March 20, 1928.

1,663,168

D. F. MACK

PRICE INDICATING MACHINE

Filed July 3, 1926

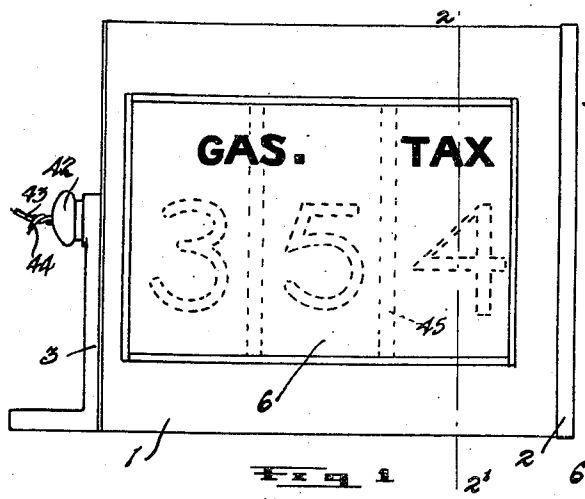

Fig 1

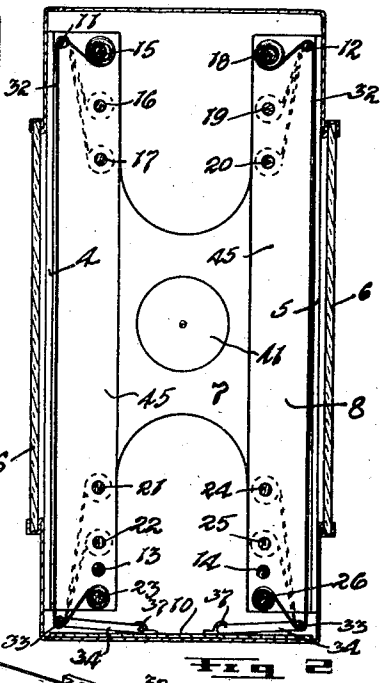

Fig 2

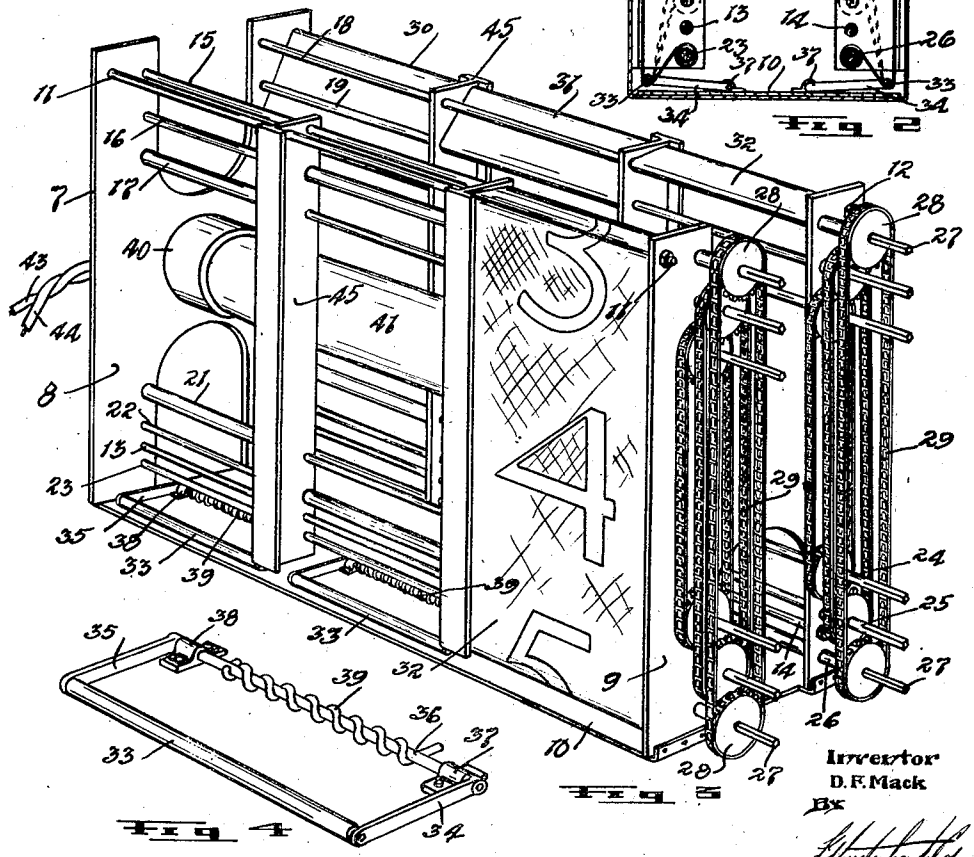

Fig 5

Fig 4

Inventor
D. F. Mack
By

Patented Mar. 20, 1928. 1,663,168

UNITED STATES PATENT OFFICE.

DAVID F. MACK, OF WINNIPEG, MANITOBA, CANADA.

PRICE-INDICATING MACHINE.

Application filed July 3, 1926. Serial No. 120,407.

The invention relates to improvements in price indicating machines and particularly a machine for indicating the price of gasoline or oil as used at filling stations, and an object of the invention is to provide a device whereby the price of say, the gasoline can be clearly indicated by day or night, such being brought about by providing illuminated price indicating numbers.

A further object of the invention is to provide a machine whereby one can easily and quickly change the numbers upon the price varying.

A further object is to construct the working parts of the machine in a simple, durable and inexpensive manner and so that it can be readily withdrawn from the contained casing for inspection and repair purposes.

With the above more important objects in view, the invention consists essentially in the arrangement and construction of parts hereinafter more particularly described, reference being had to the accompanying drawing, in which:—

Fig. 1 is a front view of an indicator.

Fig. 2 is a vertical sectional view at 2—2′ Figure 1.

Fig. 3 is a perspective view of the operating mechanism withdrawn from the casing, parts being removed to show the construction.

Fig. 4 is a perspective view of the lower roller and spring associated therewith.

In the drawing like characters of reference indicate corresponding parts in the several figures.

