No. 837,702. PATENTED DEC. 4, 1906.

J. H. MILLER.

COIN OPERATED VENDING MACHINE.

APPLICATION FILED AUG. 10, 1905.

3 SHEETS—SHEET 1.

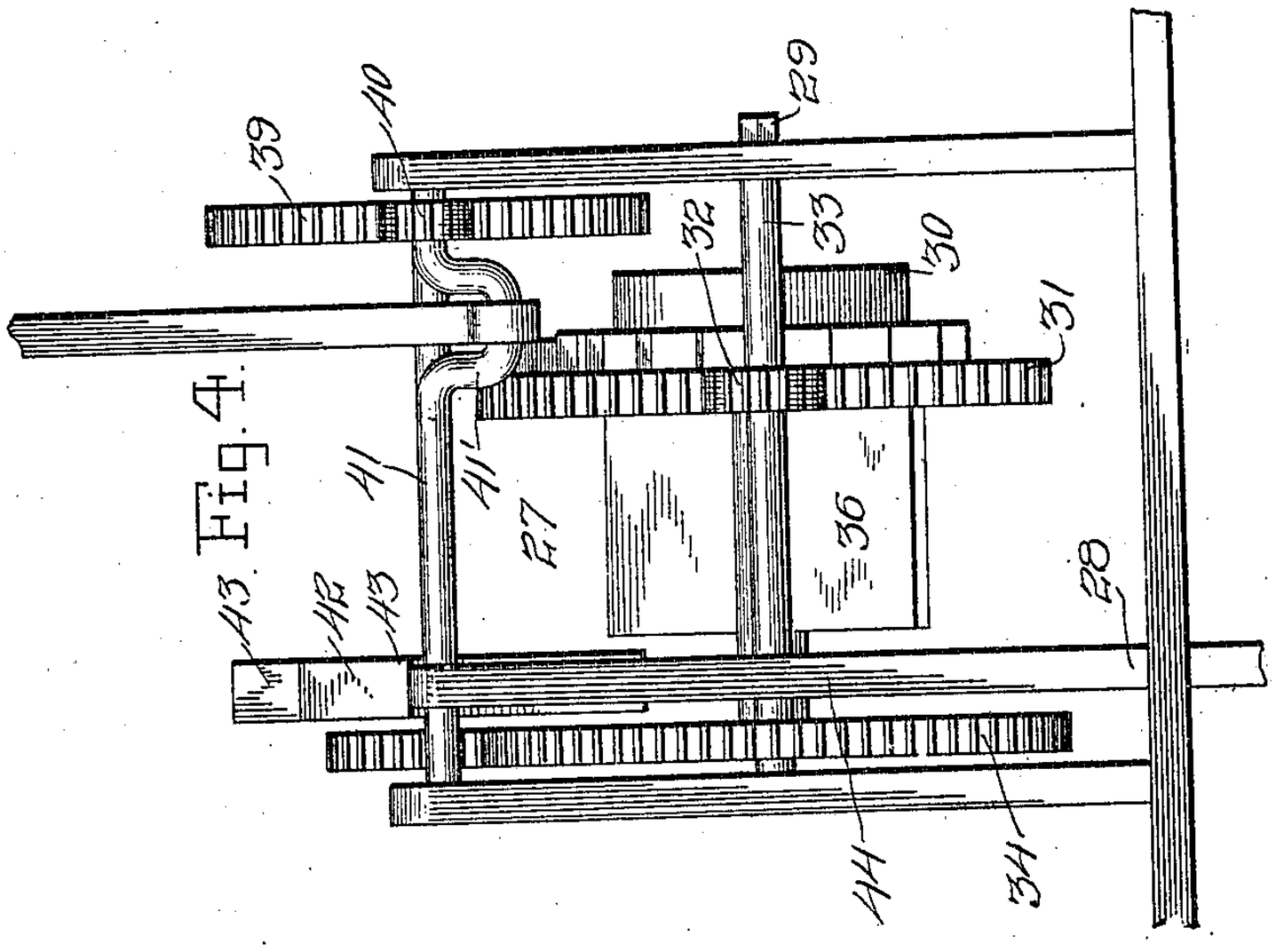

Fig. 4.

