

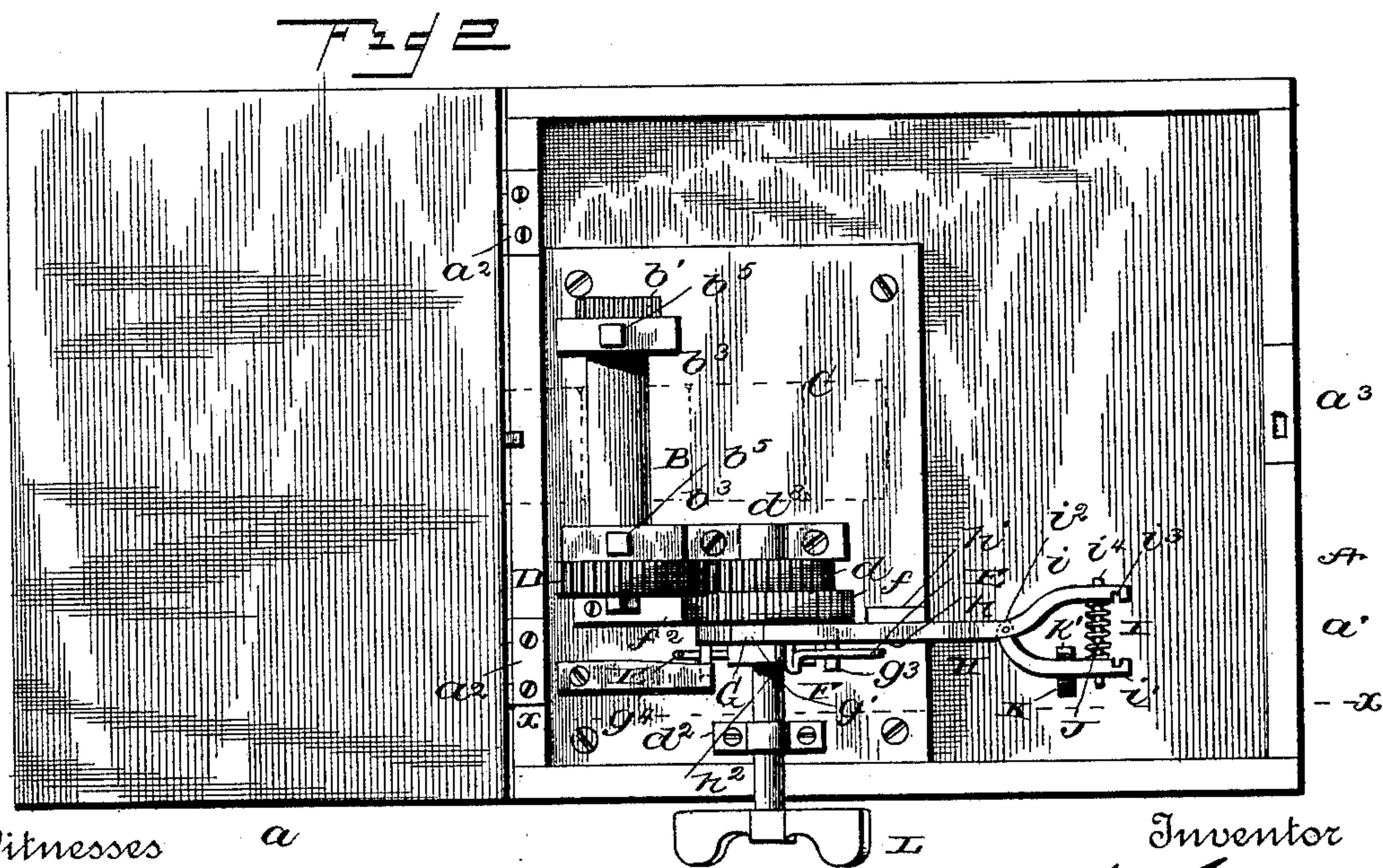
