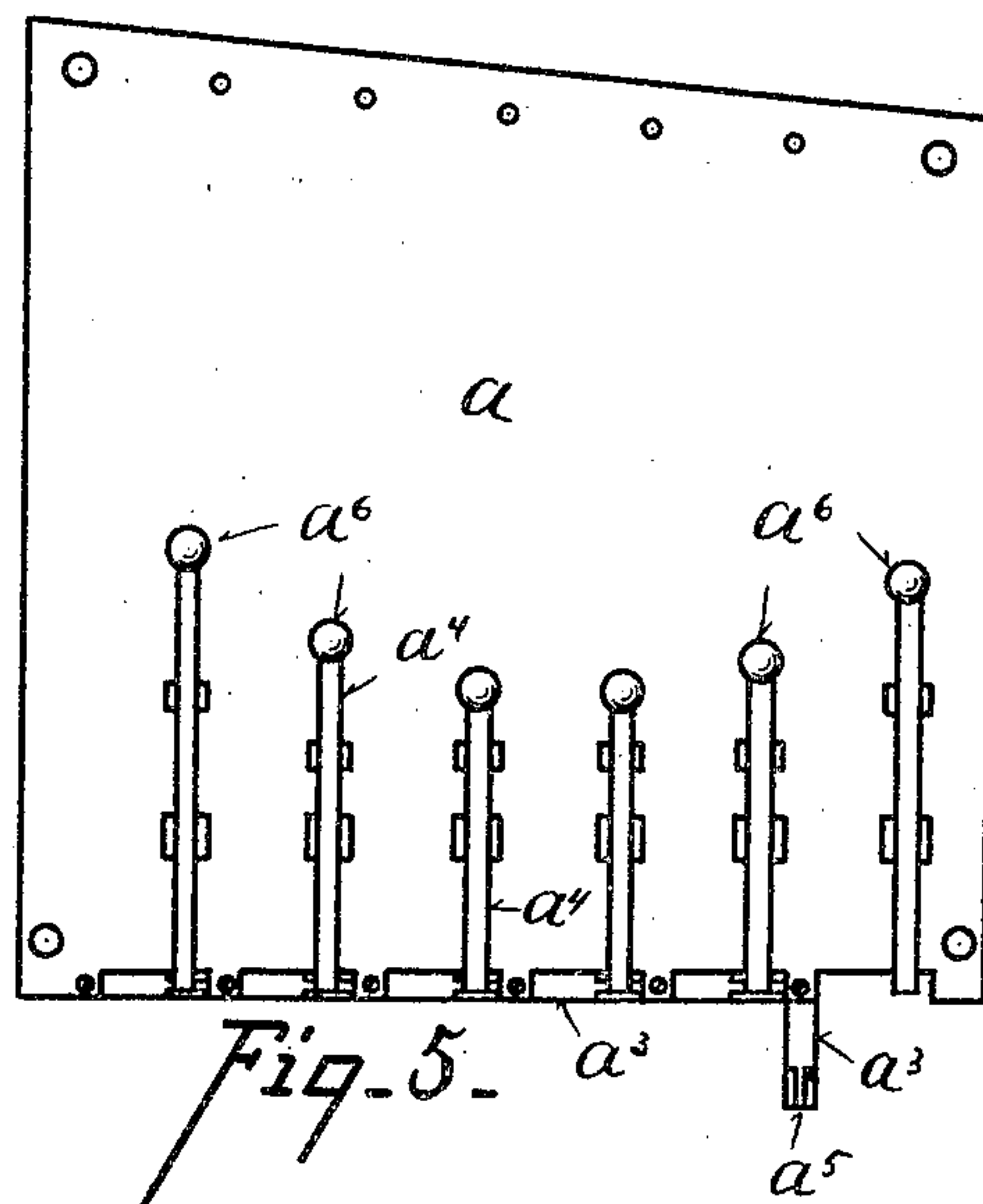
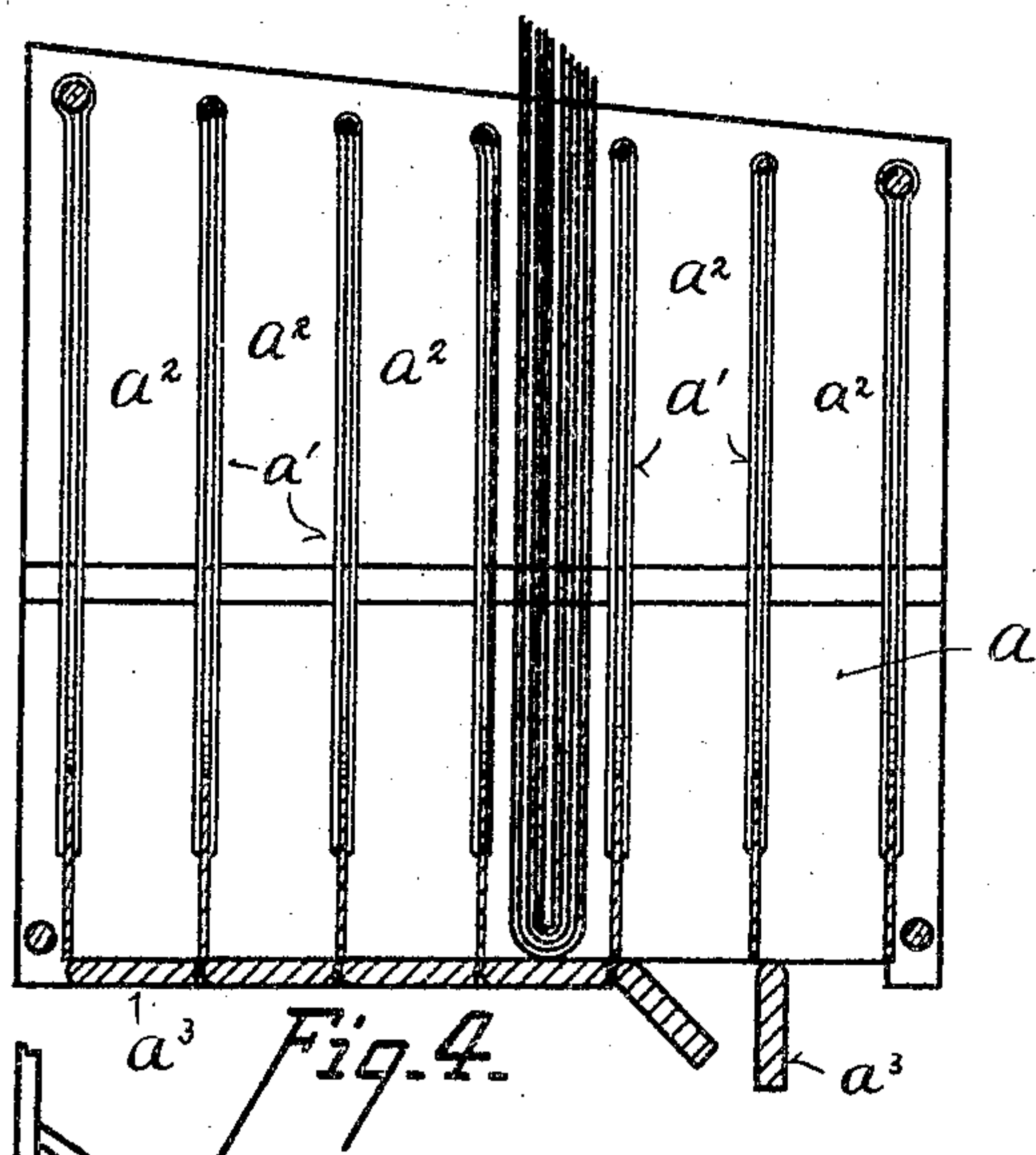
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NO MODEL.