The casing 1 is substantially rectangular and has one end permanently closed and the other end provided with a removable cap 2. A bracket 3 is permanently secured to the closed end of the casing and can be used for supporting the machine in an elevated position from a post or such like. The casing is provided at the front and rear sides with substantially rectangular sight openings 4 and 5 which are closed by a transparent material such as glass 6. Within the casing are mounted the working parts of the machine, all assembled in a manner so that they can be bodily withdrawn for inspection or repair purposes.

A frame 7 is provided, this comprising opposing ends or upright plates 8 and 9, a bottom plate 10 permanently connected thereto and suitably located tie rods 11, 12, 13 and 14 connecting the ends. The upper ends of the plates 8 and 9 carry rotatably upper winding shafts 15, 16, 17, 18, 19 and 20 and the lower ends of the said plates carry also rotatably mounted winding shafts 21, 22, 23, 24, 25 and 26. All of these shafts have their forward ends projecting beyond the plate 9 and terminating in square ends 27 for the application of a key.

The forward ends of all the shafts are provided with similar chain wheels 28 and the chain wheels are connected in pairs by endless chains 29 at each side of the frame. The upper and lower shafts rotate together, the inner shafts rotate together and the intermediate shafts rotate together. Obviously the chain wheels and chains have to be arranged in the manner best shown in Figure 3 so that they clear one another. These sets of winding shafts are herein shown as each carrying three ribbons or belts 30, 31 and 32, the belts having their ends connected to the respective upper, inner and intermediate pairs of shafts and being preferably made from an opaque material having transparent portions thereon representing numbers, the numbers appearing in arithmetical progression from zero to 9.