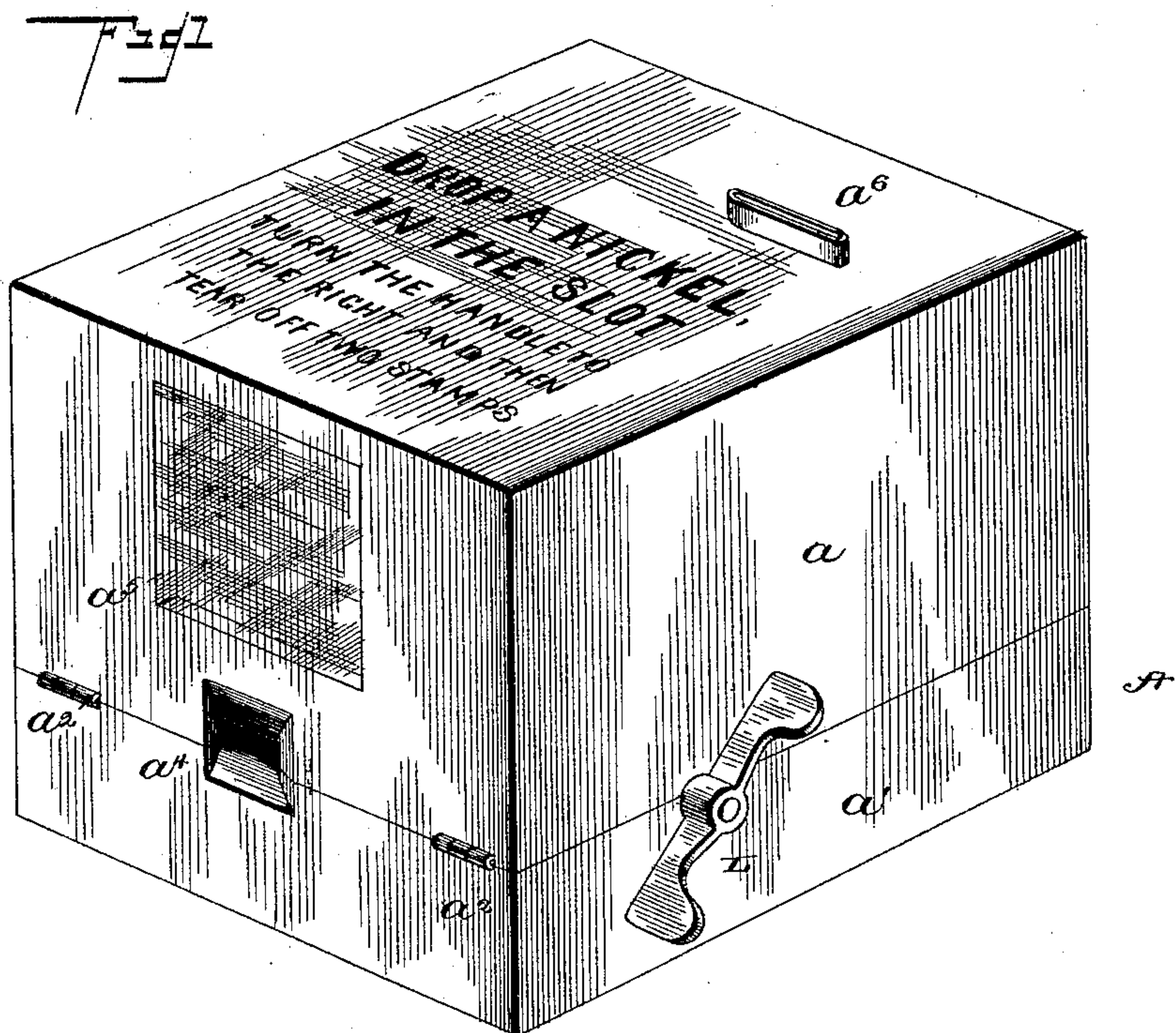
(No Model.)