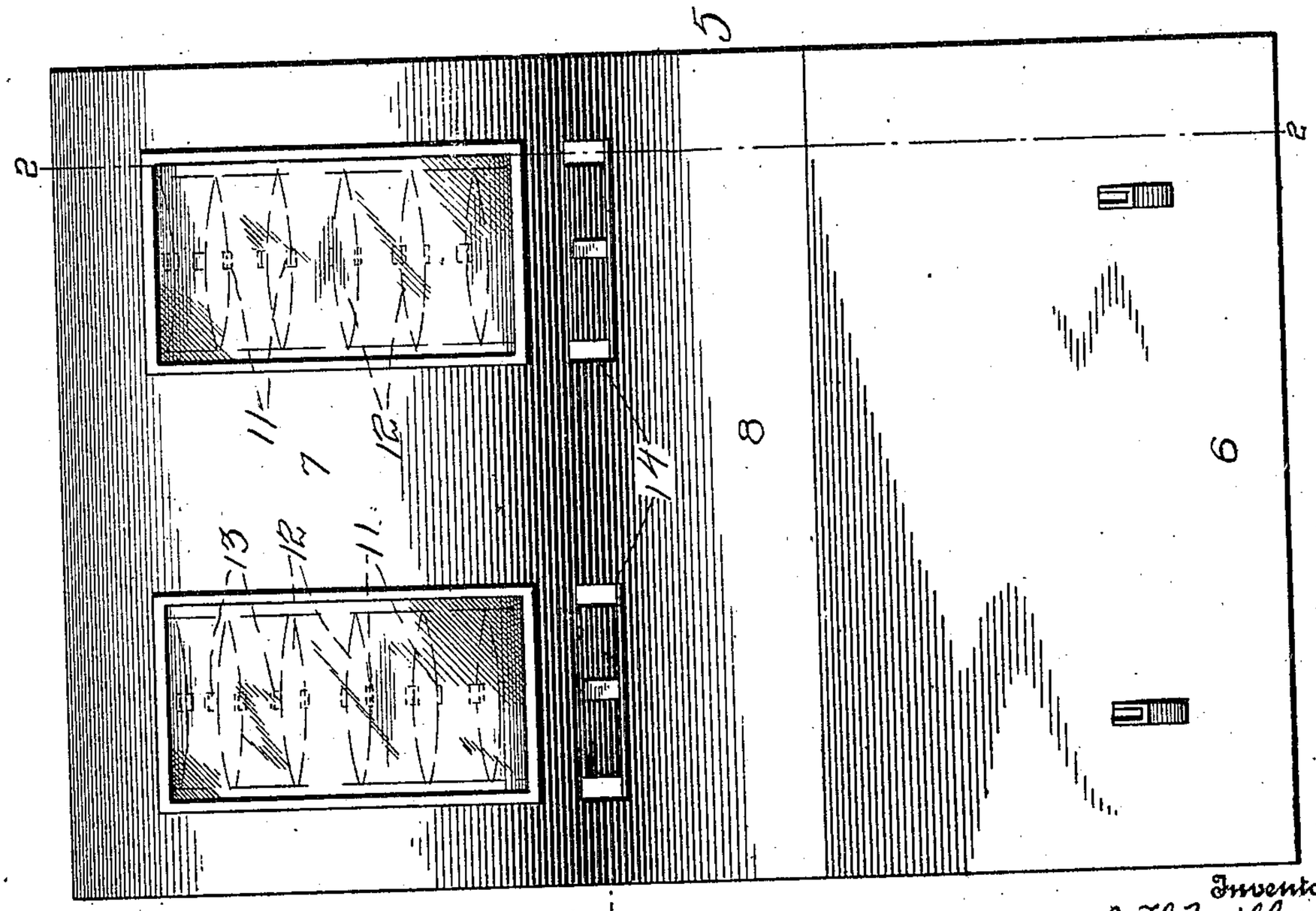

Fig. 5.

