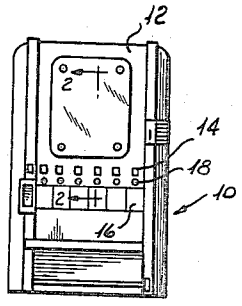
March 4, 1958 A. R. ERICSON 2,825,487

SIGNAL FOR COLUMNAR MERCHANDISING MACHINE

Filed Jan. 4, 1952

Fig 1



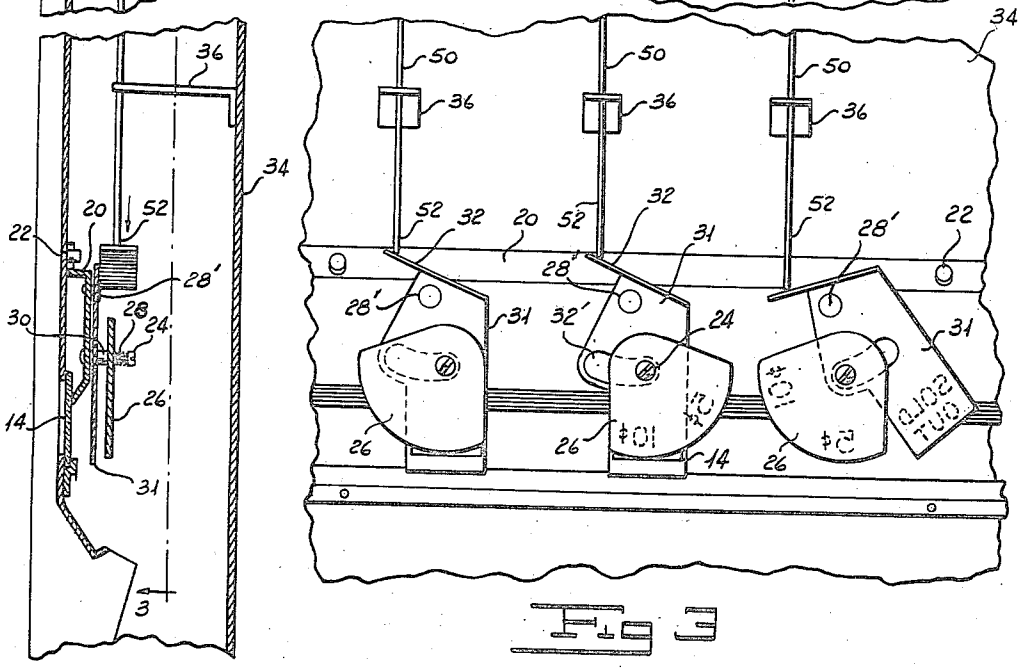


Fig 2

Fig 3

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SIGNAL FOR COLUMNAR MERCHANDISING MACHINE

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7 Claims. (Cl. 221—6)

My invention relates to a signal for columnar merchandising machines and more particularly to a signal adapted to advise a user that a column is empty or sold out and to inform the user of the price of the merchandise in the particular column.

For purposes of convenience I will describe my invention with respect to a candy merchandising machine in which certain columns of the machine are adapted to vend merchandise at five cents per bar and other columns are adapted to vend merchandise at ten cents per bar. The machine may be of the type shown in copending application of Christian Gabrielsen, Serial No. 192,485, now Patent No. 2,652,304, in which merchandise is adapted to be supported on shelves which are successively dumped. The uppermost shelf is the last shelf which is pivoted to deliver merchandise. My invention is adapted to coact with the uppermost shelf so that when this has been pivoted to dump the last candy bar my "Sold Out" signal will operate to display a "Sold Out" sign through a window formed in the door of the cabinet.

The use of a "Sold Out" signal is advantageous in a multicolumnar machine to avoid the annoyance and delay to a user of depositing money with the expectation of obtaining a particular candy bar only to find that the machine is depleted of this bar and necessitating the operating of the coin return to have the money returned. With my improvement a glance at the column will advise a purchaser that a column is empty and if this column contains the only bar in which the user is interested, time and trouble will be saved. In addition, the window normally displays the price of the particular bar of a column. This information is always necessary and is glanced at by a prospective user. My "Sold Out" signal is displayed in conjunction with the price information and is so arranged that it blanks this when a column is empty.

