J. J. STUKEL.

TANK ALARM.

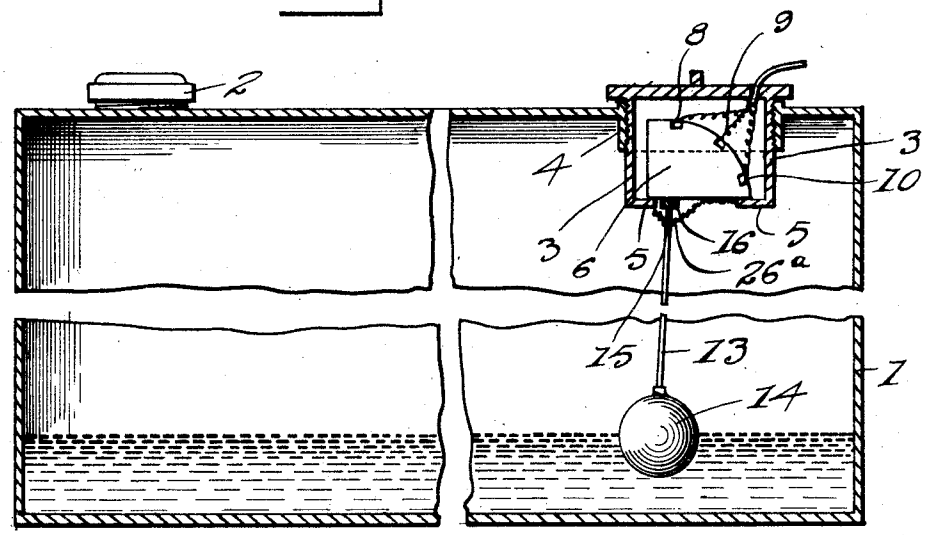
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1,185,144.

