Dec. 23, 1924. 1,520,514

E. C. SNODGRASS

REGISTER FOR LIQUID PUMPS

Filed March 25, 1924 2 Sheets-Sheet 1

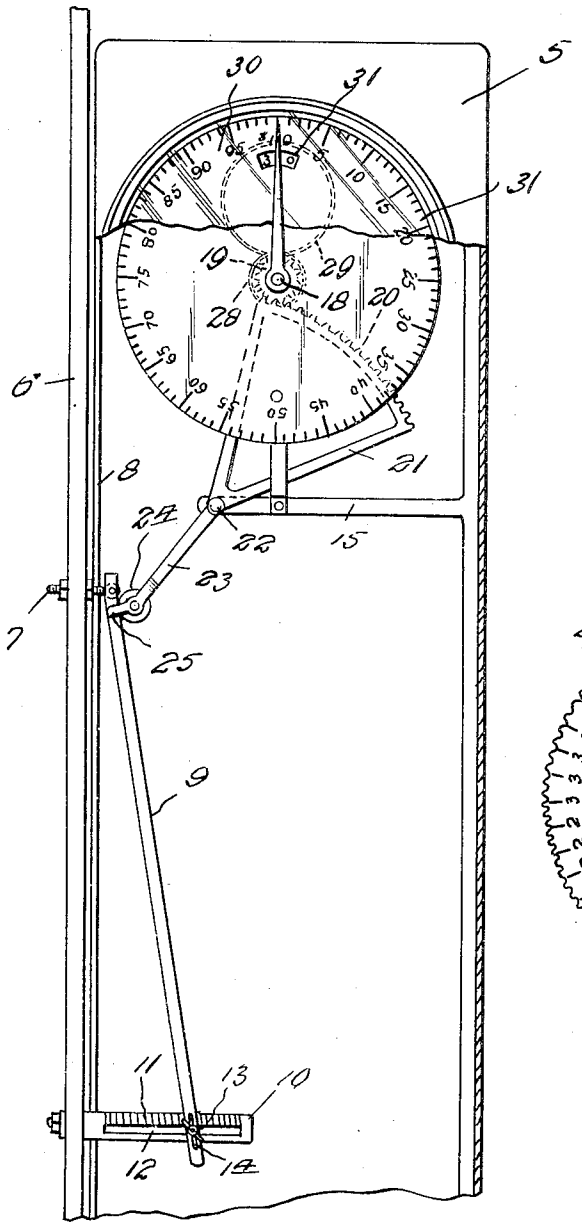
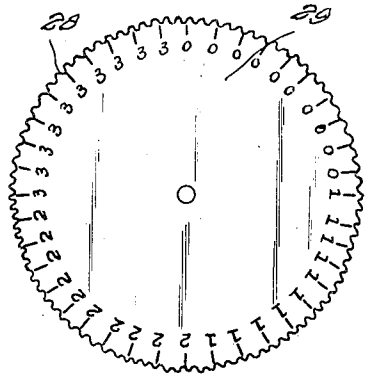


Fig. 1.

Fig. 4.



Witnesses:
F. L. Fox,

E. C. Snodgrass,
Inventor

By Clarence O'Brien.
Attorney

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REGISTER FOR LIQUID PUMPS

Filed March 25, 1924 2 Sheets-Sheet 2

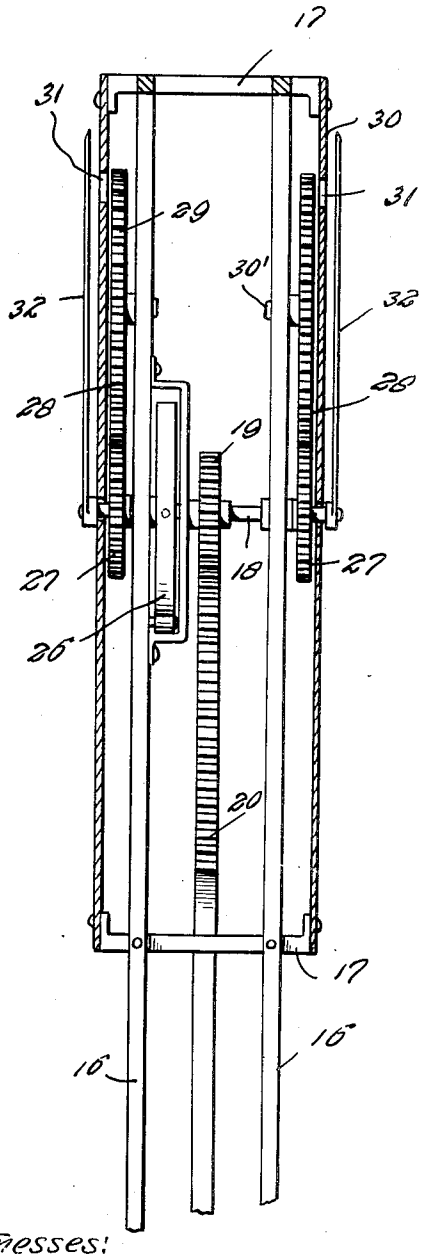


Fig. 2.

