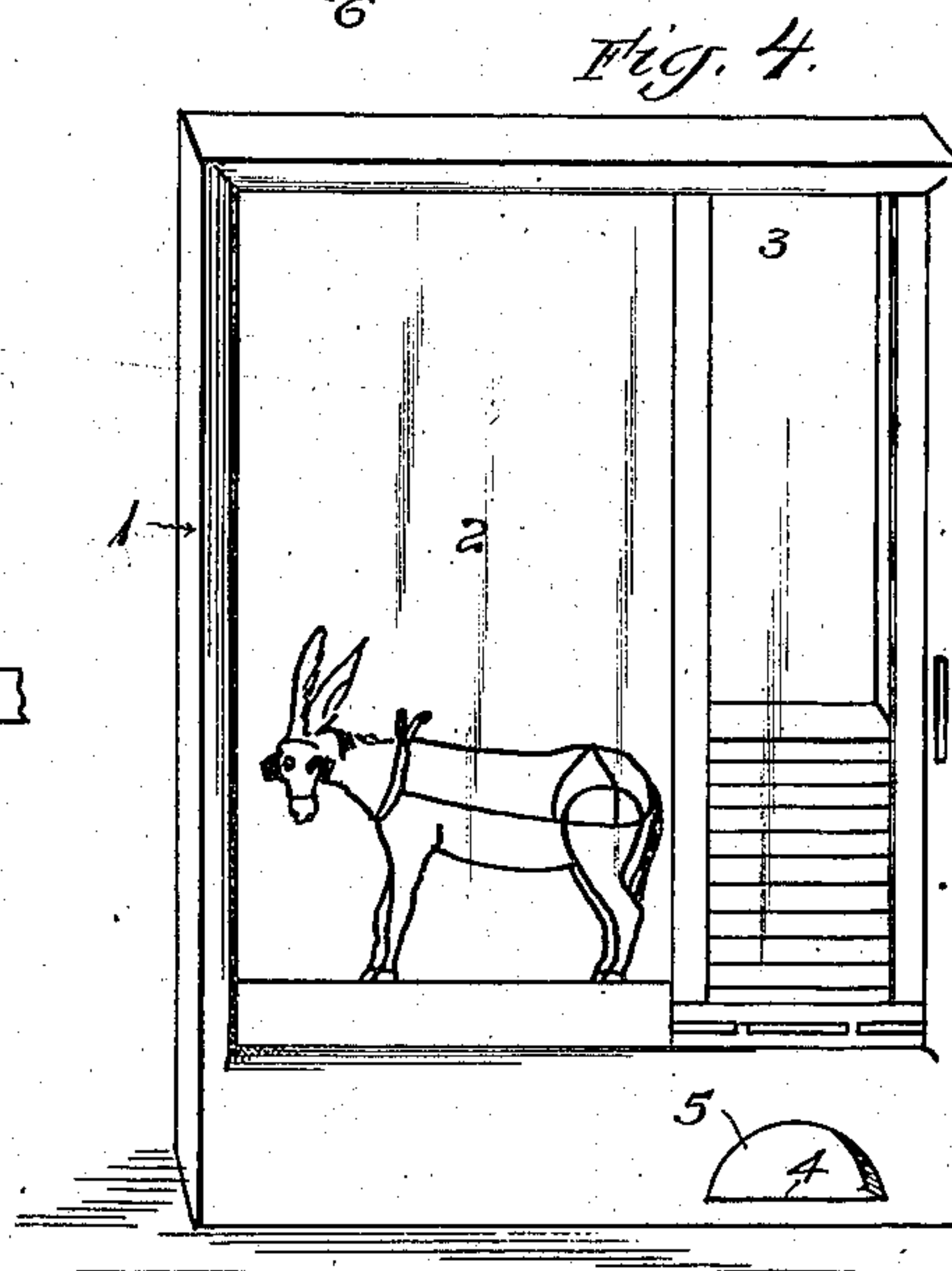
