April 16, 1940. G. H. B. WEST 2,197,356

SPECIFIC GRAVITY MARKER PLUG FOR STORAGE BATTERIES

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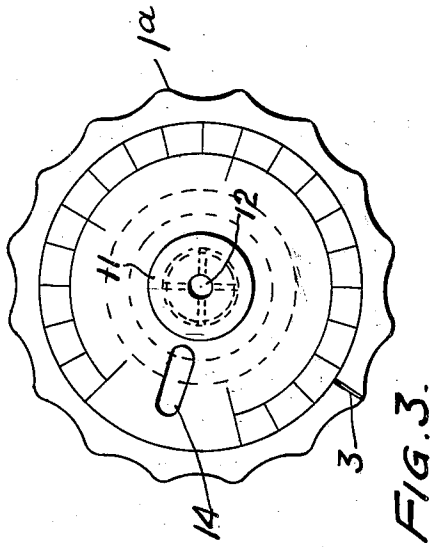


FIG. 3.

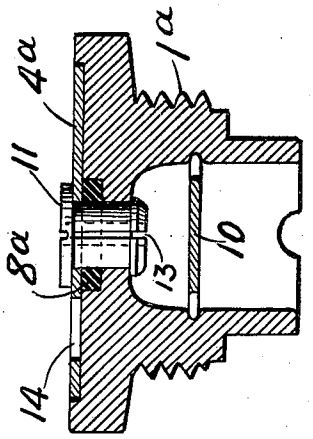


FIG. 4.

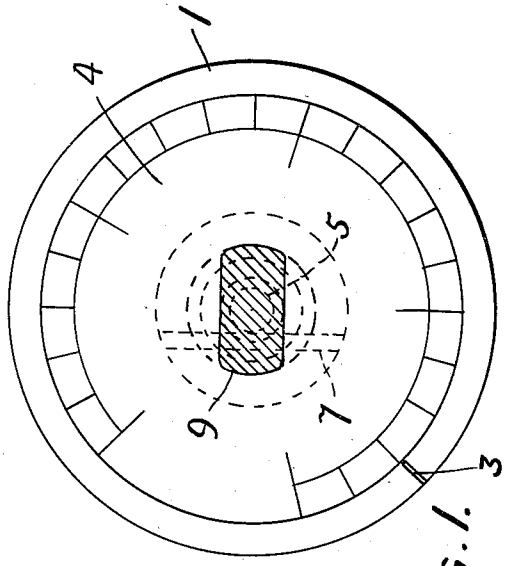


FIG. 1.

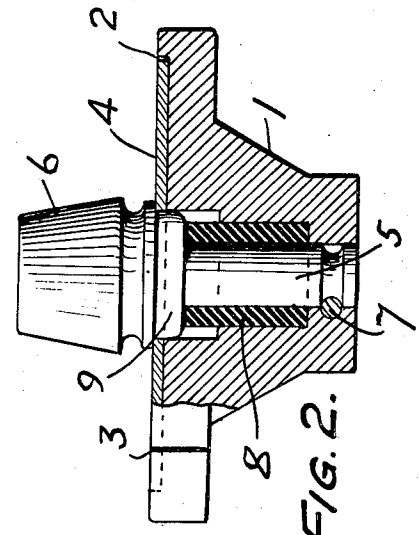


FIG. 2.

WITNESS:

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SPECIFIC GRAVITY MARKER PLUG FOR STORAGE BATTERIES

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2 Claims. (Cl. 116—133)

The principal object of the present invention is to provide convenient means for making a temporary record of the specific gravity of the electrolyte in the cell of a storage battery, which record will remain associated with the cell until another subsequent reading of the specific gravity can be taken for comparison.

Other objects of the invention will appear from the following description at the end of which the invention will be claimed.

Generally stated the invention comprises a plug adapted for insertion into the filling opening of the cover of the cell and having a body member held against motion relative to the cover by frictional engagement or otherwise and an indicating member revolubly mounted above the body member, indicia being provided on one of said members cooperating with an index on the other, means for manually turning and setting the indicating member to indicate the condition of the cell, as for example the specific gravity of the electrolyte, and a rubber ring interposed between the two members to apply friction to oppose accidental relative motion.