One object of my invention is to provide a simple and convenient "Sold Out" signal for shelf type merchandising machines.

Another object of my invention is to provide an improved construction for mounting my "Sold Out" signal on the door of the cabinet normally giving access to the shelves for loading the machine.

A further object of my invention is to provide a flexible, simple operating mechanism for selectively displaying a "Sold Out" signal on a column of a multicolumnar merchandising machine when the column is depleted of merchandise.

A further object of my invention is to associate the "Sold Out" signal with a price signal which may be simply and conveniently adjusted to indicate the price of the merchandise in a column in such a manner that the "Sold Out" signal will blank the price signal when it is displayed.

Other and further objects of my invention will appear from the following description.

In the accompanying drawings, which form part of the instant specification and which are to be read in conjunction therewith and in which like reference numerals are used to indicate like parts in the various views:

Figure 1 is a front elevation of a candy merchandising machine fitted with my invention drawn on a small scale.

Figure 2 is a fragmentary sectional view taken along the line 2—2 of Figure 1 drawn on an enlarged scale.

Figure 3 is a fragmentary sectional view taken along the line 3—3 of Figure 2.

In general my invention contemplates the provision of a plurality of windows in the door of a merchandising machine. Means are mounted for pivotally positioning a price signal behind each window so that a user may see at a glance the respective prices of each column. Pivoted members are mounted on the door in any suitable manner normally biased to interpose a "Sold Out" signal between the price signal and the window so that the "Sold Out" signal becomes visible through the window and the price information is blanketed. Means are provided for holding the "Sold Out" signal in a position clear of the window whenever the uppermost shelf of a column is extended to support merchandise. Whenever the uppermost shelf is pivoted to dump the merchandise the "Sold Out" signal moves to view in the window under the influence of the biasing means.

More particularly referring now to the drawings, a shelf type candy merchandising machine shown in Figure 1 and indicated generally by the reference numeral **10** is provided with a door **12**, which is adapted to be swung to open position to give access to the shelves. An operator arriving at a machine may find all or some of the shelves dumped to vertical position occasioned by purchases made by users. When the door is open the shelves are adapted to be positioned to a horizontal position by a resetting mechanism forming part of the merchandising machine after which candy may be placed on the shelves in the restocking of the machine. The door is provided with a plurality of windows **14** visible in front of the machine. Candy bars may be displayed in a plurality of compartments **16** and a push button or plunger **18** for operating the delivery mechanism is provided for each column.

The door **12** carries a bracket **20** extending horizontally therealong secured thereto by means of rivets **22** or in any other suitable manner. A plurality of pins **24** are carried by the bracket **20** immediately above each window **14**. Pivotally mounted on each pin **24** I provide a segment **26** which is advantageously painted white or some light color. A spring **28** urges the segment **26** against a bushing **30** carried by each pin **24**. The segment **26** is adapted to be manually positioned to display price information through the window **14**. As can be seen by reference to Figure 3, two price signs—"5¢" and "10¢"—are carried upon each segment **26**. In Figure 3 the right-hand segment viewed from behind, which is the left-hand segment viewed from the front, displays the 5¢ price, while the adjacent segment **26** displays the 10¢ price. The friction generated by the pressure of spring **28** causes the segment to move against the bushing **30** and thus maintain the position to which it is set manually by an operator. Pivoted to the bracket **20** by means of pins **28'** I provide a plurality of members **31**. Each of the members **31** is provided with an arcuate slot **32'** through which the bushing **30** passes. The slot coacting with the bushing serves to limit the motion of each member **31** around its respective pivot **28'**. The pivot **28'** is positioned to one side of the center of mass of the member **31** so that the weight of the member will tend to move it to the position occupied by the central member in Figure 3, that is, with the "Sold Out" signal behind the window and in front of the segment **26**. The eccentric positioning of the member **31** with respect to its pivot serves to bias the member to move to a position