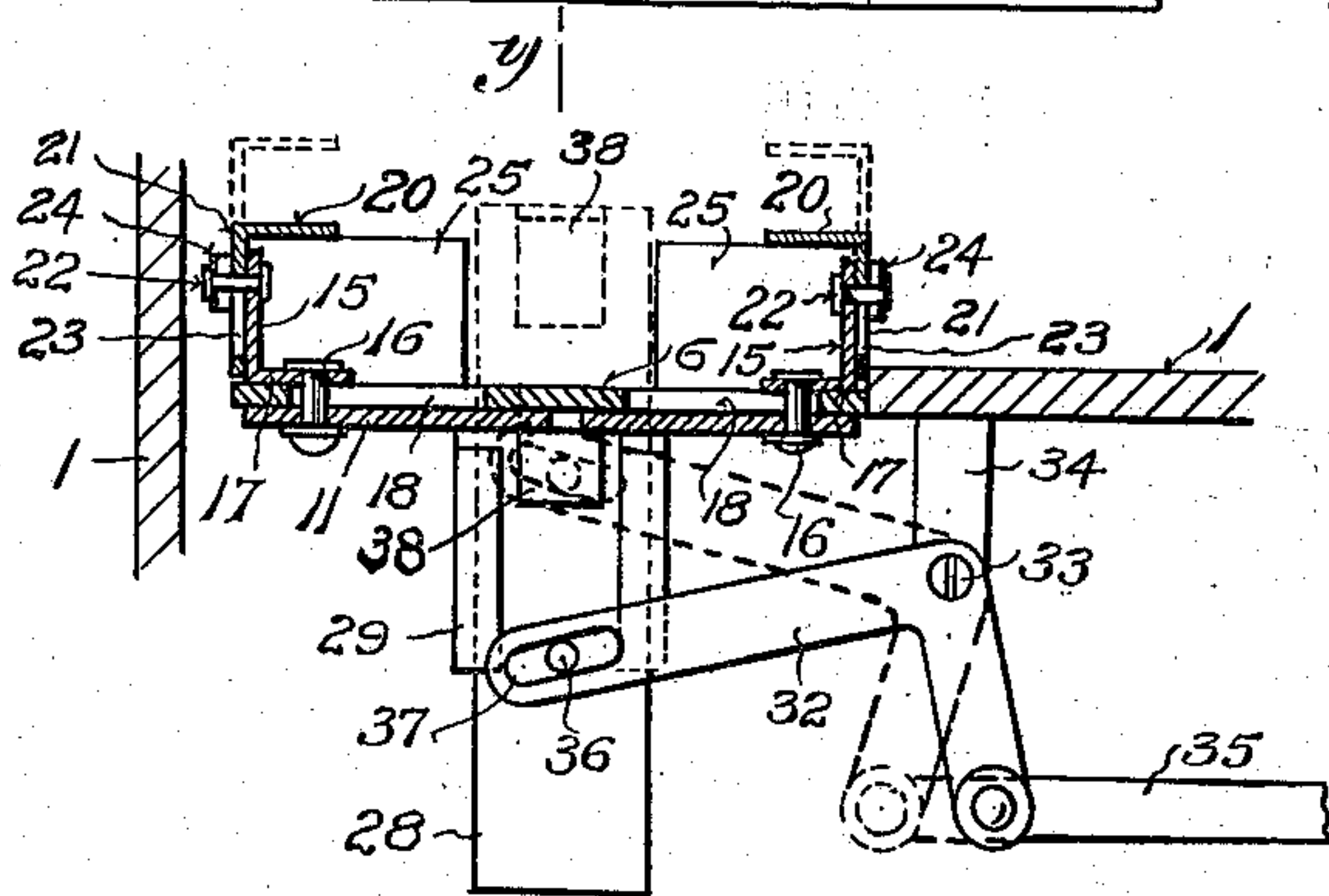
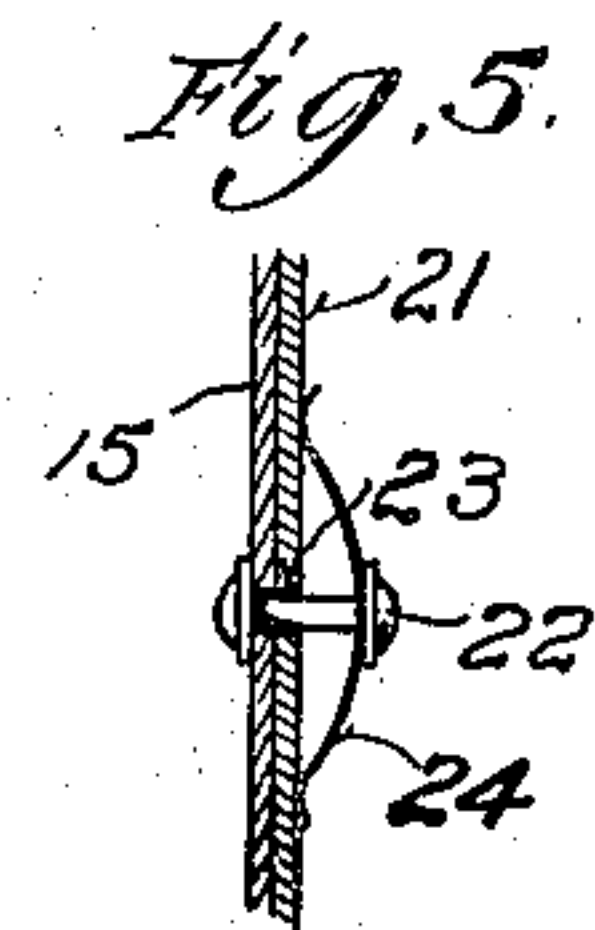