The bottom of the casing carries a roller 33 for each belt, the belt in each instance passing first downwardly and then upwardly around said roller. The rollers are positioned vertically beneath the stay rods 11 and 12 and they are carried by side arms 34 and 35 secured permanently in each instance to a shaft 36, the shaft being rotatably mounted in bearings 37 and 38 secured to the bottom plate 10. A coil spring 39 is passed around the shaft 36 in each instance and has one end fastened to the shaft and the other end projecting and engaging with the bottom 10 of the frame. The arrangement of the spring is such that the roller 33 is pressed continuously downwardly to take up any slack which might appear in the belt. Obviously as the ribbon or belt is wound from the upper shaft onto the lower or vice versa, there will be a varying amount of slack in the belt, and this is taken up by the spring pressed roller in each case.

The plate 7 carries a lamp socket 40 in which an elongated electric lamp bulb 41 is placed, the bulb taking a position centrally between the belts which appear at either side of the frame. A contact plug 42 screws into

the socket from the exterior of the casing and is provided with feed wires 43 and 44.

Vertically disposed T-bars 45 are mounted on the reinforcing rods 11, 12, 13 and 14 and these provide bearings for the winding shafts and also serve to space the ribbons or belts, and it will be here observed that the heads of the bars overlie the outer face of the ribbons.

When the frame 7 is passed into the casing 1, the ribbons take a position immediately behind the glasses 6, and obviously when the lamp is illuminated, the numbers appearing on the ribbons will be clearly visible from the exterior. I have herein shown the words "Gas." and "Tax" as printed on the upper part of the glass, the letters "Gas." being an abbreviation for "gasoline".

In referring to Figure 1 it will be seen that the numbers 35 appear under "Gas." and the number 4 under the word "Tax," which means that the price of gasoline is thirty-five cents and the government tax is four cents. If the price of gasoline or the government tax changes the attendant can very readily change the ribbons by opening the cover 2 and utilizing a key on the square ends of the shafts to turn the ribbons until the proper numbers appear.

With this device so set up, it can be clearly read when approaching from either direction, and it can have the same numbers visible at both sides, or it can be utilized to indicate at one side the price of a lower grade of gasoline and at the other side to indicate the price of a higher grade of gasoline. Obviously by increasing the length of the casing and utilizing more ribbons other prices and information could be displayed.

What I claim as my invention is:—

1. A price indicating machine comprising a casing having one end closed and the other open and provided in the sides with sight openings, a removable cap closing the open end of the casing, a frame insertable within the casing through the open end thereof and presenting opposing end plates and a connecting base plate, upper and lower guide members carried by the frame and located in the upper corners of the casing, upper and lower sets of winding shafts rotatably mounted in the end plates, said shafts having their forward ends square and contained within the cap receiving end of the casing, chain wheels secured to the latter ends of the shafts, chains connecting the chain wheels in pairs, winding ribbons arranged side by side and passing over the guides and having their ends secured to the pairs of shafts, said winding ribbons being opaque and having transparent portions appearing thereon and indicating numbers arranged in arithmetical progression throughout the length of the ribbons and a centrally disposed illuminated light carried by one end of the frame.

2. A price indicating machine comprising a casing having one end open and provided in the sides with sight openings, a removable cap closing the latter end of the casing, a frame insertible within the casing through the open end and presenting opposing end plates and a connecting bottom plate, upper stay rods connecting the upper corners of the end plates, upper and lower sets of winding shafts rotatably carried by the end plates and having their forward ends terminating in square ends located in the open end of the casing, chain wheels secured to the latter ends of the shafts, chains connecting the chain wheels in pairs, a plurality of winding ribbons arranged side by side and passing over the stay rods and having their ends connecting the shafts in pairs, said ribbons being opaque and having transparent portions indicating numbers arranged in arithmetical progression throughout the length of the ribbons, downwardly spring pressed rollers carried by the bottom plate and engaging the ribbons and an illuminating lamp carried by the frame and interposed between the sets of ribbons at opposite sides of the frame.

Signed at Winnipeg this 21st day of June 1926.

DAVID F. MACK.