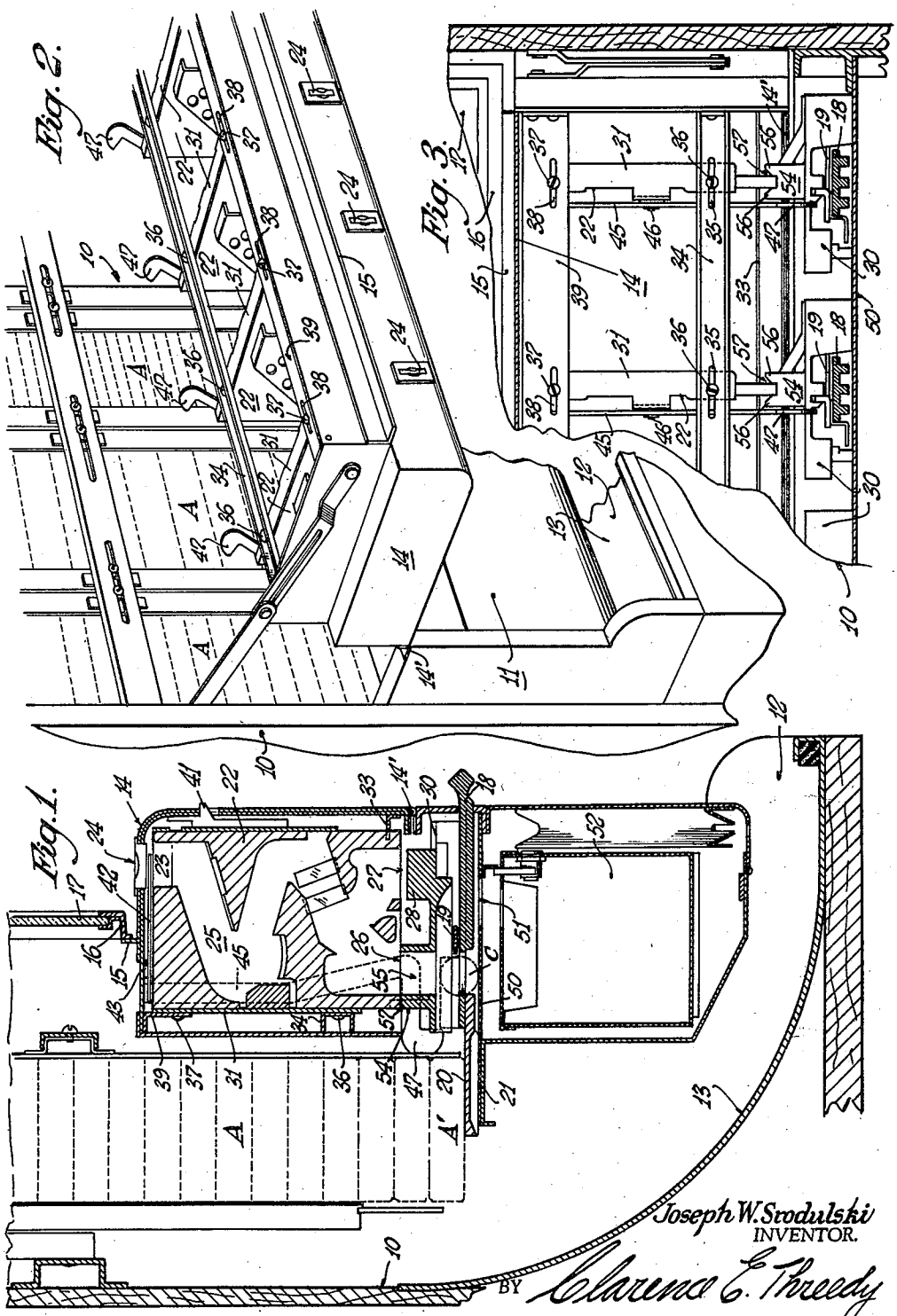
Feb. 10, 1942. J. W. SRODULSKI 2,272,683