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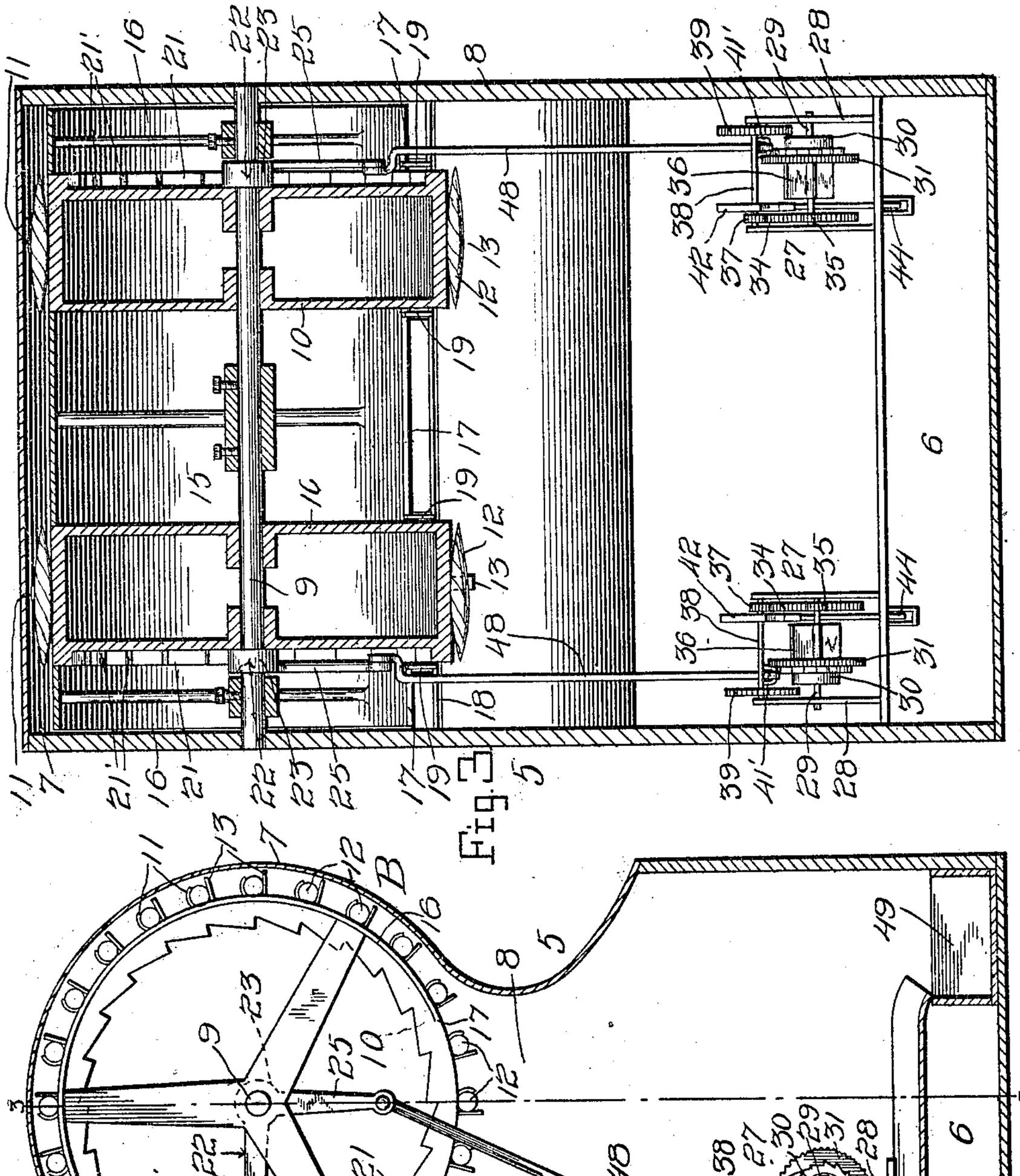

Fig. 1.

Fig. 2.

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3 SHEETS—SHEET 3.

Fig. 5.

