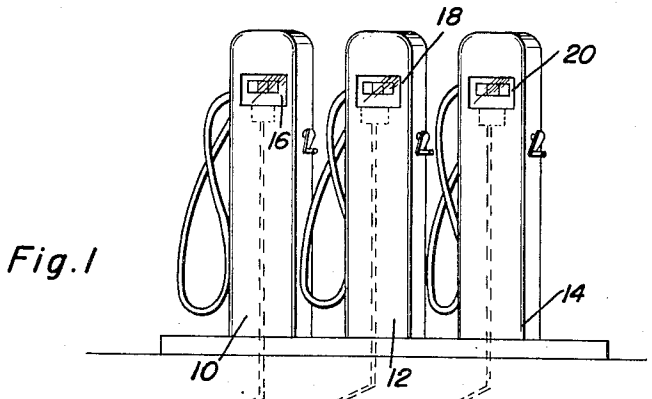
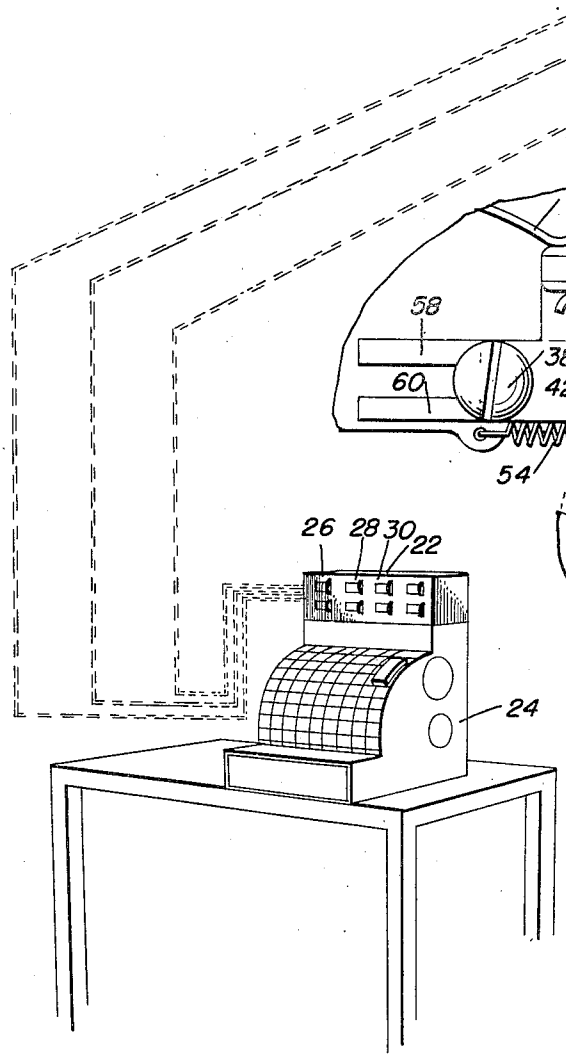
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INDICATOR FOR GAS PUMPS