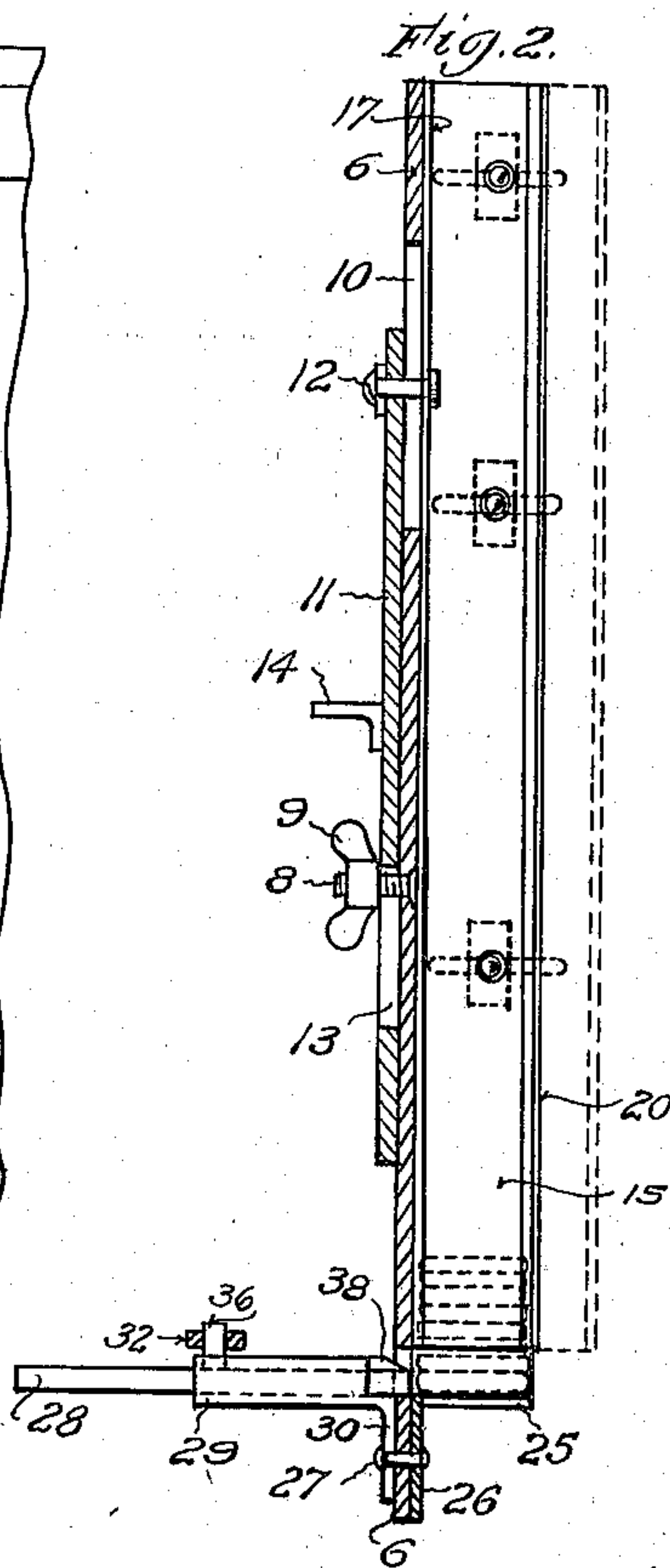