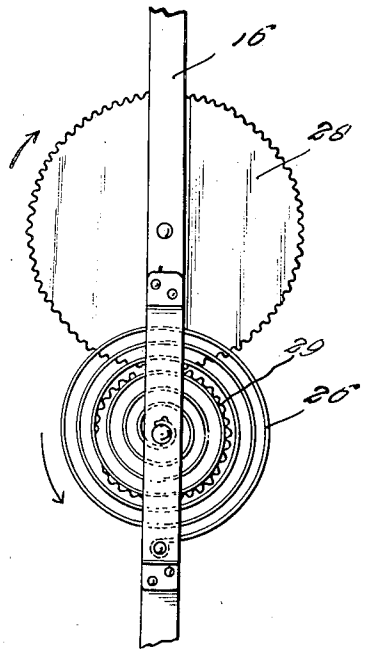


Fig. 3.

Witnesses:
H. L. Hoy.

E. C. Snodgrass,
Inventor

By Clarence O'Brien.
Attorney

Patented Dec. 23, 1924. 1,520,514

UNITED STATES PATENT OFFICE.

ELIJAH C. SNODGRASS, OF LUBBOCK, TEXAS.

REGISTER FOR LIQUID PUMPS.

Application filed March 25, 1924. Serial No. 701,871.

To all whom it may concern:

Be it known that I, ELIJAH C. SNODGRASS, a citizen of the United States, residing at Lubbock, in the county of Lubbock and State of Texas, have invented certain new and useful Improvements in Registers for Liquid Pumps, of which the following is a specification.

In carrying out the present invention it is my purpose to provide a register that is primarily but not specifically adapted for attachment to gasolene or oil pumps wherein the fuel may be sold in unequal lots, that is, it need not necessarily be sold in amounts of one, two, three, four or five, etc., gallons or one, two or three quarts as is now the general case in gasolene and oil pumps universally used. In other words, the nature of this register is such as to permit the material to be dispensed by pennies worth in contradistinction to certain stated amounts.

It is therefore the primary object of my invention to provide a highly novel and simplified form of register for gasolene and oil tanks wherein the purchaser of the fluid may buy amounts ranging anywhere from one penny up without necessitating his procurement of the same in equal amounts of quarts or gallons.

An additional object of the invention is to provide such a register that may be attached to practically all types of pumps now upon the market, the construction of the same being extremely simple and being of such a nature as to be readily taken apart for renewal or repair purposes, the device including comparatively few parts and these correlated in such a manner as to reduce the possibility of disarrangement to a minimum.

Yet another object is to provide such a registering mechanism wherein the same may be set at various positions whenever the price of the gasolene or oil varies.

Other objects will appear as the nature of the invention is better understood, the same comprising the novel form, combination and arrangement of parts set forth in the following specification, shown in the accompanying drawings and claimed.

In the drawings wherein like reference characters indicate corresponding parts throughout the several views,

Figure 1 is a fragmentary side elevational view partly broken away of my novel register,

Figure 2 is a detail vertical cross section thereof,

Figure 3 is an enlarged fragmentary sectional view through a portion of the register, and

Figure 4 is a front elevational view of one of the price indicating elements of my improved register.

With reference to the drawings and particularly to Figure 1, 5 indicates a desirable form of casing or the housing for my improved register mechanism which casing is attached as desired to the frame of the pump at a position closely adjacent to the pump rod 6 or a rod attachment for the pump rod and in parallel relation therewith. Carried by this pump rod or pump rod attachment at a suitable place thereon is a bolt 7 that extends inwardly through a vertical slot 8 in the wall of the casing 5 that is adjacent to said pump rod the inner end of this bolt being eyed as shown whereby the upper end of a relatively elongated rod 9 may be pivotally secured thereto. Also carried by the pump rod 6 at a point considerably beneath said bolt 7 is an inwardly extending bar 10 that passes inwardly through the slot 8 of said casing 5 and is formed with graduations 11 it being preferable that these graduations be numbered with numerals ranging from 1 to 50. The bar 10 is longitudinally slotted at 12 whereby the lower end of said rod 9 may be secured to this bar 10 through the medium of a bolt and nut connection 13 it being necessary that the lower end of said rod be slotted at 13 for obvious purposes. It will of course be understood that at various prices of the gasolene or oil it will be necessary for said rod 9 to be attached to the bar 10 at points thereon agreeing with the price of the fluid.