VENDING MACHINE

Filed Sept. 29, 1939 2 Sheets-Sheet 1



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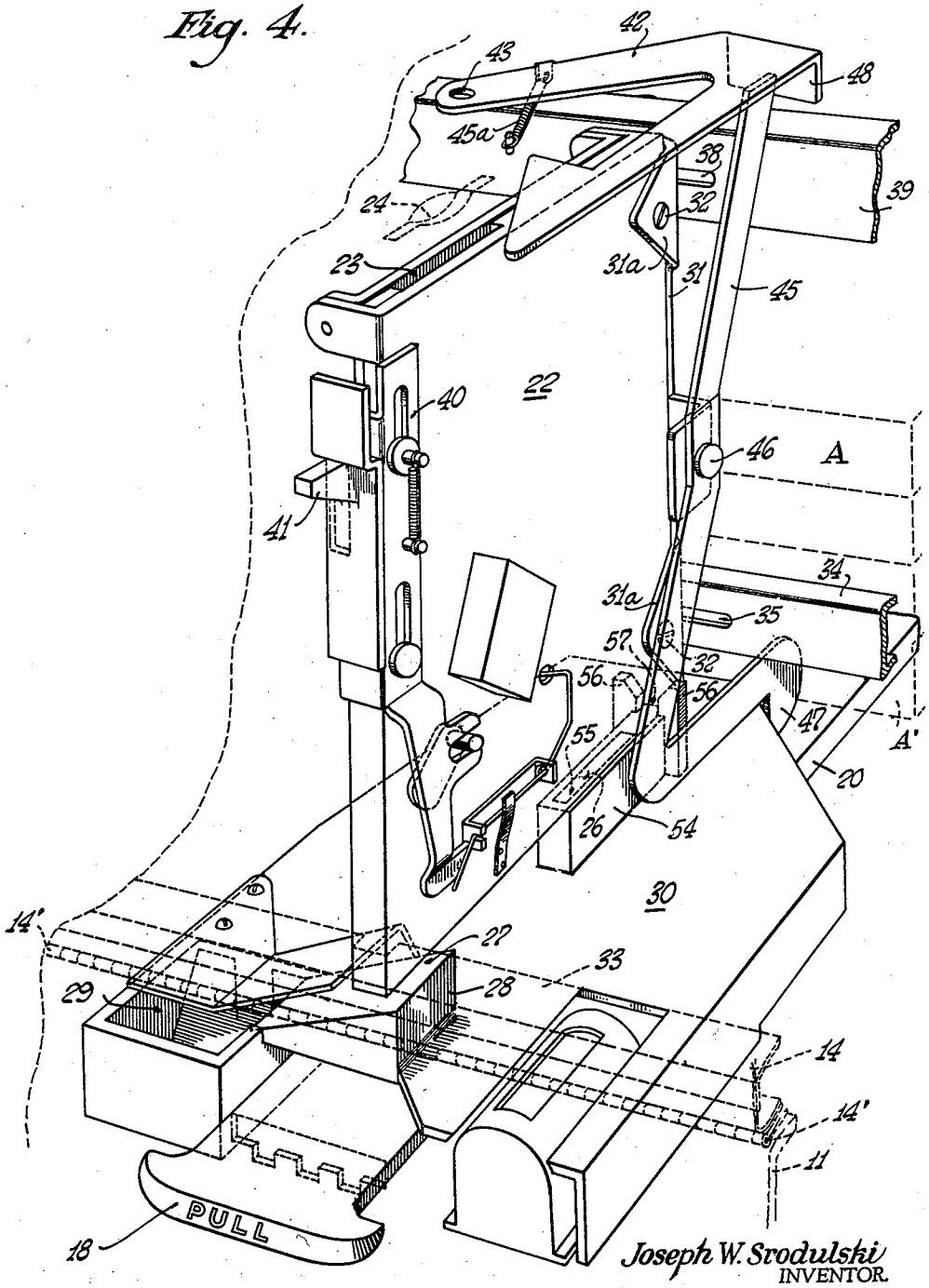
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Fig. 4.



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VENDING MACHINE

Joseph W. Srodulski, Chicago, Ill.

Application September 29, 1939, Serial No. 297,047

1 Claim. (Cl. 194—97)

A principal object of the present invention is the provision in a vending machine of a plurality of control units hingedly mounted for movement as a group into and out of operative position on the front of the machine and secured in normal operating position by an overlapping panel constituting a front wall portion of the machine.

Viewed from another aspect, it is an important object of the invention to arrange a plurality of coin control units in side by side relation and mount the same for tilting movement as a group into and out of operative position in the front wall portion of a cabinet, the cabinet having a hinged panel with a lower edge portion overlying the upper extremities of the control units when closed so as to prevent movement of the units out of operative position, the several units being connected together and arranged for ready detachment or separation from the remaining units of the group to facilitate repairs or replacement.