3 SHEETS—SHEET 3.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN A. RULE, OF CINCINNATI, OHIO, ASSIGNOR TO THE AMERICAN NEWS PAPER DISTRIBUTING COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF SOUTH DAKOTA.

COIN-OPERATED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 770,928, dated September 27, 1904.

Application filed August 14, 1903. Serial No. 169,440. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. RULE, a citizen of the United States of America, and a resident of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Coin-Operated Vending-Machines, of which the following is a specification.

The object of my invention is a vending-machine which may be operated by one or more small coins or by a larger coin, in the latter case the machine delivering to the purchaser his change.

In the accompanying drawings I have shown my invention as applied to a newspaper-vending machine.

In the accompanying drawings, Figure 1 is a rear elevation of a paper-vending machine embodying my invention, the rear plate of the casing being removed to expose the interior mechanism. Fig. 2 is a sectional view taken upon line *xx* of Fig. 1. Fig. 3 is a view taken upon line *yy* of Fig. 1. Fig. 4 is a sectional view of the paper-receptacle. Fig. 5 is an end view of the same. Fig. 6 is a detail perspective view, upon an enlarged scale, of one of the levers for holding the swinging doors in the bottom of the paper-receptacle. Fig. 7 is a detail perspective view, upon an enlarged scale, of one of the swinging doors. Figs. 8 and 9 are detail side elevations of the coin-chute, showing it regulated for different denominations of coins.