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Fig. 1





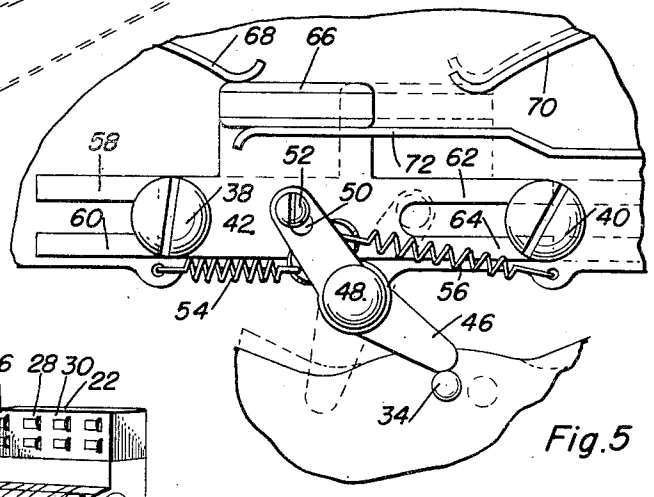


Fig. 5

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INDICATOR FOR GAS PUMPS

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Fig.2

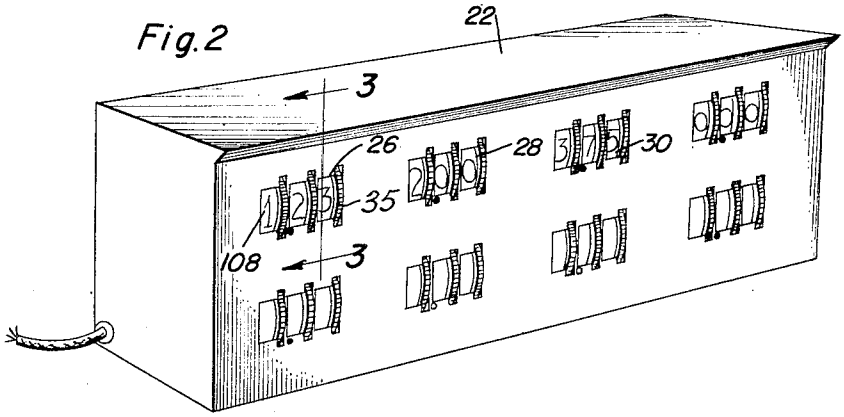


Fig.6

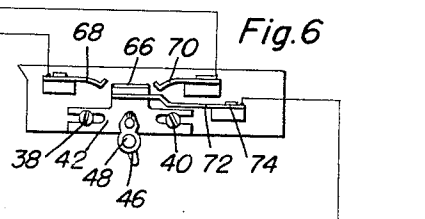
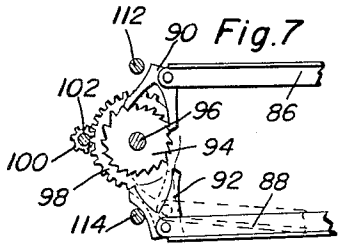
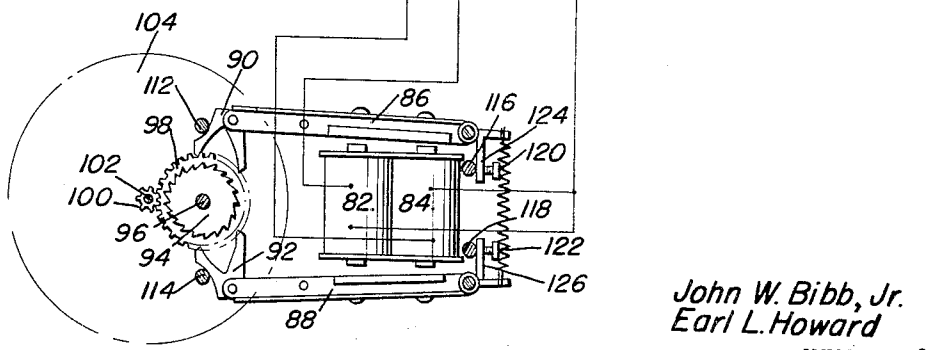


Fig.7





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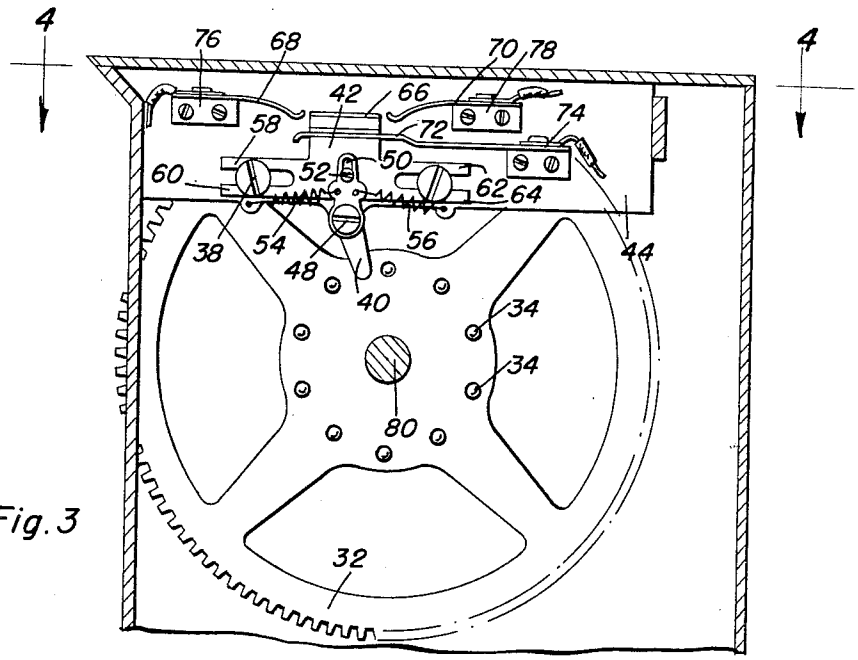