2 Sheets—Sheet 1.

J. D. GRAY.
VENDING APPARATUS.

No. 462,253.

Patented Nov. 3, 1891.



Witnesses

John D. Gray
John S. Hodges

Inventor

James D. Gray,

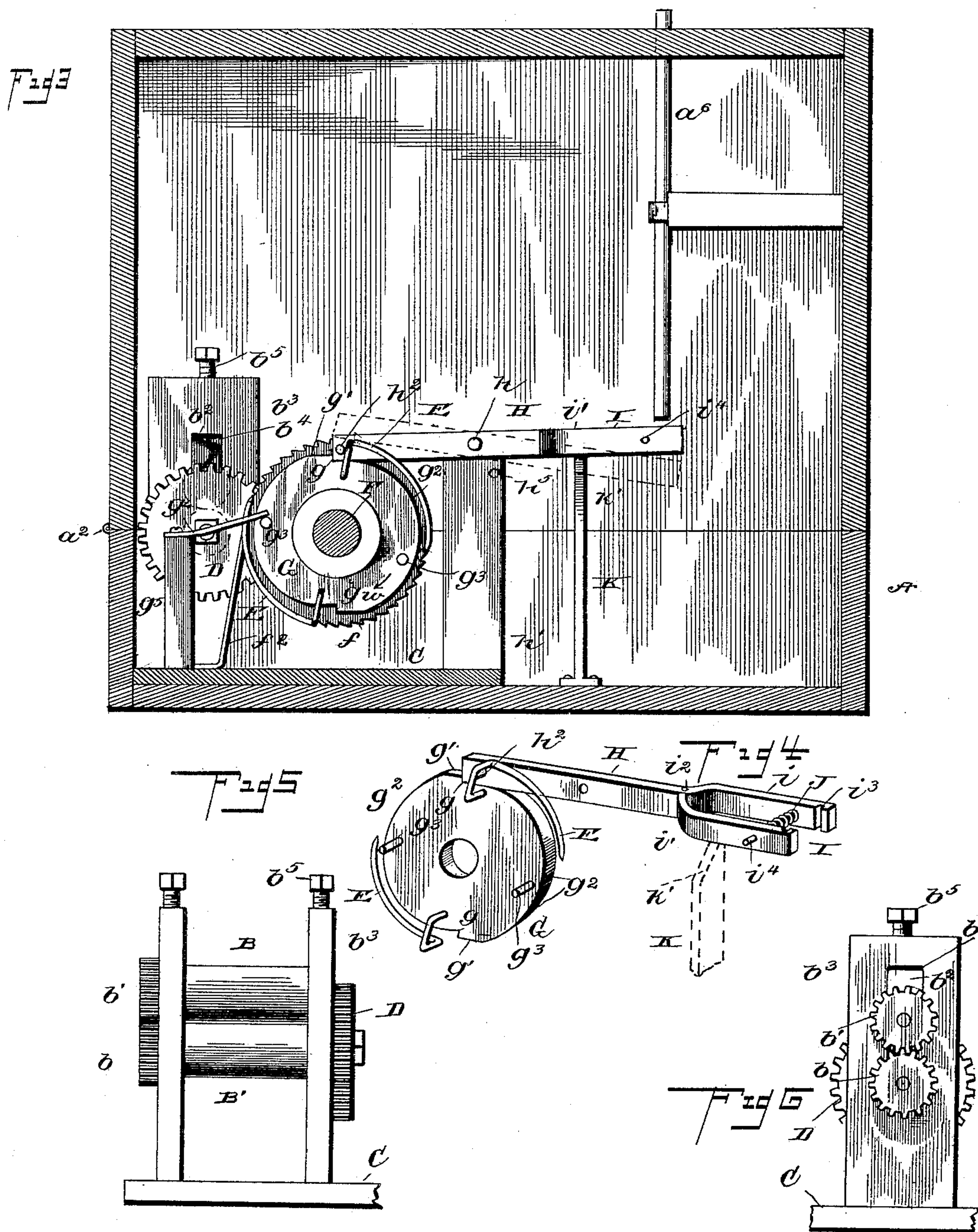
By *his* Attorney.

John D. Gray.

2 Sheets—Sheet 2.

No. 462,253.

