

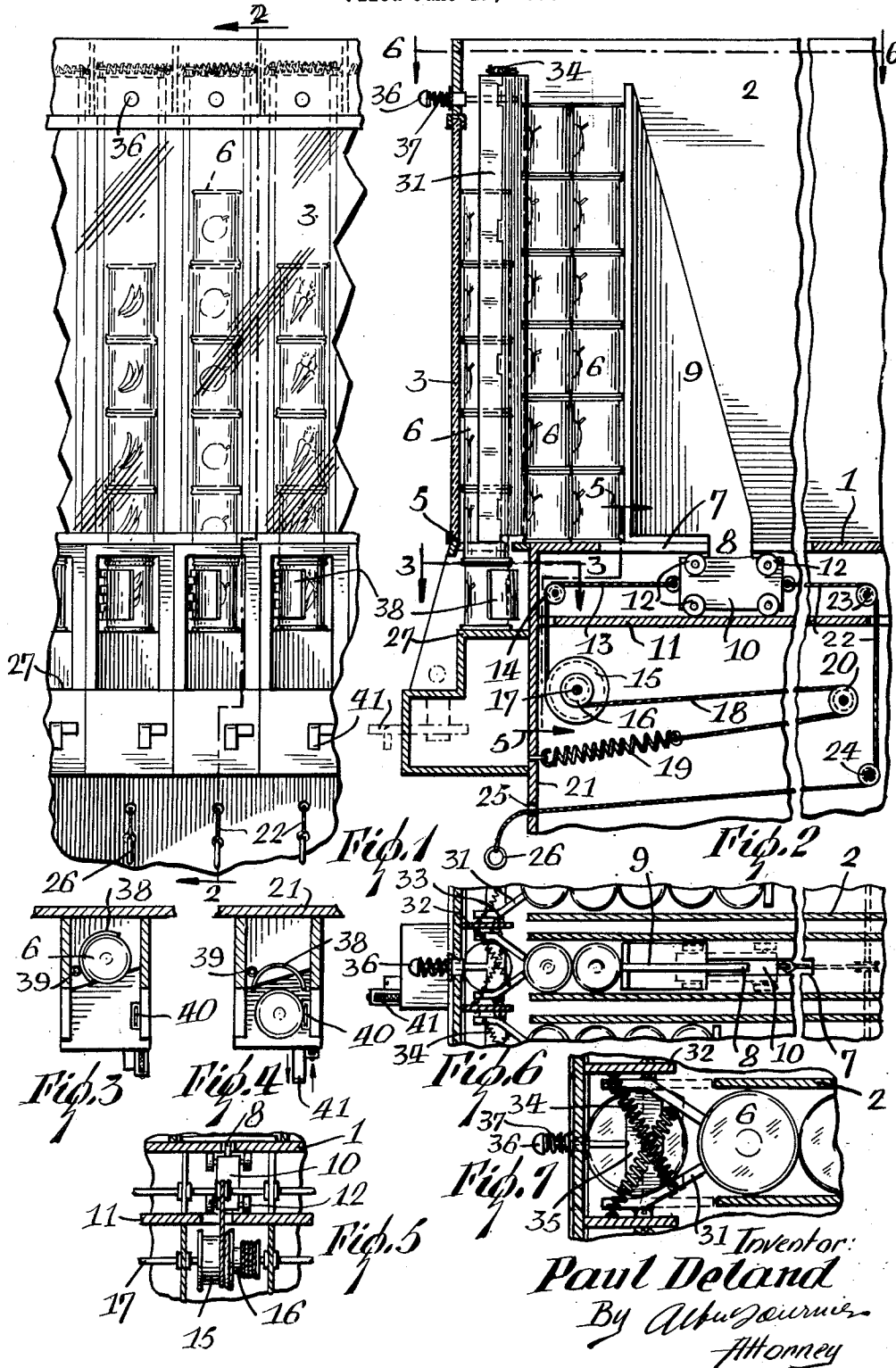
July 28, 1953

P. DELAND

2,647,029

VENDING MACHINE

Filed June 11, 1951



UNITED STATES PATENT OFFICE

2,647,029

VENDING MACHINE

Paul Deland, Montreal, Quebec, Canada

Application June 11, 1951, Serial No. 231,027

In Canada August 10, 1950

2 Claims. (Cl. 312-46)

1

The present invention pertains to a novel vending machine operable by a coin-controlled lever, key or the like.

The principal object of the invention is to distribute articles instantaneously for self service or use by clerks who thereby are spared the labor of searching for goods on shelves or counters.

Another object of the invention is to provide means for moving the articles forward in the vending cabinets, so that they will not be hidden or even lost when annual inventory is taken.