A further object is the provision in a gang coin control assembly of individual coin testing units each having a coin exit which is adapted to be aligned with a coin passage, and means for accurately seating each of the coin testing units when the same is moved into operative position to align the exit therein with the coin passage.

Another object is the provision of means for automatically blocking the coin entrance to each testing unit when the supply of merchandise in the corresponding storage compartment is exhausted.

Other novel aspects, economies and advantages of the invention reside in certain details of construction, as well as the arrangement and operation of the component parts of the illustrative embodiment described hereinafter in view of the annexed drawings, in which:

Fig. 1 is a vertical side section through the vending machine and one of the control units thereof;

Fig. 2 is a fragmentary front perspective of the machine and gang control unit with the front panel open and the gang assembly lowered;

Fig. 3 is a fragmentary rear elevation of the gang assembly; while

Fig. 4 is an enlarged front perspective of one of the coin testing units.

In the arrangement of Fig. 1, the vending mechanism is housed in a cabinet 10 having the usual back and side wall portions and an open front wall portion on which the coin-operated control means is mounted. A stationary ledge and panel member 11 closes off a portion of the otherwise open front side of the cabinet about a delivery opening 12 therein and into which opening articles of merchandise are delivered from a chute 13 disposed below a vertical column or stack of articles A.

As seen in Figs. 1 and 2, the gang control assembly is mounted on a movable front wall or panel section 14 hinged as at 14' (Fig. 4 also) along the top front edge portion of the stationary ledge 11. Thus, the gang assembly is mounted for pivotal movement about a horizontal axis from the normally raised operative position of Fig. 1, to the lowered open position of Fig. 2 wherein the mechanism of the control units as well as the several merchandise storage compartments are exposed for access. Means for locking the movable gang panel in operative position includes the provision of an angle arm 15 along the top side of the movable section and which is disposed to lie behind a flange portion 16 arranged along the bottom of a front closure or door including a glass window 17 through which the contents of the storage compartments are normally viewed. The door or closure is adapted to be locked in the usual manner and the flange portion 16 effectively blocks displacement of the angle bracket 15 and hence prevents lowering of the control assembly from the position of Fig. 1 into the position of Fig. 2, it being necessary to unlock the door or closure and swing the same aside for this purpose, the closure preferably pivoting about a vertical hinge means or axis at one side of the cabinet, although it will be apparent that such hinged movement could be effected about a horizontal axis at the top of the cabinet so that the closure would swing down toward the gang control assembly.

There are a plurality of storage compartments in which the merchandise packages A are stored, and there is one coin-controlled dispensing unit for each compartment. Each unit includes a reciprocable operating handle 18, which is normally latched against effective movement by a latch member 19 adapted to be released by action of a coin C in a pocket in the control member or slide when the latter is pulled outwardly of the machine (toward the right, Fig. 1).

At the rear of each control slide 18, there is provided a shoe 20 which normally underlies the lowermost article of merchandise A' (Fig. 4 also) in the corresponding stack. When the slide is drawn forward upon release by a coin, the shoe is withdrawn from beneath the lowermost article, which drops onto a ledge portion 21, and when the slide is subsequently pushed in, the

shoe bears against the article A' in its lowered position and shoves the same off the ledge 21 for descent onto the chute 13 by which it is gravitated into the delivery opening 12.

Each control unit includes a coin testing unit 22 (Fig. 4) which is positioned to overlie the corresponding control slide 18 and which has a coin entrance 23 underlying a coin depositing opening 24 (Figs. 1 and 2) in the movable panel section 14 of the assembly. The testing units may be of any desired construction, the one illustrated in Fig. 1, for instance, having a descending coin passage 25 with a coin acceptance exit 26 in its lower level and into which suitable coins are delivered for ultimate deposit in a coin receptacle behind the stationary panel section 11. The testing units also have a reject opening 27 which leads into a return chute adapted ultimately to guide the rejected coins into the merchandise delivery opening 12 by descent onto a downwardly inclined guide block 28 and into a reject passage 29 formed in a base block 30 underlying each testing unit. The coin control units are identical and the one shown in Fig. 4 being taken as typical, each testing unit 22 is mounted in operative position at the rear of the movable panel section 14 by means of a saddle bracket 31 having flange portions 31a offset to fit closely around the vertical edge portion at the rear of the testing unit (Fig 3 also), the saddle bracket being secured to the unit by means such as the screws 32. The lower front end of each testing unit fits into a notch in an angle bracket 33 (Fig. 1) on the inside of the front wall of the movable panel section 14. At the rear of each unit is a channel iron 34 mounted rigidly on the movable panel structure and provided with horizontally elongated slots 35 through which extend attaching screws 36 which thread into the lower part of the corresponding saddle bracket. A similar mounting is arranged at the top of the testing units wherein attaching screws 37 are fitted through elongated slots 38 in an angle iron 39 likewise rigidly mounted on the panel structure for threading engagement in the upper part of the saddle bracket.