where it can be viewed through the window. The upper portion of the member 31 is provided with a flange 32. The door 12 is provided with a lining sheet 34 secured thereto in any suitable manner. A plurality of brackets 36 are secured to the lining 34. A plurality of bolts 38 are mounted in the lining sheet 34 adjacent its upper portion. The lining is also formed with a plurality of openings 40. A plurality of levers 42 are formed with openings through which the bolts 38 are positioned. Each bolt 38 carries a spring 44 maintained on the bolt by a nut 46. The spring 44 thus urges the lever 42 against the lining 34. One end 48 of the lever carries a rod 50 which extends downwardly through the guide bracket 36 with the lower end 52 of the rod contacting the flange 32 of the member 31. The spring 44 normally urges the lever to the position shown in Figure 2, that is, with the end 48 in generally horizontal position. This is accomplished by making the central portion 54 of the lever extend at right angles to the end 48 of the lever. In this manner the spring 44 will tend to seat the portion 54 of the lever against the lining 34. When the end 48 is horizontal the parts are in position to permit the member 31 to pivot to display position, that is, with the "Sold Out" signal in operative condition. The right-hand side of the lever 42 is provided with a cam portion 56. When the uppermost shelf 60 is moved to horizontal position its edge will coact with the cam 56 to rotate the lever 42 in a counterclockwise direction around the lower edge of the angle formed by the left-hand portion of the lever and the vertical portion 54 bearing against the lining plate 34. This moves the rod 50 downwardly and pivots the member 31 through the flange 32 to move the "Sold Out" signal clear of the window. When the upper shelf 60 is dumped, the spring 44 seats the vertical portion 54 against the lining plate 34 and raises the rod 50 to permit the "Sold Out" signal to swing into view behind the window. The "Sold Out" signal may advantageously be painted red or any color differing from the price segment, so that a user can tell at a glance that a column of merchandise is empty. Inasmuch as the upper shelves of each column may vary slightly in width, it is not desirable that the lever and cam 56 coact with the shelves with great precision. My mounting means is such that allowances are automatically made for variations in the dimensions of the parts without affecting the operation of my signal.

In use the door is swung open and immediately all of the levers 42 will be moved by the springs 44 so that the rods 50 are retracted enabling all the "Sold Out" signals to be viewed. An operator can glance at the front of the door when open and see all of the "Sold Out" signals displayed. The price segments 26 are readily accessible when the door is open and these can be set for the various columns. The machine is then loaded and in this process the upper shelf 60 is moved to horizontal position, after which merchandise is placed upon the shelf. When the door is closed, each of the cams 56 will strike the edge of respective shelves 60 and cause the lever 42 to rotate to move its end 48 downwardly. This causes the rods 50 to move downwardly and to move all of the "Sold Out" signals clear of the windows. As a column becomes depleted of merchandise and the uppermost shelf pivots downwardly clear of the cam 56, the lever 42 will again move to the horizontal position and retract its rod 50 to permit the "Sold Out" signal to move under the influence of its bias to position to be viewed through the window.

It will be seen that I have accomplished the objects of my invention. I have provided a simple and convenient "Sold Out" signal for shelf type merchandising machines which is mounted on the door of a cabinet in readily accessible position. I have provided a pricing signal adapted to be viewed through the same window as the "Sold Out" signal and adapted to be blanketed by the

"Sold Out" signal when a column is depleted of merchandise. My price signal may be readily adjusted to inform a user of the price of the merchandise in a particular column. My "Sold Out" signal is so constructed that it need not be made with precision and will readily accommodate itself for differences in dimensions of respective upper shelves with which my signal cooperates.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of my claims. It is further obvious that various changes may be made in details within the scope of my claims without departing from the spirit of my invention. It is therefore to be understood that my invention is not to be limited to the specific details shown and described.