A further object is to provide a machine of the character described which is easy to load and contains considerable merchandise.

Finally, another object is to provide an efficient, economical and simple mechanism for the stated purposes.

In the accomplishment of these objects, the device consists of a floor or table on which are mounted vertical partitions between which is disposed in tiers the articles to be sold. A movable member is disposed at the rear and automatically pushes the articles forward against a transparent window. The latter is slightly spaced from the edge of the floor in order to permit the articles to drop singly as they are moved to the front row by a slidable weight. The discharge of the articles is controlled by a stop which permits only one object at a time to drop, since it is pivotally mounted. A lever controls this stop, and the invention comprises moreover a means for withdrawing the aforementioned pusher member.

The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a front elevation of the device;

Figure 2 is a section on the line 2-2 of Figure 1;

Figure 3 is a section on the line 3-3 of Figure 2;

Figure 4 is a similar view in a different position;

Figures 5 and 6 are sections on the lines 5-5 and 6-6 of Figure 2, and

Figure 7 is a detail of Figure 6.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

The device includes a floor 1 on which are mounted transverse partitions 2 spaced according to the width of the articles to be sold.

At the front of the partitions is a window 3 spaced from the forward edge of the floor 1 to

2

leave a passage 5 for one of the articles 6. Between the partitions 2 the table is slotted at 7 parallel to the partitions. Each slot 7 receives the movable tongue 8 of a vertical T-shaped pusher member 9, connected to a rolling base 10 riding on a lower floor 11. The base 10 is mounted on upper and lower rollers 12 and is normally drawn forward by a cable 13 passing over a pulley 14 and wound on a drum 15. This drum is rotated by a contiguous pulley 16 secured to the common shaft 17. On the pulley 16 is wound one end of another cable 18 connected to an apron 21 by a spring 19 after passing over a rear pulley 20.

The apron 21 conceals the lower floor 11, the base 10 and the pulleys. At the rear of the base or carriage 10, under each compartment, is attached an end of another cable 22 which passes over two pulleys 23 and 24 one above the other, and is drawn through a hole 25 in the apron 21. Outside the apron, the cable 22 is a ring 26 attached. Below the openings 5 a platform 27 is attached to the apron 21.

The objects 6 are arranged in horizontal rows along the compartments as well as in vertical tiers. Each tier is advanced by a pusher 9.

In front of each row is a pair of angular wings 31 converging toward and engaging the foremost article 6. The midpoints of the wings are pivoted to walls 32 at 33. The converging portions of the wings are joined at the top by coil springs 34 to the opposite walls 32. Between these portions is a spreading cam 35 pushed by an external knob 36 against a spring 37. The pusher 9 drawn by spring 19 and the cables, advances a tier of articles into the space between the wings.

From the foremost tiers, the bottom object of each tier drops through passage 5 to the platform 27. The object is held against removal by a curved shoe 38 pivoted to the structure at 39, as shown in Figures 3 and 4. A coin inserted in a slot 40 permits operation of a push rod or lever 41 which turns the shoe to the release position of Figure 4. The coin-control mechanism is not a novel portion of this invention and any such known mechanism may be employed.

Although a specific embodiment of the invention has been illustrated and described it will be understood that various alternations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim is:

1. A vending machine comprising a floor, a

3

plurality of partitions thereon forming compartments, a window spaced forwardly of said floor to form an opening adjacent to said floor, a platform beneath said opening, a vertical pusher slidable in each compartment means tending to move said pushers forward to advance the articles in tiers, a pair of wings pivotally mounted over said opening at each compartment and converging rearwardly against a tier of articles, springs holding said wings in the converged position, a cam between the wings of each pair for spreading them to admit a tier of articles, and a cam-operating member passing through said window.

2. A vending machine comprising a floor, a plurality of partitions thereon forming compartments, a window spaced forwardly of said floor to form an opening adjacent to said floor, a platform beneath said opening, a vertical pusher slidable in each compartment, a spring-pulled cable for moving said pushers forward to ad-

4

vance the articles in tiers, a pair of wings pivotally mounted over said opening at each compartment and converging rearwardly against a tier of articles, springs holding said wings in the converged position, a cam between the wings of each pair for spreading them to admit a tier of articles, and a cam-operating member passing through said window.

PAUL DELAND.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
265,400	Fitch	Oct. 3, 1882
630,661	Cody	Aug. 8, 1899
1,263,033	Campbell	Apr. 16, 1918
1,881,894	Olsen	Oct. 11, 1932
2,182,255	Ford	Dec. 5, 1939
2,304,533	Bright	Dec. 8, 1942
2,370,848	Doggett	Mar. 6, 1945