The invention also comprises the improvements to be presently described and finally claimed.

In the following description reference will be made to the accompanying drawing forming part hereof and in which,

Figure 1 is a top or plan view partly in section of a device embodying features of the invention.

Fig. 2 is an elevational view partly in section of the same.

Fig. 3 is a top or plan view illustrating a modification, and

Fig. 4 is a central sectional view of the device shown in Fig. 3.

Referring to the drawing, more particularly Figs. 1 and 2, 1 indicates a plug adapted for application to the vent opening in the cover of a storage battery container or cell, by reason of its conical form the plug is adapted for frictional engagement with openings of different diameters. In the outer face of the head of the plug there is a countersunk circular cavity or recess 2, and on the rim of the outer face of the plug there is demarked an index 3 which may be in the form of an inlay differing in color from the rest of the head. A dial disk 4 is revolubly mounted in the recess or cavity 2 and it is arranged for cooperation with the index 3. 5 indicates a spindle provided with a hand piece 6 and the shank of the spindle is provided with a deformed or oblong portion 9 which fits a corresponding opening in the disk 4 so that the two turn as a unit. The spindle 5 is revolubly mounted in the plug or body 1 and the pin 7 arranged in an annular groove in the spindle and engaging the body serves to retain the two parts together and to permit of rotation of the spindle and disk in respect to the body. 8 is a rubber ring or tube interposed between the spindle 5 and the plug 1, and it serves to prevent accidental or undesirable turning movement of the disk 4 in respect to the plug or body 1.

In servicing automobile starting and lighting batteries it is usual to take a reading of the specific gravity of each cell for comparison with subsequent similar readings. It is of course desirable that these readings be kept in readily accessible and accurate form, the described device is useful for this purpose.

Having ascertained the specific gravity the same is noted by properly positioning the dial on the disk 4 with respect to the index. The plug is then inserted in the vent of the cell being serviced and thus the record is kept with the cell, and by reason of the described construction of the device the record is accurately kept because the spindle 5 is held by the element 8 against accidental movement. The hand piece 6 is of course a means for turning the disk 4 in order to make the described setting of the device.

The construction and mode of operation of the modification shown in Figs. 3 and 4 are as above described except that the form of the plug 1^a is somewhat modified and it is provided with an external thread by means of which it can be made a more or less permanent attachment of the cell. The plug 1^a is provided with the usual baffle 10 and the pivot piece 11 by which the disk 4^a is pivoted in the recess is provided with an opening 12 thru it which constitutes the usual vent. The pivot element is provided with a split headed shank 13 so that it can be sprung into place in an opening in the plug or body 1^a. The rubber ring or washer 8^a arranged between the plug and the disk 4^a and around the pivot element 11 affords the necessary drag or friction for preventing accidental or undesired movement of the disk 4^a. This element 8^a is arranged in a recess provided for its reception. The finger slot 14 in the disk 4^a provides a means by which the disk can be turned in making a record of specific gravity.

By providing for frictional engagement between the body member and the cell cover, the indicating member can be turned with one hand with-

out having to hold the body member with the other. There is a distinct advantage in being able to set the device to the correct reading of specific gravity with one hand.

It will be obvious to those skilled in the art to which the invention relates that modifications may be made in details of construction and arrangement without departing from the spirit of the invention which is not limited in respect to such matters or otherwise than as the prior art and the appended claims may require.

I claim:

1. A device of the character described comprising an externally threaded plug having an axial opening thru it and having in the face of its head a circular recess, a dial disk arranged in the recess and having means for accurately turning it, a pivot element arranged thru the disk and thru the head of the plug and having spring feet and a friction disk encircling the pivot element and interposed between the plug and the disk.

2. A device of the character described and comprising, a plug having the lower part of its external surface shaped to interfit with the vent of the cover of a battery and having an axial opening through it and having in the face of its head a circular recess, a dial disk arranged in the recess and having means for accurately turning it, a pivot element arranged through the disk and through the head of the plug and having spring feet, and a friction disk encircling the pivot element and interposed between the plug and the disk.

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