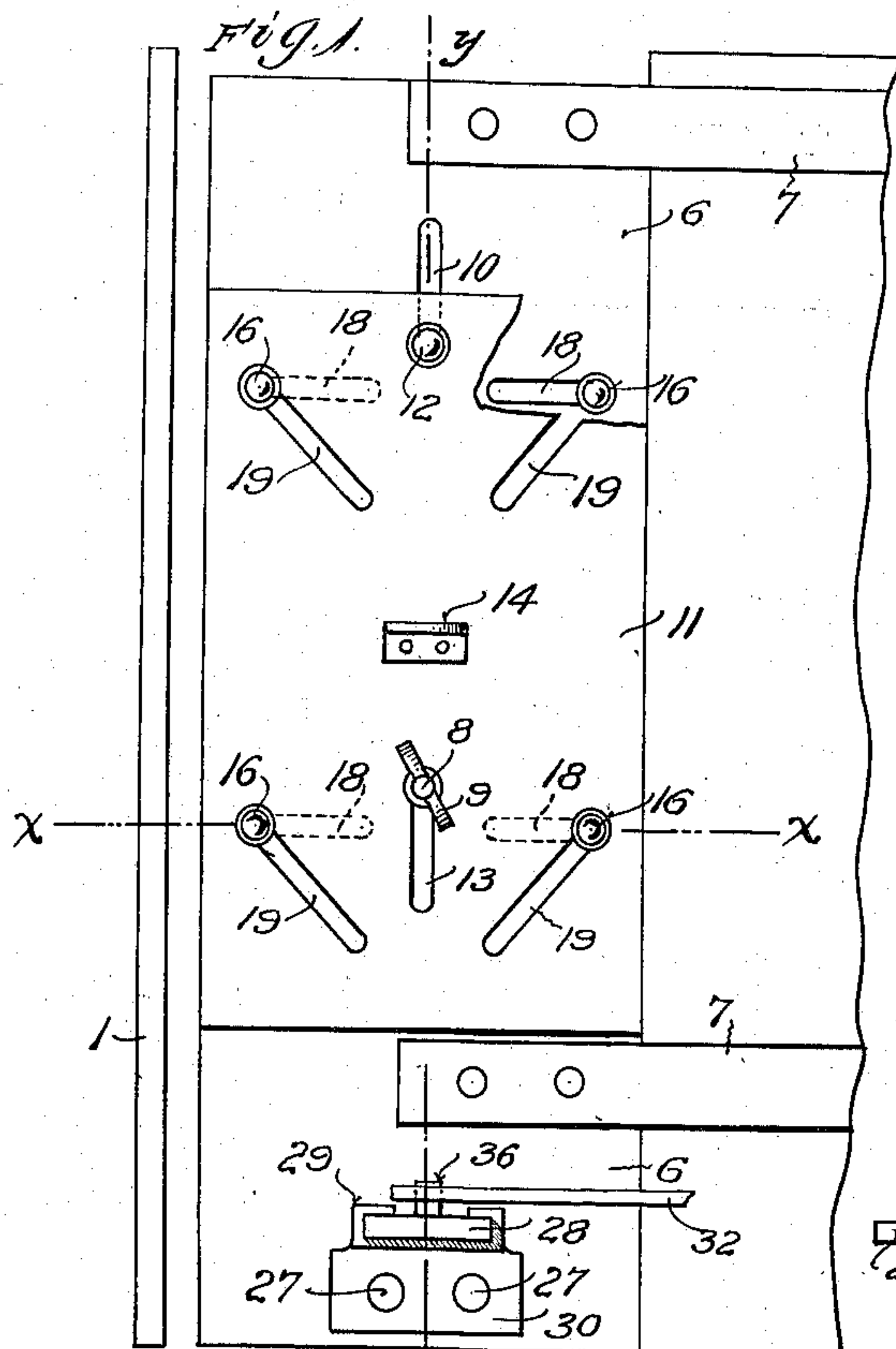