Patented Nov. 3, 1891.



Witnesses

John Irvine
Wm S. Hodges

Inventor

James D. Gray,
By *hi* Attorney
Arthur W. Gill.

UNITED STATES PATENT OFFICE.

JAMES D. GRAY, OF ARLINGTON, VIRGINIA, ASSIGNOR OF THREE-FOURTHS
TO GEORGE A. SAWYER AND JAMES McCONNELL, BOTH OF WASHING-
TON, DISTRICT OF COLUMBIA.

VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 462,253, dated November 3, 1891.

Application filed January 15, 1891. Serial No. 377,854. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. GRAY, a citizen of the United States of America, residing at Arlington, in the county of Alexandria
5 and State of Virginia, have invented certain new and useful Improvements in Vending Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention pertains to an improved vending apparatus, relating more especially to the class having coin-controlled mechanism.

The object of the invention is to provide
15 simple and highly-efficient mechanism for the sale or vending of postage-stamps.

A further object is the production of an improved two-part coin holder or receiver capable of being automatically operated to permit the coin to drop at each operation of the
20 apparatus.

The invention comprises a coin-controlled stop-lever having a laterally-movable spring-jaw, a cam for moving said stop-lever, and a stationary arm for forcing said jaw outward
25 to cause the coin to be freed from said stop-lever.

The invention further comprises a coin-controlled stop-lever and an operating-cam having stops or shoulders, and guiding-arms
30 for drawing said lever into engagement with said stops or shoulders.

The invention further comprises a coin-controlled stop-lever having a spring-jaw and an operating-cam having stops or shoulders,
35 guiding-arms for drawing said lever into engagement with said stops or shoulders, and a stationary arm for forcing said spring-jaw to one side, said jaw being forced into contact with said arm by said cam.

40 The invention further comprises the detail construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

45 In the accompanying drawings, Figure 1 is a view in perspective of the inclosing box or casing. Fig. 2 is a plan view with the top or cover removed. Fig. 3 is a longitudinal sectional view on the line $x\ x$, Fig. 2, showing
50 parts in dotted lines. Fig. 4 is a detail per-

spective view of the coin-controlled stop-lever. Figs. 5 and 6 are respectively front and end views of the tension-rolls and their supporting posts or standards.

Referring to the drawings, A designates
55 the box or inclosing casing, preferably formed in two sections $a\ a'$, secured together by hinges a^2 and held, when closed, by a lock a^3 . An opening a^4 is formed in the front wall of the box, through which the postage-stamps
60 are ejected, and above said opening is a sight-opening a^5 . In the top of said box is secured the widened end of a chute a^6 , into which a coin is designed to be placed.

B B' are two rolls mounted in rear of the
65 exit-opening a^4 . Between these rolls the stamps are designed to pass, said stamps being preferably arranged in twos or pairs. Upon one end of the lower roll B' is secured a small pinion b , which gears with a second
70 pinion b' on the end of the upper roll B. This latter roll is adjustable by means of followers b^2 , resting upon its ends and moving in slots of posts or standards b^3 , secured to
75 base-plate C. Upon the upper ends of followers b^2 are rubber strips b^4 , upon which bear the lower ends of screws b^5 , working in
80 holes or apertures of posts or standards b^3 . By this means the rolls can be held at any desired tension.

D is a gear-wheel secured upon one end of the lower roll B', and it engages a similar gear-wheel d , fast upon an operating-shaft F,
85 mounted at its inner end on an offset d^3 of one of the posts b^3 , said shaft being also supported by a short post d^2 , secured to plate C. Adjacent to wheel d is a ratchet-wheel f , with which engages a pawl f^2 , secured to plate C.