Patented May 30, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



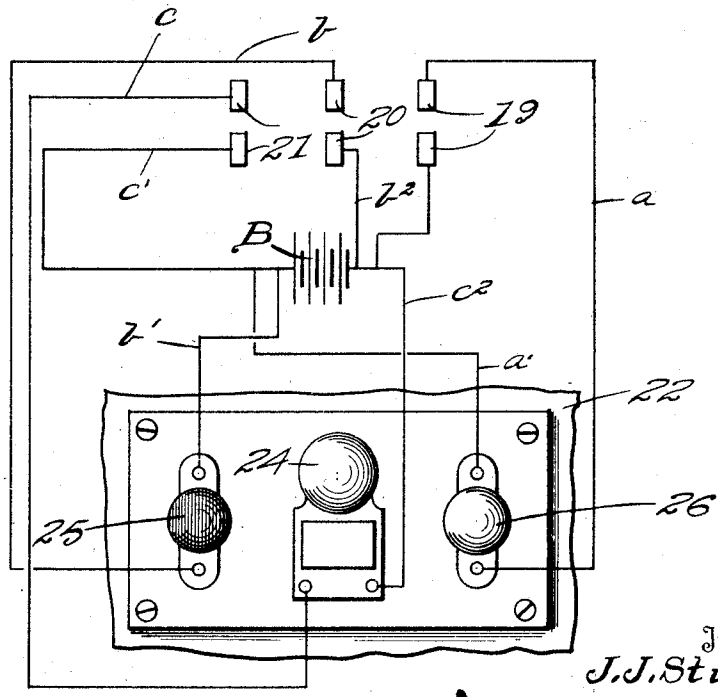


Fig. 5.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

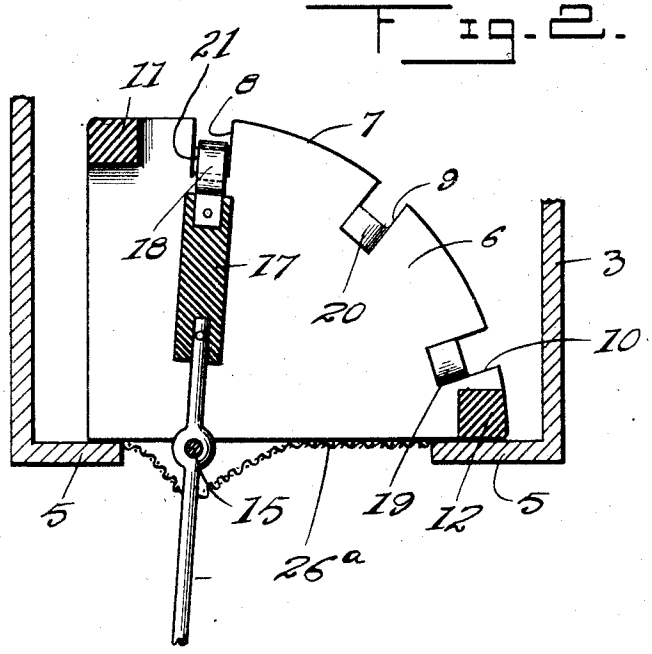


Fig. 3.

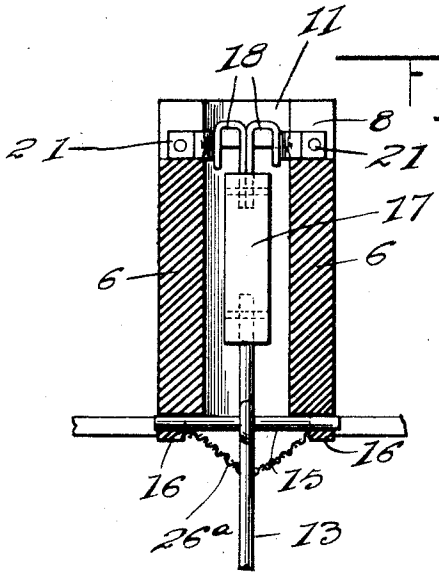
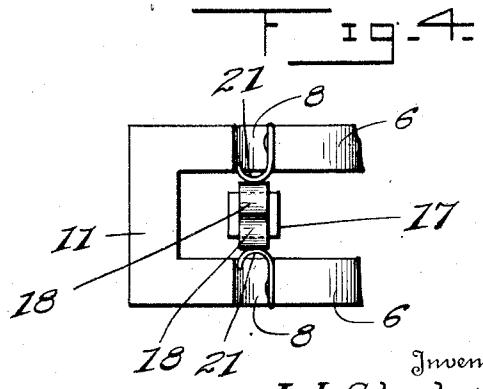


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE

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TANK-ALARM.

1,185,144. Specification of Letters Patent. Patented May 30, 1916.

Application filed April 9, 1915. Serial No. 20,243.

To all whom it may concern:

Be it known that I, JOHN J. STUKEL, a citizen of the United States, residing at Laurium, in the county of Houghton and State of Michigan, have invented certain new and useful Improvements in Tank-Alarms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to gasolene tank alarms, designed more particularly for indicating the height of gasolene in a tank support upon an auto vehicle, and one of the principal objects of the invention is to provide reliable and efficient means for indicating the height of gasolene in the supply tank of an automobile in such manner that the chauffeur may know when the gasolene is nearly run out, said alarm flashing a white light, and later a red light, and finally sounding a bell when the gasolene has reached a low level in the tank.

Another object of the invention is to provide an alarm for a supply gasolene tank for auto vehicles, said alarm comprising a float and a series of contacts which will display a small white light first, a red light after a short interval, and will sound a bell as an alarm when the gasolene is nearly exhausted, thus indicating to the chauffeur the condition of the supply tank at all times.

The foregoing and other objects may be attained by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view taken through a gas tank and shown broken away centrally, said tank having an alarm connected thereto and made in accordance with this invention, Fig. 2 is an enlarged sectional view of the contacts and the float rod pivoted to a cap or plug fitted in the top of the gasolene tank, the float rod being shown broken away, Fig. 3 is a detail sectional view showing the spring contacts connected to a piece of insulating material attached to the end of the float rod, the latter being pivoted to the spaced contact points, Fig. 4 is a detail horizontal sectional view of one pair of the contact plates, and Fig. 5 is a diagrammatic view of the electrical connections to the white and red lights and to the bell.