Within casing A is a receptacle *a*, divided by partitions *a'* into compartments *a''* for the reception of papers. In the bottom of each compartment is a swinging door *a'''*, which is held closed by a lever *a''''*, a number of which are pivoted to the end of receptacle *a* and have their lower hooked ends engaging lugs *a'''''* upon the swinging doors. The upper ends of the levers have knobs *a''''''*. Within each of the compartments *a''* a newspaper is to be placed, and when the upper end of one of the levers *a''''* is pressed inward the door *a'''* is released and drops of its own weight, thereby discharging the newspaper in its compartment through the bottom of the case A, which is open.

Levers *a''''* have their upper ends in the path of an arm *b*, which is secured upon a horizontal shaft B. Shaft B has attached to it a coiled spring *b'* and a ratchet-wheel *b''*. Ratchet-wheel *b''* is held against rotation by a pawl *b'''*, which is secured upon a lever *b''''*, the lower end of which comes vertically beneath the coin-chute C, so that when the coin passes down through the chute it strikes the lever *b''''*, throws the pawl *b'''* out of engagement with the ratchet-wheel *b''*, and allows the wheel and shaft B to rotate through one step, and spring *b'* throws the pawl into engagement with the next tooth of the ratchet-wheel. The rotation of the shaft B through one step rotates the arm *b* likewise through one step and causes it to release the next door *a'''* of the newspaper-receptacle. The speed at which the main shaft B rotates is regulated by a set of governors D.

The price of papers as a rule is one, two, and three cents. Sometimes it may be desired, as in the morning, to sell papers for two cents and in the evening for one cent. My machine has a ready means for regulating the machine so that it may be operated by one cent or by two cents. Sometimes the purchaser has not a cent in change. With my machine he may put a nickel in the slot and get three cents change if the machine be set for a two-cent paper or four cents in change if it be set for a one-cent paper. The machine may likewise be set for selling only a nickel paper, in which event a cent or two cents would not operate it. The means by which these ends are attained will now be described.

The upper end of coin-chute C has the lower side removed down to the point *c*. Leading from the slot *c'* into the chute are ledges *c''*, formed upon the sides of the chute and of a distance apart such that they will support a nickel and carry it into the coin-chute to operate the lever *b''''*. A one-cent piece would not slide on the ledges *c''*, but would fall upon lever *c'''*, which is pivoted at the upper end of the chute beneath the slot *c'*. The inner end of the lever *c'''* is supported by a lever *c''''*, which

is pivoted to the upper ends of the chute C and has a weight c^5 at one end. The position at which the lever c^4 stands is regulated by an arm c^6 , pivoted upon the upper end of the chute. At the inner end of the lever c^3 a vertical flange c^7 is formed near the upper end of the coin-chute below ledges c^2 . When it is desired to have the machine operated by one cent, the arm c^6 is placed in the position shown in Fig. 8, so that the cent is carried over the top of the flange c^7 . When it is desired to require more than one cent to operate the machine, arm c^6 is arranged, as shown in Fig. 2, so that lever c^3 stands below flange c^7 . If it be desired to have two cents operate the machine, the weight c^5 is regulated upon the lever c^4 so that the weight of two cents will carry lever c^3 down and allow the pennies to pass into chute C below flange c^7 . If it is desired that the machine be operated simply by a nickel, lever c^3 is dropped, as shown in Fig. 9, so that pennies cannot be passed into the coin-chute at all.

The means by which the change is returned to the purchaser when he places a nickel in the slot in buying a paper which sells for a smaller amount is as follows: Mounted in vertical ways e upon the door adjacent to the coin-chute is a sliding change-receptacle E, which is divided by slanting partitions e' into compartments e^2 , within which pennies are placed, the number placed in each compartment depending upon the price of the paper. For instance, if it be a two-cent paper three pennies will be placed in each compartment e^2 , or if it be a three-cent paper two pennies. When the compartment is brought to register with the delivery-opening e^4 , the change passes out therethrough.

The means by which the coin-receptacle is set by the insertion of a nickel so that it is operated by the turning of the shaft B will now be described. Upon the side of the change-receptacle adjacent to the coin-chute are a series of teeth e^5 , and upon the side of the receptacle away from the coin-chute are a series of teeth e^6 , the teeth e^5 being in a different horizontal plane from the teeth e^6 . The teeth e^5 are engaged by a lever F, the upper end of which limits the size of the coin-slot c' , so that when a nickel is inserted therethrough lever F is rotated slightly about its pivot and disengages its lower end from the teeth e^5 , allowing the coin-receptacle to drop a short distance until the next one of the teeth e^6 is engaged by lever G. The lever F is then returned to its normal position by the spring f to engage the next one of the teeth e^5 after the lever G has been disengaged from the tooth e^6 which it is engaging. Lever G has its lower end g in contact with the toothed wheel g' , mounted upon shaft B, so that when the shaft B is turned by the coin's dropping upon lever b^4 the lower end g of the lever is pushed inward by the teeth of the wheel g' and allows the coin-receptacle E to drop down

in front of the coin-discharge opening e^4 , its movement being checked by the lever F engaging the next tooth e^5 .