G is a cam-wheel secured fast upon shaft F, and the same is provided with two dia-
90 metrically-opposed shoulders g , adjacent flattened portions g' , enlargements g^2 , and two opposite pins or studs g^3 , projecting from the exposed face thereof. A flat-spring g^4 , secured to a post g^5 , is normally in engage-
95 ment with one of these studs g^3 . This spring serves to hold the gearing in such position that when a coin is dropped onto the stop-lever the latter is free to turn on its pivot and
100 readily disengage from contact with the

shoulder of the cam-wheel, the latter being held from binding against the end of said stop-lever. To the outer face of this cam-wheel G are secured the inner ends of guiding-arms E E, which are attached to said cam-wheel at a point near the stops or shoulders. These arms extend outwardly from cam-wheel G a short distance, and are then bent at right angles parallel with the face of said cam-wheel, then again bent inwardly toward the wheel, and they are then extended outward parallel with the periphery of the cam-wheel, their free ends being adjacent to the enlargements g^2 .

H is a stop-lever fulcrumed by a stud h on a post or standard h' , and to one end thereof is secured a pin h^2 , said end of the lever being normally in engagement with the cam-wheel G. The other end of this lever is bent or curved to form a stationary jaw i of a holding or receiving end I, the other jaw i' being pivoted at i^2 to lever H. In these jaws are formed opposite grooves or recesses i^3 , slightly widened at their upper ends, so as to direct a coin in its passage. A rod i^4 is located between these jaws to limit their inward movement, its reduced ends being projected through coincident holes or apertures in said jaws. A spiral spring J, encircling rod i^4 and secured at its ends to the jaws, serves to hold them in their contracted position for the reception of a coin, which is dropped into the grooves i^3 through the chute a^6 . A stop-pin h^5 of post h' limits the downward movement of this lever.

K is a stationary arm rigidly secured at its lower end, and its upper wedge-like end k' is projected up into or near jaw I. By depressing the outer end of the stop-lever its movable or pivoted jaw i' will come in contact with the upper wedge-shaped end of the arm K, resulting in forcing said jaw outward, causing the coin held between the jaws to drop on the bottom of the box or casing, said jaw being instantly returned to its normal position under the action of spring J.

To the outer end of the operating-shaft F is secured a winged handle L, by which said shaft can be turned by the hand of the operator.

The operation of my invention is as follows: The machine is first supplied with the desired number of stamps, and the outer end of the line of stamps is passed between the rolls B B', beyond which they protrude but a short distance. Upon dropping the proper coin into the chute the same will fall into the grooves of the jaws of the stop-lever, and by reason of its weight and momentum will cause the tilting of said lever and the disengagement of the forward end thereof from contact with the adjoining shoulder on the cam-wheel. The mechanism being thus freed, the operating-shaft is turned by the operator moving the handle L in the direction of the arrow w , which will impart motion to the rolls and force the stamp or stamps held therebe-

tween out through the front opening a^4 , when they can be separated from the line of stamps by pulling, the separation occurring at the scored meeting points immediately adjacent the rolls. When the cam is turned in the direction of arrow z , the flattened portion g' adjacent the shoulder from which the stop-lever was freed first comes in contact with the end of said lever. Then the enlargement g^2 forces said end of the lever upward, causing its cam-receiving end to be lowered and the spring-jaw to bear directly against the upper end of arm K. This results in the moving outward of the spring-jaw and the freeing of the coin. As this is accomplished the pin h^2 of lever H is engaged by one of the guiding-arms E, which draws this end of the lever downward against the periphery of the same and into engagement with the other stop or shoulder. As the end of the lever strikes against the latter stop or shoulder the pin h^2 is freed from engagement or contact with the guiding-arm. Hence by the means described a positive action is secured, and it is impossible to give the cam more than a partial revolution without depositing a second coin. By the time the stop-lever is in engagement with the other or second shoulder on the cam-wheel the stamps are forced through the opening.

I claim as my invention—

1. In a coin-controlled vending apparatus, the cam-wheel and the stop-lever having a positive engagement therewith at one end and having coin-receiving jaws at its other end, one of said jaws being laterally movable, as set forth.

2. In a coin-controlled vending apparatus, the cam-wheel and the stop-lever engaging therewith at one end and having a laterally-movable jaw pivotally connected thereto at its other end for holding a coin, as set forth.