Fig. 3

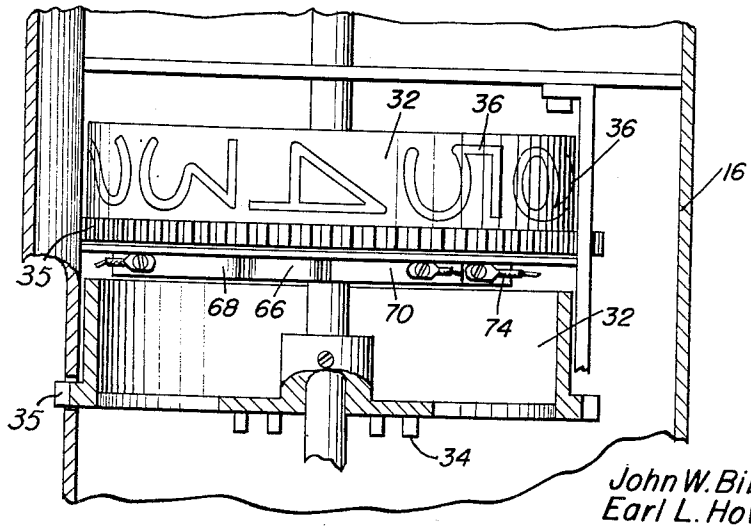


Fig. 4

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INDICATOR FOR GAS PUMPS

John W. Bibb, Jr., and Earl L. Howard, Hammond, La.

Application September 16, 1954, Serial No. 456,453

1 Claim. (Cl. 200—30)

This invention relates to a remote indicator for gas pumps and has for its primary object the provision of means for indicating to a cashier the exact amount of a sale at a particular gas pump at the time of the sale at a location remote from the fuel pump.

In multiple pump gasoline stations serious losses can occur because of a cashier's inability to continuously observe the various fuel pumps and thereby determine the amount of the sale. Because of comparatively long driveways and peak hour rushes it is often impossible for the cashier at the cash register remote from the fuel pumps to watch the entire operation all of the time. Therefore, this invention provides means for automatically informing the cashier of the actual sale at each of the gasoline or other fuel pumps at the time of the sale thereby eliminating such losses as might otherwise occur.

The construction of this invention features a novel actuation device for actuating an indicator setting device remote from the fuel pump. The actuation device includes means responsive to the movement of the sales indication drums at the fuel pump which are responsive to the flow of fluid.

Still further objects and features of this invention reside in the provision of a remote indicator for gas pumps that is simple in construction, substantially foolproof in operation, and inexpensive to manufacture thereby permitting wide distribution and utilization.

These, together with the various ancillary objects and features of the invention which will become apparent as the following description proceeds, are attained by this indicator for gas pumps, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example, wherein:

Figure 1 is a schematic view illustrating the manner in which the sales of a multiple pump gasoline station may be indicated at the cash register remote from the fuel pumps;

Figure 2 is a perspective view of the indicator adapted to be mounted on a cash register or the like;

Figure 3 is a sectional detail view of the actuation device comprising one of the important elements of the invention;

Figure 4 is a sectional view as taken along the plane of line 4—4 in Figure 3;

Figure 5 is an enlarged detail view illustrating the manner of operation of the actuation device and further indicating by phantom lines the relative positions which the operating members of the actuation device can attain;

Figure 6 is a schematic diagram illustrating the connection between the actuation device and the indicator setting device; and

Figure 7 is another view of the operating mechanism of the indicator setting device showing the manner in which the pairs of pawls actuate the ratchet wheel.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numerals 10, 12 and 14 generally designate fuel pumps which are

arranged in any convenient manner in a gasoline station and which are designed to provide gasoline or other suitable fuel to motor vehicles in the conventional manner. Suitable indicators as at 16, 18 and 20 are provided for indicating the quantity of gasoline or other fuel delivered and the actual cost thereof. It is the primary purpose of this invention to provide an indicator as designated at 22 for indicating to the cashier located at a cash register 24 remote from the gasoline pumps 10, 12, 14 and such other fuel pumps as may be installed of the actual sale of gasoline at each of the pumps at the time of the sale. The indicator 22 includes a housing and therefore has suitable visual indicators as at 26, 28 and 30 visible through windows in the housing for providing an indication of the actual sale at the gasoline pumps 10, 12, 14, respectively.

Attached to each of the money wheels or drums 32 of each of the indicators 16, 18 or 20 are a plurality of spaced pins 34. The drums 32 have manual reset teeth 35 thereon as well as suitable indicia 36 thereon which is visible so as to indicate the posititon of the drums 32, the drums 32 being responsive to and controlled by flow of fuel from the pump through conventional fluid flow metering devices.