No. 847,863.

PATENTED MAR. 19, 1907.

T. A. WATTS.
VENDING MACHINE.

APPLICATION FILED APR. 19, 1906.



WITNESSES:
J. C. Dawley.
F. H. Schaefer.

INVENTOR.
Thomas A. Watts,
BY W. A. Coulman,
ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS A. WATTS, OF SPRINGFIELD, OHIO.

VENDING-MACHINE.

No. 847,863.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed April 19, 1906. Serial No. 312,677.

To all whom it may concern:

Be it known that I, THOMAS A. WATTS, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to improvements in vending-machines.

The special feature to which the improvements relate is the retaining and feeding chute by which the articles to be vended—
15 chewing-gum particularly—may be contained in a stack and fed automatically, one at a time, when the machine is operated. This special feature consists, essentially, of a combination of the feeding-plunger and a fixed
20 bottom for the chute, with adjustable side walls for the chute to vary the width of the chute according to the length of the articles—say different lengths of chewing-gum sticks—and with the face walls adjustable on the side
25 walls to vary the depth of the chute to agree with the different widths of the articles—say the width of the chewing-gum sticks—all as hereinafter more fully described, and particularly pointed out in the claims.

30 In the accompanying drawings, Figure 1 is a rear elevation of so much of a vending-machine as is comprehended in my improvements; Fig. 2, a vertical sectional view on the line *y y* of Fig. 1; Fig. 3, a horizontal sectional view on the line *x x* of Fig. 1; Fig. 4, a
35 general perspective view looking at the face of the machine and illustrating particularly the chute and its contained articles, as also the front end of the feeding-plunger; and
40 Fig. 5, a sectional view in detail of the means for holding the front plates.

At 1 is designated the frame of a vending-machine of any approved type, in the panel 2 of which is shown the figure of a mule, which
45 by mechanism not involved in this invention is made to kick every time a stick of chewing-gum or the article vended is dropped from the chute. Behind the panel 2 the operating machinery is located. The section 3 of
50 the machine is where the retaining and delivering chute is located, being built in in that part of the machine and being of the construction now about to be described. The articles vended drop to the surface 4, where,
55 through the opening 5, they are accessible to the purchaser.

Referring now to the features of my invention, the numeral 6 designates the fixed back plate of the chute, preferably consisting of a sheet of metal held to the general frame by
60 bars 7. This back plate carries a screw-threaded stud 8, having a wing-nut 9, and is slotted at 10. An adjusting-plate 11 is fitted to slide up and down on the rear of this back plate 6, and as a selected means of se-
65 curing the adjustable plate it is provided with a stud 12, which extends through the slot 10 and is widened out at its forward end to prevent withdrawing from the slot. Then the screw-threaded stud 8 extends through
70 the slot 13 in the plate 11, and the wing-nut 9 is used to keep that portion of the plate 10 against the plate 6, as also to clamp the plate 11 when adjusted to different desired
75 positions. A handpiece 14 enables the user to adjust the adjustable plate up and down. The effect of adjusting this plate 11 upward is to contract or narrow the width of the chute, and the effect of adjusting it down-
80 ward is to increase the width of the chute. This is done by means of the adjustable end plates 15, which are provided with studs 16, secured to the rear wings 17 of these plates
85 and passing through horizontally-extended slots 18 in the back plate 6 and through slots 19 in the adjustable plate 11. These studs are fixed to the wings 17 of the side plates 15,
90 as stated, and when the adjustable plate 11 is moved up or down the studs are made to travel inward or outward in the horizontal slots 18 by means of the action of the oblique
95 slots 19. Thus when the adjustable plate 11 is moved up or down, as the case may be, the end plates of the chute are adjusted inward to lessen the width of the chute or outward
100 to increase the width of the chute. In this manner the chute is made to conform in respect to its width to the length of the articles to be placed therein—say sticks of chewing-gum, for which this chute is specially de-
105 signed. There is little variance in the width of sticks of chewing-gum, while the length of the different makes varies considerably; but as there are brands whose width is different from the widths of other brands I have
110 provided for adjusting the depth of my chute to agree with all the different widths of the different brands, and by this double adjustment—that is, the adjustment of the width of my chute and the adjustment of the depth
of my chute—I am enabled to conform its size to that of all the sizes of the articles to

be fed and delivered. To this end I provide the chute with front walls 20, consisting of plates having wings 21, which overlap and fit against the end walls 15 of the chute and which are adjustable in and out on such end walls. Studs 22 are secured to the walls 15 and passed through slots 23 in the wings 21 and carry springs 24, whose tension holds the front walls 20 to adjusted positions. It will now be seen that having adjusted the front walls 20 to suit the width of the article I can then adjust the distance of the end walls 15 from each other by operating the adjusting-plate 11, both end walls being thus adjusted at the same time and both being held in any adjusted position by the one means which is used to secure the adjusting-plate 11 in fixed positions—namely, the screw 8 and its wing-nut 9 or other equivalent fastening device.