In use let us suppose a machine of my invention is adjusted to sell a two-cent paper, in which event the compartments of the change-receptacle would each contain three cents. Pennies inserted through the slot would not contact lever F, which would therefore continue to hold the change-receptacle out of contact with lever G. Two pennies inserted through the slot would overbalance arm c^3 , and they would pass on down through the coin-chute, strike lever d^4 , and release from wheel d^3 and actuate the delivery mechanism. The movement of lever d^4 likewise moves lever G; but as the coin-receptacle is not resting upon it its movement does not affect the receptacle. Had a nickel been inserted into the slot it would have moved lever F, allowing the receptacle to descend and rest on lever G, so that as the nickel passed on down the chute when it moved lever d^4 the latter would have moved lever G and released the receptacle to allow it to fall, so that its next compartment would register with the change-delivery slot e^4 at the same time that it released the delivery mechanism.

What I claim is—

1. In a coin-operated device the combination of a delivery mechanism adapted to be actuated automatically by a large or small coin, a coin-chute for the coins leading to the delivery mechanism, a change-discharging device adapted to be actuated by the delivery mechanism, and means whereby the insertion of a large coin sets the change device in a condition to be actuated by the delivery mechanism.

2. In a coin-operated device the combination of a coin-chute, means for directing a small or a larger coin into the chute, a delivery mechanism to be operated by either the small or the larger coins, a change-receptacle for holding smaller coins, means for coupling the change-receptacle and the delivery mechanism, means for holding the change-receptacle out of engagement with the delivery mechanism to be actuated by a large coin whereby the insertion of a large coin actuates both the change-receptacle and the delivery mechanism and a small coin actuates only the delivery mechanism.

3. In a coin-operated device the combination of a coin-chute, means for directing a small or a larger coin into the chute, a delivery mechanism to be operated by either the small or the larger coins, a vertical sliding change-receptacle divided into a series of compartments, a discharge-outlet, two levers for successively engaging the change-receptacle for bringing one of the compartments to register with the discharge-outlet, means for actuating the first lever by the insertion of a large coin and means for actuating the second lever through the movement of the delivery mechanism, substantially as shown and described.

4. In a coin-operated device the combination
of a delivery mechanism, a coin-chute for car-
rying coins for actuating the delivery mech-
anism, a way leading into the coin-chute con-
5 sisting of ledges at a distance apart such as to
support a large coin and to drop the smaller
coin, a lever pivoted beneath the way to re-
ceive the smaller coins, a flange in the coin-
chute in front of the lever, a weight for hold-
10 ing the lever normally in front of the flange
to prevent the coins upon the lever from en-
tering the chute and to be overbalanced by
the weight of the coins and then directing
them into the chute substantially as shown
15 and described.

5. In a coin-operated device the combination
of a delivery mechanism, a coin-chute for car-
rying coins for actuating the delivery mech-
anism, a way leading into the coin-chute con-
20 sisting of ledges at a distance apart such as to
support a large coin and to drop the smaller
coin, a lever pivoted beneath the way to re-
ceive the smaller coins, a flange in the coin-
chute in front of the lever, a weight for hold-
25 ing the lever normally in front of the flange

to prevent the coins upon the lever from en-
tering the chute and to be overbalanced by
the weight of the coins directing them into
the chute, and a means for setting the lever
to direct a single coin past the flange. 30

6. In a coin-operated device the combination
of a delivery mechanism, a coin-chute for car-
rying coins for actuating the delivery mech-
anism, a way leading into the coin-chute con-
35 sisting of ledges at a distance apart such as to
support a large coin and to drop the smaller
coin, a lever pivoted beneath the way to re-
ceive the smaller coins, a flange in the coin-
chute in front of the lever, a weight for hold-
40 ing the lever normally in front of the flange
to prevent the coins upon the lever from en-
tering the chute and to be overbalanced by
the weight of the coins directing them into
the chute, and a change-receptacle to be ac-
45 tuated by the delivery mechanism when a
large coin is inserted in the chute.

JOHN A. RULE.

Witnesses:

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GEO. J. MURRAY.