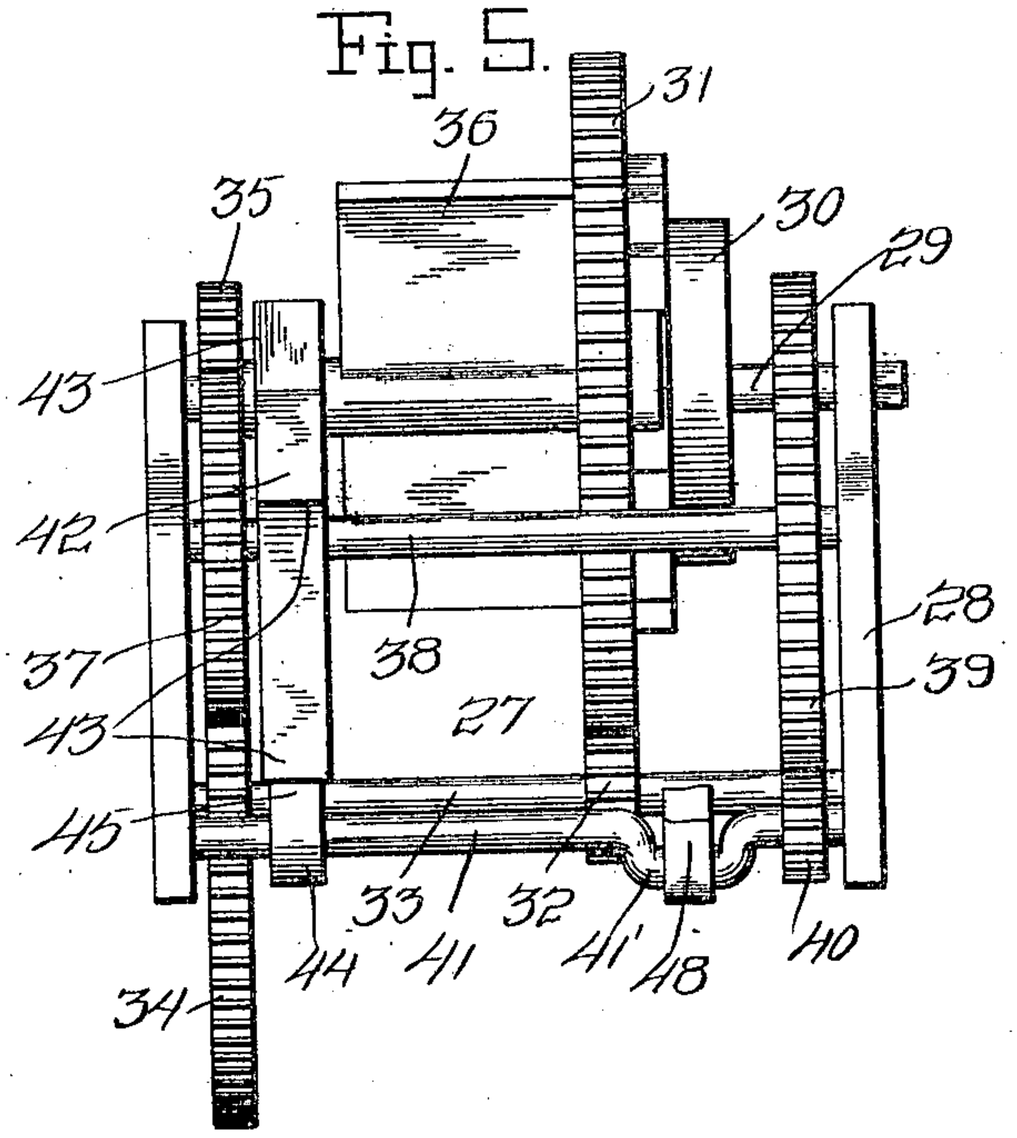
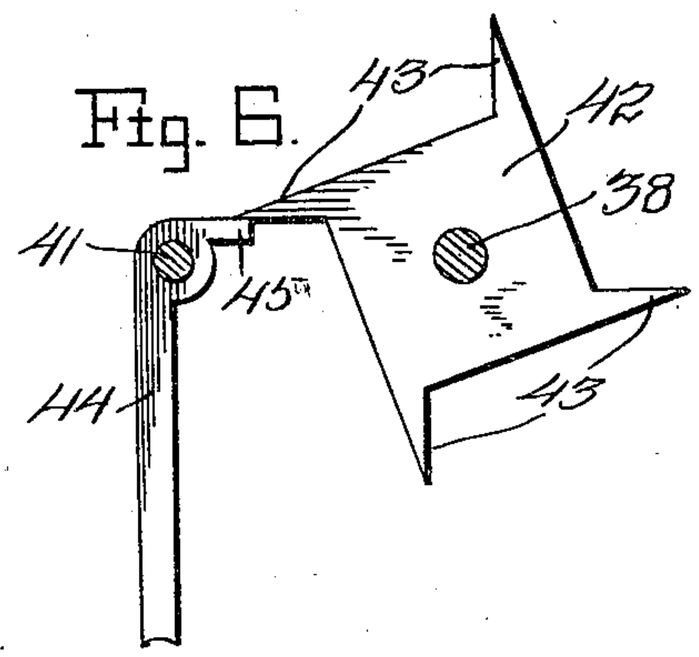