The bottom of the chute is composed of two fixed plates 25 25, each having a wing 26 secured to the back plate 6, as by rivets 27. This bottom supports the article in the chute, as suggested in Fig. 2. The space between these plates, constituting, in effect, a cut-away part in the bottom of the chute, is adapted to receive the feeding-plunger 28, composed of a bar slidably mounted in ways 29, having a wing 30 secured by the aforesaid rivets 27 to the back plate 6. The back plate is slotted at 31 to permit the plunger to pass back and forth when reciprocated by the bell-crank lever 32, mounted on a pivot 33, carried by a suitable arm 34, extending from the frame of the machine, and itself actuated by a pitman 35, reciprocated by any suitable operating mechanism, preferably a clock mechanism adapted to actuate the parts when a coin is dropped into the machine in the usual way. A pin 36 on the plunger 28 works in a slot 37 in the bell-crank lever in an obvious manner. The plunger carries a wedge 38, adapted to press against and somewhat lift the article to be fed or delivered when the machine is operated—say the lowermost stick of chewing-gum of the several piled up in the chute. As the plunger advances forward it so engages this lowermost article or chewing-gum stick and forces it from the bottom 25 25, whence it falls onto the surface 4, where it is accessible to the purchaser through the opening 5. The plunger then returns to its normal position, letting the superincumbent articles or sticks of chewing-gum settle down until the lowermost one rests upon the bottom 25 25. It will be noted that the bottom is fixed in size and that its relation to the feeding-plunger remains the same all the time, subject only to the fact that the plunger reciprocates into and out of the space between the parts 25 and 25 and that this arrangement is preserved irrespective of the size of the chute. It will also be noted that the adjust-

ment of the width of this chute is effected by manually moving but one part after loosening the fastening device 9. In Fig. 1 I have broken away one corner of the adjusting-plate 11 the more readily to show one of the horizontal slots 18 in the plate 6.

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

1. In a vending-machine, the combination, with the casing forming a chute, a bottom for said chute, and a plunger adapted to work across the same, of outer walls for said casing adjustable one toward the other, and means for adjusting and securing the same in different positions, substantially as described.

2. In a vending-machine, the combination, with the casing forming a chute, a bottom for said chute, and a plunger adapted to work across the same, of end walls for said casing adjustable one toward the other, means for adjusting and securing the same in different positions, and front walls for said casing adjustably secured to said end walls, substantially as described.

3. In a vending-machine, the combination, with a chute-bottom, and a plunger adapted to work across the same, of adjustable end walls for the chute, an adjusting-plate mounted at the back of the chute, and connections between said plate and said end walls to adjust and hold the latter by means of the plate.

4. In a vending-machine, the combination, with a chute-bottom, and a plunger adapted to work across the same, of adjustable end walls for the chute, an adjusting-plate mounted at the back of the chute, connections between said plate and end walls to adjust and secure the latter by means of said plate, and adjustable front walls secured to the said walls and means to hold them in different adjusted positions.

5. In a vending-machine, the combination, with a chute-bottom, and a plunger adapted to work across the same, of a back plate for the chute, an adjusting-plate mounted on the back plate, end walls for the chute mounted on the back plate and connected with the adjusting-plate to be adjusted thereby, the connection between the back plate and the adjusting-plate being by means of vertical slots and connecting devices, and the connection between the adjusting-plate and the end walls being by means of oblique and horizontal slots and connecting devices.

6. In a vending-machine, a chute consisting of a back plate having vertical and horizontal slots, an adjusting-plate having oblique slots and connected to the back plate through the vertical slots and securing devices, and walls having wings fitted to the back plate with securing devices passing through the horizontal slots and through said oblique slots.

7. In a vending-machine, a chute comprising a back plate having horizontal and vertical slots, an adjusting-plate having oblique slots and a vertical slot, and secured
5 to the back plate by means of securing devices passing through said vertical slots, end walls having wings fitted against the back plate and carrying securing devices which extend through said horizontal slots and said
10 oblique slots, said end walls being horizon-

tally slotted, and front walls having wings fitted to the end walls, and securing devices secured to the end walls and passing through the slots in the wings of the front walls.

In testimony whereof I affix my signature 15
in presence of two witnesses.

THOMAS A. WATTS.

Witnesses:

E. O. HAGAN,
IRVINE MILLER.