Having thus described my invention, what I claim is:

1. In a columnar merchandising machine, a housing, a door for the housing, a plurality of pivoted shelves adapted to hold articles and to be dumped successively from the bottom of a column to the top to deliver articles and arranged in a tier, a window formed in the door corresponding to each column, a pivoted member mounted on the door behind the window and bearing a "Sold Out" indicator, means biasing the pivoted member to a position viewable through the window, a lever swingably mounted on the door adjacent the top shelf, means normally positioning the lever in a substantially horizontal position, means carried by the lever engageable by the top shelf when in horizontal position for swinging the lever against the action of the positioning means and permitting the positioning means to move the lever to horizontal position when the top shelf is dumped, a rod engaging the end of the lever and the pivoted member adapted to move the pivoted member against its biasing means to a position clear of the window in response to the swinging of the lever against the action of its positioning means, the construction being such that when the top shelf is dumped, the lever will swing to horizontal position to permit the pivoted member to swing to view behind the window.

2. In a columnar merchandising machine, a housing, a door for the housing, a plurality of pivoted shelves adapted to hold articles and to be dumped successively from the bottom of a column to the top to deliver articles and arranged in a tier, a window formed in the door corresponding to each column, a price indicator positioned behind the window and viewable therethrough to indicate the price of the articles in the column, a pivoted member mounted on the door behind the window and bearing a "Sold Out" indicator, means biasing the pivoted member to a position viewable through the window, a lever swingably mounted on the door adjacent the top shelf, means normally positioning the lever in a substantially horizontal position, means carried by the lever engageable by the top shelf when in horizontal position for swinging the lever against the action of the positioning means and permitting the positioning means to move the lever to horizontal position when the top shelf is dumped, a rod engaging the end of the lever and the pivoted member adapted to move the pivoted member against its biasing means to a position clear of the window in response to the swinging of the lever against the action of its positioning means, the construction being such that when the top shelf is dumped, the lever will swing to horizontal position to permit the pivoted member to swing to view behind the window and in front of the price indicator.

3. A columnar merchandising machine as in claim 2 in which said pivoted member comprises a plate, means for mounting the plate with its pivot eccentric of the center of gravity of the plate whereby said plate will tend to rotate by gravity, stop means for positioning the plate behind the window, and means carried by the plate for

engaging the rod whereby movement of the rod in one direction will swing the plate clear of the window and movement of the rod in the other direction will permit the plate to swing to view behind the window.

4. A columnar merchandising machine as in claim 2 in which said lever is formed with a bent portion intermediate its ends extending generally normal to the axis of the lever, said positioning means comprises a spring adjacent the bent portion adapted to bias the bent portion to seat against the door.

5. A columnar merchandising machine as in claim 2 in which the means carried by the lever engageable by the top shelf comprises an upwardly directed cam surface normally positioned adjacent the locus of movement of the edge of the shelf.

6. A columnar merchandising machine as in claim 2 in which said price indicator comprises a plate, means for mounting the plate for swingable movement behind the window and friction means for holding the plate in the position to which it is moved manually, said price indicator bearing several price legends, the construction being such that the price indicator may be manually adjusted to display an appropriate price behind a window.

7. In a columnar merchandising machine, a housing, a plurality of pivoted shelves adapted to hold articles and to be dumped successively from the bottom of a column to the top to deliver articles and arranged in a tier, a window formed in the housing corresponding to each column, a pivoted member mounted on the housing behind the window and bearing a "Sold Out" indicator, means biasing the pivoted member to a position viewable through

the window, a lever swingably mounted on the housing adjacent the top shelf, means normally positioning the lever in a substantially horizontal position, means formed on the lever independent of said top shelf and engageable by the top shelf when in horizontal position for swinging the lever against the action of the positioning means and permitting the positioning means to move the lever to horizontal position when the top shelf is dumped, said means formed on said lever being free of said top shelf when said shelf is dumped, a rod engaging the end of the lever and the pivoted member adapted to move the pivoted member against its biasing means to a position clear of the window in response to the swinging of the lever against the action of its positioning means, the construction being such that when the top shelf is dumped, the lever will swing to horizontal position to permit the pivoted member to swing to view behind the window.

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