By means of a pair of studs 38 and 40 a contact block 42 is mounted for linear movement on the frame 44 adjacent the drum 32. A pawl 46 is pivotally mounted as at 48 for pivotal movement relative to the frame 44. The pawl 46 has a slot 50 therein and is pivotally and vertically slidably mounted relative to the block 42 as at 52. Springs 54 and 56 are terminally attached to the frame 44 and to the pawl 46 for resiliently holding the pawl 46 in an initial position such as can be seen in Figure 3.

The block 42 has bifurcated ends forming furcations 58 and 60 between which the stud 38 is received and furcations 62 and 64 receiving the stud 40 therebetween. A contact element 66 is mounted on the top of the block 42 and is adapted to engage successively the resilient contact members 68 and 70. The contact block is slidable relative to a contact element 72 which is attached to a terminal 74 mounted on the frame 44 while the switch contacts 68 and 70 are mounted on other terminal blocks 76 and 78 on the frame 44. The drum 32 is of course mounted on a shaft 80 for rotation in accordance with the amount of fuel delivered and upon rotation a pin 34 engages the pawl 46 to move the block 42 so that the contact 66 will engage the switch contact 68 completing an an operative electrical circuit. However, when the pin 34 engaging the pawl 46 passes beyond the pawl, the stored energy in the springs 54 and 56 will return the block so that the contact 66 will engage the switch contact 70 to complete a successive operative electrical circuit.

Closure of the circuit first between the contact 66 and the switch contact 68 and then between the contact 66 and the switch contact 70 will successively actuate solenoids 82 and 84, see Figure 6. Successive actuation of the solenoids 82 and 84 will cause successive actuation of the armatures 86 and 88 thereof, the armatures carrying pairs of pawls 90 and 92 which are adapted to engage in a manner as can be best seen in Figure 7 the ratchet wheel 94 mounted on a shaft 96 which drives a gear 98 engaging a gear 100. The pairs of pawls 90 and 92 are provided to insure a more positive action since while one of the pawls of one of the pairs of pawls engages and holds the one pair of pawls in engagement with the ratchet wheel 94, the other pawl of the one pair of pawls will because of its angular relationship with the ratchet wheel drive the ratchet wheel by rotation thereof. The gear 100 is mounted on a shaft 102 on which an indicator wheel 104 of one of the indicators 26, 28 or 30 of the composite indicator 22 is mounted.

The operation of this remote indicator for gas pumps

is therefore quite apparent. Upon rotation of the money wheel or drum **32** due to operation of the shaft **80**, the pins **34** will engage the pawl **46** to actuate the block **42** to cause successive engagement of the contact **66** with the switch contacts **68** and **70** thus successively exciting the solenoids **82** and **84** and causing successive operation of the armatures **86** and **88** and the pairs of pawls **90** and **92** carried thereby. The pawls **90** and **92** will successively engage the ratchet wheel **94** and upon the operation thereof the indicator drum **104** of the indicator elements **26**, **28** and **30** will be rotated to provide by means of the indicia **108** thereon the representation of the same sale indicated by the indicia **36**. The remote indicator may be manually reset by engagement of the projecting reset teeth **35**.

It is noted that the armatures **86** and **88** are interconnected by a spring **110** and that the pawls **90** and **92** engage stops **112** and **114** mounted in any suitable manner. Further, the positions of the armatures **86** and **88** are further controlled by means of stops **116** and **118** and adjustment screws **120** and **122** secured to depending portions **124** and **126** of the armatures **86** and **88**.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

In a remote indicator for sales at a fuel pump, a housing having a window therein, an actuation device in said housing, said actuation device comprising a drum having a plurality of annularly spaced pins thereon, said drum further having reset teeth disposed about the periphery thereof, said drum being in alignment with said window with said teeth extending outwardly of said housing, a frame adjacent said drum, a contact block mounted for linear movement on said frame, a switch contact mounted on said block, a pair of spaced switch members successively engaged by said switch contact, a pawl pivotally and slidably attached to said block, springs resiliently holding said pawl in an initial position, said pawl being pivotally mounted on said frame, said pawl being engaged by said pins upon rotation of said drum to move said contact block linearly, said springs being terminally attached to said pawl and said frame to move said block in the opposite direction to movement caused by said pins, studs carried by said frame, said block having bifurcated ends, said studs being received between the furcations of said bifurcated ends.

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