3. In a coin-controlled vending apparatus, the cam-wheel, the stop-lever engaging therewith at one end, and the laterally-movable spring-held jaw at the other end of said lever, as set forth.

4. In a coin-controlled vending apparatus, the cam-wheel, the stop-lever engaging therewith at one end and having its other end formed into a jaw, the movable jaw secured to said lever, the spring interposed between said jaws, and the cross-rod, as set forth.

5. In a coin-controlled vending apparatus, a two-part coin holder or receiver having a movable spring-held jaw capable of being operated at each operation of the apparatus and having opposite corresponding grooves or recesses, as set forth.

6. In a coin-controlled vending apparatus, the cam-wheel, the stop-lever engaging therewith at one end and having its other end formed into a jaw, a laterally-movable jaw secured to said lever, and the stationary arm for forcing said latter jaw outward, its upper end being projected between said jaws, substantially as set forth.

7. In a coin-controlled vending apparatus, the cam-wheel, the stop-lever engaging therewith at one end and having two coin-receiving jaws at its other end, one of said jaws being
5 movable, the spring connected to and located between said jaws, and the stationary arm for moving said movable jaw outward, as set forth.

8. In a coin-controlled vending apparatus,
10 the cam-wheel, the stop-lever engaging therewith at one end and having two coin-receiving jaws at its other end and provided with opposite grooves or recesses, one of said jaws being movable, the spring connected to said
15 jaws, the cross-rod between said jaws, and the stationary arm for moving said movable jaw outward, as set forth.

9. In a coin-controlled vending apparatus, the cam-wheel having a stop or shoulder on
20 its periphery, the guiding-arm projecting from said cam-wheel, and the stop-lever normally in contact with said periphery and with which said guiding-arm engages, substantially as set forth.

25 10. In a coin-controlled vending apparatus, the cam-wheel having a stop or shoulder, the guiding-arm projecting from said cam-wheel, and the stop-lever having a pin at one end and coin-receiving jaws at the other, substantially
30 as set forth, said stop-lever being moved by said guiding-arm engaging said pin, as stated.

11. In a coin-controlled vending apparatus, the cam-wheel having stops or shoulders on its periphery and flattened and enlarged portions, the guiding-arms having free ends and
35 projected parallel to said cam-wheel, the stop-lever having a pin at one end, with which said guiding-arms engage, the coin-receiving jaws at the other end of said stop-lever, and the
40 stationary arm, with which one of said jaws engages and by which it is forced outward, substantially as set forth.

12. In a coin-controlled vending apparatus,

the combination of the cam-wheel, the shaft having a handle, the gear-wheel secured on
45 said shaft, the stop-lever having one end normally in contact with said cam-wheel, its other end having coin-receiving jaws, the ratchet-wheel also secured on said shaft, the pawl engaging therewith, and the stationary arm and
50 the rolls, one of which has a gear-wheel engaging said former gear-wheel, substantially as set forth.

13. The herein-described improved coin-controlled vending apparatus, comprising the
55 box or casing having an opening therein, the rolls having intermeshing pinions, the gear-wheel secured to one of said rolls, the handled shaft having a gear-wheel engaging said former gear-wheel, the ratchet-wheel, the
60 pawl engaging therewith, the cam-wheel having two stops or shoulders, the guiding-arms, the pins or studs, the spring normally in engagement with one of said pins or studs, the stop-lever having one end normally in con-
65 tact with said cam-wheel and having its other end bent to form a stationary jaw, the movable jaw, the spring secured to said jaws, the rod between said jaws, the pin secured to the forward end of said stop-lever, and the sta-
70 tionary arm having an upper wedge-shaped end, substantially as set forth.

14. In a coin-controlled vending apparatus, the combination, with the cam-wheels having pins or studs projecting from one side there-
75 of, of the stop-lever designed to engage shoulders on said cam-wheels, and the spring designed to normally bear on one of said pins or studs and relieve said stop-lever from contact with said shoulders, as set forth.
80

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

JAMES D. GRAY.

Witnesses:

WM. S. HODGES,
J. NOTA MCGILL.