Each testing unit 22 in the embodiment shown is provided with a scavenging means for eliminating defective or unacceptable coin elements from the device and which are prevented, for one reason or another (as by being bent, perforate, etc.) from passing normally through the reject exit 27. The scavenging mechanism is actuated by a vertically reciprocable member 40 (Fig. 4) having a handle projection 41 arranged to project through an opening in the front wall of the movable panel section 14 for access by the patron or proprietor. The scavenging mechanism is not described in detail since it does not constitute a part of the invention, such mechanism being well known in the art.

Means for preventing deposit of a coin in any unit when the corresponding supply of vendible articles is exhausted, includes the provision of a blocking arm 42 (Fig. 4) for each unit and pivoted as at 43 on the under side of the top wall of the movable panel section 14 for movement to project an offset end portion 44 in blocking relation above the coin entrance 23 whereby deposit of a coin in the unit will be prevented. Spring means 45a normally urges each blocking member 42 into blocking position, but such movement is prevented by action of a feeler lever 45 pivoted, as at 46, on the corresponding saddle bracket and having an offset nose portion 47 arranged to bear against the lowermost article A' in the corresponding stack of articles A. When the gang assembly is in operative position as shown in Fig. 1, the nose portion 47, bearing against the lowermost article A' in the stack, will pivot the lever 45 and cause the upper edge portion thereof to bear against a flange 48 on the blocking lever 45 to retract the latter from blocking position against the tension of the spring 45a. As soon as the last article is ejected from the storage compartment, lever 45 is free to be moved by action of the spring 45a in moving the member 42 into blocking position.

The operation of the coin control is such that an acceptable coin C is delivered from the exit 26 of the testing unit into the pocket in the slide, as shown in Fig. 1, the coin resting at this time on a floor portion 50 beneath the slide and subsequently being transported by withdrawal of the slide to a position where it can gravitate through a drop-out opening 51 in the floor portion for descent into a coin receptacle 52. An important feature of the invention is the provision of means for accurately aligning each testing unit so that the acceptance exit 26 thereof will be registered with the opening or pocket in the slide 18.

As shown particularly in Fig. 4, this registering or aligning means includes the provision of a member 54 arranged on the base plate 30 and having a coin passage 55 disposed to underlie the acceptance exit 26 in the testing unit. The member 54 is preferably an integral part of the base member or plate 30, the latter in such construction being a die casting. However, it will be apparent that the member 54 may be a separate element attached by any suitable means such as screws or the like on the top of the plate 30. The means for accurately seating the corresponding testing unit 22 includes the provision of convergently angled projections 56 on the member 54 at one side of the passage 55, the portions 56 constituting a V-shaped notch or seat 57 (Fig. 3 also) into which the lower edge portion of the testing unit 22 fits when the gang assembly is raised into operative position so that the exit 26 is accurately registered with the passage 55 to assure that coin elements will positively move into operative position with relation to the control slide 18.

Thus, while the several testing units may be mounted and adjusted in the first instance with a certain degree of accuracy with respect to their corresponding coin control units, as a result of the mounting means 36—37—38, it will be apparent that a high degree of accuracy of alignment is required to assure that there will be no possibility of failure of the unit to operate as a result of even a slight displacement which might be caused through usage, vibration and ordinary wear of parts. The aligning means 54—56—57 therefore provides a means for disposing each testing unit in exactly proper position each time the unit is moved into operative position with the gang assembly.

Changes may be made in various details of the structure specifically set forth herein for purposes of illustration, and the appended claim is intended to include all equivalent constructions and arrangements.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

In a gang coin control assembly, means pro-

viding a mounting base having a coin passage, a coin testing unit removably mounted on said base, said testing unit having a coin exit adapted to be accurately aligned with respect to the coin passage of said base, means for accurately seating said testing unit in coin receiving position on said base including a member on said base providing, together with said base, said coin passage, and convergently angled portions on said member between which a portion of said testing unit is guided by said portions when said testing unit is placed in operative relation to said base.

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