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN H. MILLER, OF FORT JENNINGS, OHIO.

COIN-OPERATED VENDING-MACHINE.

No. 837,702. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed August 10, 1905. Serial No. 273,558.

To all whom it may concern:

Be it known that I, JOHN H. MILLER, a citizen of the United States, residing at Fort Jennings, in the county of Putnam, State of Ohio, have invented certain new and useful Improvements in Coin-Operated Vending-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to vending-machines, and more particularly to coin-controlled machines of this kind, and has for its object to provide a machine which will be adapted for vending cigars or similarly-shaped articles and which will include a novel arrangement of parts.

Other objects and advantages will be apparent from the following specification, which describes an embodiment of the present invention.

In the drawings forming a portion of this specification, and in which like characters of reference indicate similar parts in the several views, Figure 1 is a front view of the present machine. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a section on line 3 3 of Fig. 2. Fig. 4 is a front view of the motor and releasing mechanism. Fig. 5 is a top plan view of Fig. 4. Fig. 6 is a detail view showing the stop-wheel and the trigger.

Referring now to the drawings, the present invention comprises a casing 5, including a hollow base portion 6, an upper horizontally-extending cylindrical portion 7, and a reduced connecting portion 8. Mounted in the portion 7 of the casing there is a longitudinally-extending horizontal shaft 9, upon which are revolubly mounted a pair of article-carrying drums 10, having radially-extending spaced racks 11 upon their peripheries, these racks being adapted for the reception of cigars or similarly-shaped articles 12, and, as shown, these articles lie upon the upper faces of the racks at the forward side A of the machine and against the under faces of the racks at the under side B of the machine, the articles being held upon the racks by means of radially-extending strap-springs 13, which are secured at their inner ends to the peripheries of the drums. These springs extend outwardly beyond the outer ends of the racks for a purpose to be presently described.

Formed in the lower portion of the upper portion 7 of the casing, at the forward side of and adjacent to the portion 8 of the latter, is a pair of discharge-openings 14, one lying beneath each of the drums 10, and these openings are of a size for the passage of the articles 12 therethrough.

The drums 10 are held in spaced relation by a spacing member 15, mounted rigidly upon the shaft 9, and they are also held in spaced relation to the ends of the casing by means of similar spacing members 16, these spacing members being open at their lower portions, as shown at 17. Secured within the portion 7 of the casing there is a longitudinally-extending strip 18, which lies below the openings 14 and has fingers 19 extending at the side of the drums 10, and a rod 20 extends longitudinally of the portion 7 of the casing just above the openings 14 and lies in the path of movement of the outwardly-extending end portions of the springs 13. It will thus be seen that if the forward portions of the drums 10 be moved downwardly, the drums being rotated, the springs 13 will come into engagement with the rod 20 and will be moved out of operative position to permit the articles held by the springs to fall from the racks 11 through the openings 14, the fingers 19 preventing the articles from falling down between the plate 18 and the spacing members. It will be seen that the released articles fall upon the plate 18 and pass therefrom through the openings 14.

Means for revolving the drums 10 is provided and includes inwardly-directed ratchet-teeth 21, carried by the drums 10 and arranged in continuous series, and loosely mounted upon the shaft 9 within the inclosure of each of the drums there is an actuating member 22, comprising a hub portion 23, in which the shaft is engaged, a normally horizontal arm 24, and a normally vertical arm 25, the latter extending downwardly and the former extending forwardly. A dog 26 is pivoted to the arm 24 and is arranged for downward movement only, and this dog lies normally in engagement with the upwardly-directed straight faces 21′ of the ratchet-teeth 21 at the forward portion of the drum. It will thus be seen that if the arms 25 of the member 22 be moved rearwardly the forward portions of the drums will be moved downwardly and that the arms 25 may be moved forwardly to move the arms 24 independently of the drums.