Within the casing 5 is one or more inwardly extending arms 15 to which is rigidly attached the lower ends of vertical bar members 16 which together with upper and lower

cross bar members 17 constitute the frame for my improved register mechanism. Journaled through these vertical bar members 16 is a horizontal shaft 18 upon which is keyed a relatively small spur gear 19 that is in mesh with the teeth 20 upon a segment 21, the gearing ratio between the teeth of this segment and said spur gear 19 being substantially two and one-half to one. Said segment 21 is pivotally connected at 22 to the before mentioned inwardly extending arm or arms 15 this segment also including an arm extension 23 that is bifurcated at its lower end and carries a roller 24 that has close contact with the actuating rod 9 carried by said pump rod or pump rod attachment 6. For maintaining this roller in permanent engagement with said rod the bifurcated end of the arm 23 is extended inwardly for providing fingers 25 for positioning upon opposite sides of said rod 9.

Surrounding the shaft 18 and being secured at one end thereto and at its opposite end to the adjacent vertical frame bar 16 is a band spring 26 which spring serves as a medium for returning the shaft 18 and consequently the segment 21 and other parts to be hereinafter described, to their normal positions, that is, as shown in Figure 7.

Adjacent the opposite ends of the before mentioned shaft 18 are relatively small spur gears 27 that are keyed to said shaft and mesh with teeth 28 upon the periphery of disk dials 29 that are freely rotatable upon pins 30 carried by the vertical bar members 16 of the frame mechanism for the register.

As more clearly shown in Figure 4 each of these disk dials 29 are numbered on their front faces from 0 to 3, there being ten of each of these indicating characters each group of characters extending around the disk a distance of substantially one-fourth of the dial. The gearing ratio between the dials 29 and gears 27 is approximately four to one.

Arranged upon opposite sides of the frame for this mechanism are stationary dials 30 each of which is formed with a central opening for allowing the passage of the opposite ends of said shaft 18. The front face of each of these stationary dials 30 is provided with indicating characters from 5 to 100 as more clearly shown in Figure 1. These indicating characters representing amounts from five cents to one dollar. Directly beneath the dollar mark of each of said dials 30 is an arcuate shaped slot 31 for permitting the indicating characters upon the disk dials 29 to be viewed. The front and rear walls of the before mentioned casing 5 are also provided with circular openings directly forwardly of each of the stationary dials 30 whereby the indicating mechanism may be viewed by the public it being preferable that transparent plates 31 be provided within these openings for preventing the entrance of dirt, rain or the like into the casing and consequently impairing the operating efficiency of the mechanism.

Attached to the opposite ends of the shaft 18 and movable over the front faces of the stationary dials 30 are pointers 32.

Let us consider that the price of the gasolene or oil is twenty cents per gallon and that the rod 9 has been properly set. In making a complete stroke on a five gallon pump the upward movement of the rod 9 will consequently control a swinging movement of the segment 21 in a direction toward the left the gear teeth thereof being in mesh with the pinion 19 will consequently rotate the shaft 18 a complete turn for thereby moving the pointers 32 around the stationary dials 30 to the one dollar mark, the character 1 upon each of the disk dials 31 will also show through the slots 31 of the said stationary dials 30.

Should the price of the gasoline or oil be fifty cents per gallon the rod 9 is of course properly adjusted and upon the upstroke of the pump rod or pump rod attachment 6 the segment 21 will be swung to the limit of its movement for thereby rotating the shaft 18 two and one-half times for bringing the pointers 32 to the indicating characters 50 upon said dials 30 and for also rotating the dials 29 to such a degree that the indicating characters 2 will show through the slots 31 in said stationary dials 30 for consequently registering two dollars and fifty cents.

In view of the above considered in conjunction with the accompanying drawings it is believed that the operation and advantages of a mechanism of this character will be at once appreciated by those skilled in the art. Even though I have herein set forth the most practical embodiment of my invention it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the appended claim.

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

In combination with a register including a dial and having a hand mounted for movement over the dial, a lever pivoted adjacent the register, means operatively connecting the lever with the hand to swing the hand simultaneously with the swinging movement of the lever, said lever being provided at its free end with spaced fingers and having a roller journaled between said fingers, a rod mounted for movement transversely of the register, a bar carried by the rod, a second rod adjustably connected with the bar and disposed approximately trans-

versely of the bar, a bolt pivotally connected with the second mentioned bar and connected with the first mentioned bar at a fixed point, the second mentioned bar being received between the fingers of the lever and bearing at its edge against the periphery of the roller, the parts being so arranged that the angle of disposition of the second rod with relation to the first mentioned rod may be changed by adjusting the second mentioned rod along the bar and whereby the swinging movement of the lever may be varied during the longitudinal movement of the first mentioned rod.

In testimony whereof I affix my signature.

ELIJAH C. SNODGRASS.