Referring to the drawings, the numeral 1 designates the gasolene tank provided with a filling cap 2. Fitted in the top of the tank is a contact support 3 in the form of a cap or plug screw threaded exteriorly to fit the threaded flange 4 in the top of the tank. The support 3 is provided with inturned flanges 5, and supported on said flanges are spaced fibrous non-conducting elements 6, each provided with a curved upper edge 7 and in said edge are notches 8, 9, and 10. The elements 6 are connected together by cross members 11 and 12. A float rod 13, to which a hollow float 14 is connected at its lower end is pivoted upon a rod 15 mounted in bearings 16 attached to the undersides of the elements 6. At the upper end of the float rod 13 is a piece of insulation 17 having connected thereto at the opposite sides thereof spring contacts 18. Connected to the supporting elements 6 at opposite sides of the notch 10 are spring contacts 19. In the notch 9 are similar spring contacts 20, and in the notch 8 are spring contacts 21.

Mounted on the dash board 22 or some other suitable or convenient point is a plate 23 having a bell 24 connected thereto, and at opposite sides of the bell are a red globe or bulb 25 and a white globe or bulb 26. Connecting wire a leads from one of the contacts 19 to the white light 26 and connector a' from white light to battery B. Connector a^2 leads from the battery to the other contact 19. Connector b leads from one of the contacts 20 to red light 25 and connector b' to battery B, and by connector b^2 from battery to the other contact 20. The bell circuit leads from contacts 21 to bell 24 through wire c and conductor c' leads from contact 21 to battery B, and through battery by conductor c^2 to bell 24. A piece of fabric 26^a is connected to the support 3, and the float rod 13 is extended through the fabric, as shown in Fig. 2, said fabric serving to keep the gasolene out of the way of the contact elements.

The operation of the device may be briefly described as follows: When the tank 1 is filled to the desired height, the float 14 is thrown to the left in Fig. 1 and the spring contacts 18 are moved into contact with the spring connectors 19. When the gasolene is running low in the tank, the spring contacts 18 are moved to contact with the spring members 20 which light up

the red bulb 25. When the contacts 18 are in the notch 10 and in contact with the springs 19, the white light 26 is lighted. When the float rod is nearly in a vertical position and the gasolene is nearly exhausted from the tank, the contacts 18 are in the upper notch 8 and contact with the springs 21 to ring the bell 24. A suitable switch may be conveniently located for switching out the bell.

From the foregoing it will be obvious that the driver of an automobile provided with the tank alarm will be notified by the white light that there is a given quantity of gasolene in the tank, and when the red light is flashed the gasolene is running low. When the bell 24 rings, it gives the alarm that the gasolene is practically exhausted from the tank.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined in the claims.

What is claimed is:—

1. A gasolene tank alarm comprising a support fitted in the top of the gasolene tank, non-conducting elements carried by said support, spring contacts at three points on said elements, a float rod, contact points connected to the upper end of said rod, a float secured to the lower end of said rod, a white light, a red light, a bell, and electrical connections between the spring contacts, the white light, the red light, and the bell for notifying the driver as to the condition of the gasolene in the tank.

2. A gasolene tank alarm comprising a support fitted in the top of the gasolene tank, relatively spaced non-conducting elements carried by said support, spring contacts at three points on each of said elements, a float rod pivoted to swing between said elements, contact points connected to the upper end of said rod, a float secured to the lower end of said rod, a white light, a red light, a bell, and electrical connections between the spring contacts, the white light, the red light, and the bell to indicate the height of gasolene in the tank.

3. A gasolene tank alarm comprising a hollow support fitted in the top of the gasolene tank, a pair of relatively spaced non-conducting elements fixed within the support, relatively spaced spring contacts carried by said elements, a float rod pivoted to said elements, contact points connected to the upper end of said rod, a float secured to the lower end of said rod, electric circuits including said spring contacts and a source of current, and signaling means arranged in said circuits.

4. A gasolene tank alarm comprising a hollow plug fitted in one wall of the tank, said plug having an opening in its bottom wall, an electric switch mounted within the plug, a pivoted switch operating rod having one end extending from the plug through the opening therein, a float secured to the outer end of said rod, and a flexible member extending across the opening in the plug to prevent gasolene from coming in contact with the switch, said rod passing through said member.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN J. STUKEL.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."