Identical actuating-motors 27 are pro-

vided for the two drums, each consisting of a frame 28, having a power-shaft 29 journaled horizontally therein, this power-shaft having a spring 30 engaged therewith for actuation thereof. A gear-wheel 31 is carried by the shaft 29 and meshes with a pinion 32, carried by a horizontal shaft 33, the latter carrying a gear 34, meshing with a pinion 35, revolubly mounted upon a shaft 29 and carrying a governor-fan 36. The gear 34 also meshes with a gear 37, carried by a shaft 38, and this shaft 38 carries a second gear 39, which meshes with a gear 40, carried by a crank-shaft 41, and it will thus be apparent that rotation of the shaft 29 by the spring 30 will rotate the shaft 41. Mounted upon the shaft 38 there is a stop-wheel 42, including a plurality of radial arms 43, which are curved in the same direction, and pivoted adjacent to its upper end upon the crank-shaft 41 there is a trigger 44, having a nose 45 at its upper end which lies normally in the path of movement of the arm 43. As shown, the trigger depends below the shaft 41 and extends into a coin-chute 45, thus lying in position for engagement by coins passing through the chute, and the arrangement is such that, whereas the trigger lies normally with its nose engaged by one of the arms 43, when it is engaged by a coin it is moved to bring its nose out of engagement with the arm to permit this arm to pass beyond the trigger, and the coin having passed on through the chute the trigger returns to its normal position to receive the next arm of the stop-wheel against its nose, thus stopping the motor, and the arrangement is such that this movement of the stop-wheel is sufficient to permit of one complete revolution of the crank-shaft. The crank 41 of the crank-shaft of each of the motors is connected, by means of a rod 48, extending upwardly and rearwardly, with the lower end of one of the arms 25, and the chutes 45 of the two motors extend outwardly through the casing at their forward ends to receive coins, the rearward ends of these chutes being directed into a till 49.

Upper portion 7 of the casing is preferably formed of glass or other transparent material, and the portions of the mechanism lying therewithin are suitably decorated.

It will be seen that after the springs 13 have passed the rod 20 they lie in position for engagement of this rod to prevent return movement of the drums when the arms 24 are returned to their normal positions.

What is claimed is—

1. A mechanism of the class described comprising a shaft, a drum revolubly mounted upon the shaft, racks carried by the periphery of the drum and adapted for the reception of articles, springs carried by the periphery of the drum and arranged for engagement of articles upon the racks to hold said articles thereupon, said springs extending outwardly beyond the racks, a rod disposed in the path of movement of the outwardly-extending portions of the springs and adapted for engagement by the springs when the drum is revolved to move the springs out of engagement with the articles to permit of discharge of the latter from the racks, and means for revolving the drum.

2. A mechanism of the class described comprising a revolubly-mounted drum, racks carried by the periphery of the drum and adapted for the reception of articles to be vended, springs carried by the periphery of the drum and arranged for engagement with articles upon the racks to hold the articles in such position and means for moving the springs out of operative position when the drum is rotated in one direction, said means being arranged for coöperation with the springs to prevent return movement of the drum.

3. A mechanism of the class described comprising a revolubly-mounted drum, article-racks carried by the periphery of the drum, retaining devices arranged for engagement of articles to hold them upon the racks, means for moving the retaining devices out of operative position successively when the drum is revolved, inwardly-extending ratchet-teeth carried by the drum, a pivoted arm, and a dog carried by the arm and adapted for engagement with the ratchet-teeth to move the drum.

4. A mechanism of the class described comprising a drum, article-racks carried by the periphery of the drum, means for holding articles upon the racks, a casing for the mechanism having an opening therein, said opening lying in position for the passage of articles therethrough from the drum, means located adjacent to the opening for moving the article-retaining means into inoperative position, said second-named means being adapted for successive engagement by the article-retaining means when the drum is revolved, and means for revolving the drum.

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

JOHN H. MILLER.

Witnesses:
EDWARD E. TRUESDALE,
CHARLES O. ENSLEN.