L. E. KITCHEN.

OIL GAGE FOR MOTOR CARS.

APPLICATION FILED APR. 20, 1921.

1,395,682. Patented Nov. 1, 1921.

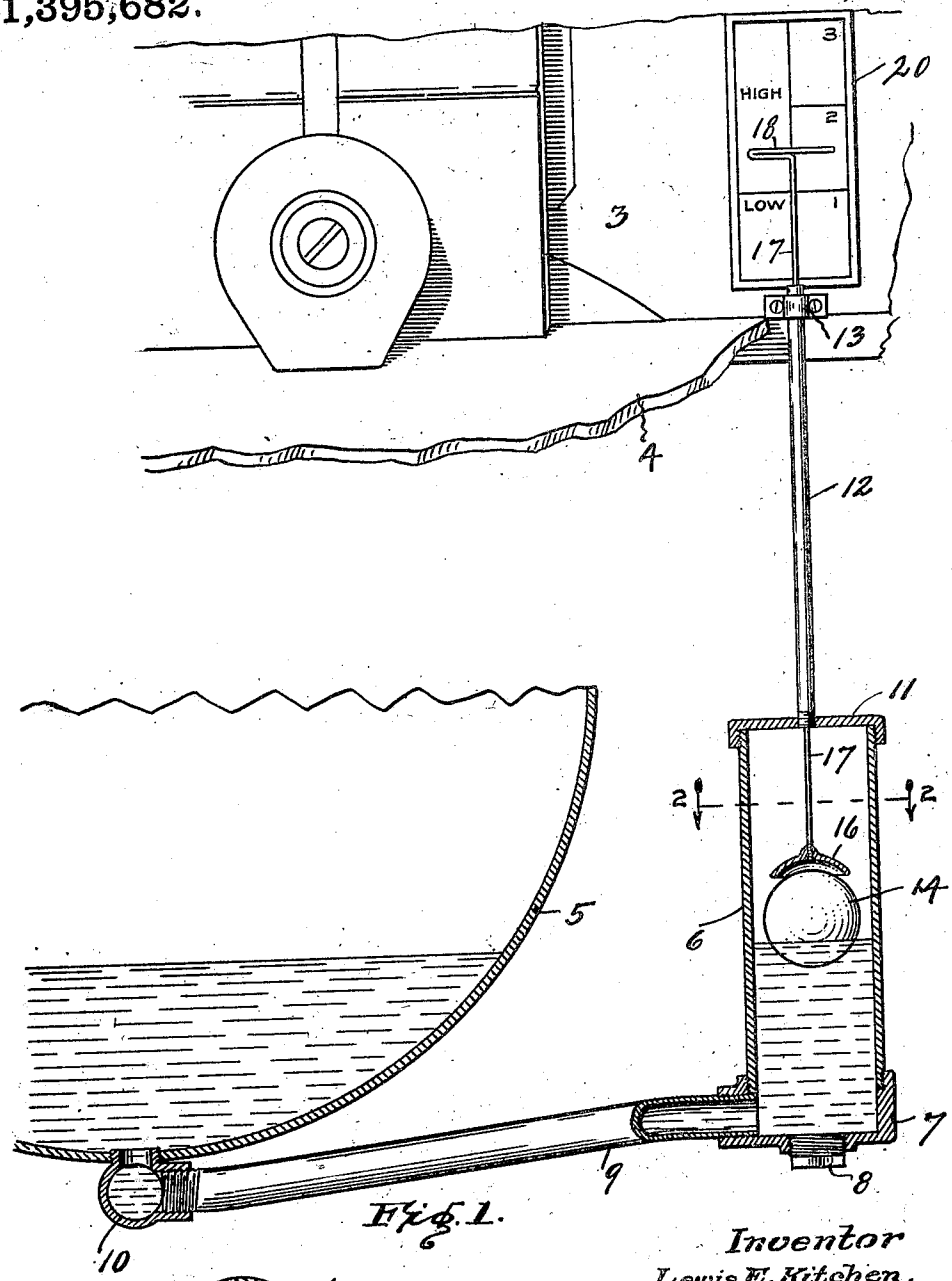


Fig. 1.

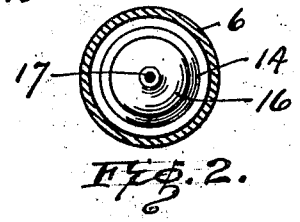


Fig. 2.

Inventor

Lewis E. Kitchen,

By Joseph A. Minturn

Attorney.

UNITED STATES PATENT OFFICE.

LEWIS E. KITCHEN, OF INDIANAPOLIS, INDIANA

OIL-GAGE FOR MOTOR-CARS.

1,395,682. Specification of Letters Patent. Patented Nov. 1, 1921.

Application filed April 20, 1921. Serial No. 462,825.

To all whom it may concern:

Be it known that I, LEWIS E. KITCHEN, a citizen of the United States, residing at Indianapolis, in the county of Marion and the State of Indiana, have invented new and useful Improvements in Oil-Gages for Motor-Cars, of which the following is a specification.

This invention relates to improvements in gages for indicating the quantity of lubricating oil in the crank case or other oil container of motor-cars at all times, on a dial in full view of the driver, whereby injury to the rubbing parts caused by the exhaustion of the lubricating medium without notice is avoided.

The above principal object, and other minor objects which will hereinafter appear, are accomplished by the mechanism illustrated in the accompanying drawing, in which:—

Figure 1 is a vertical section of my invention shown in operative assembly with associated parts of an automobile, and Fig. 2 is a horizontal section of the tube on the line 2—2 of Fig. 1.

Referring to the drawing, the dash 3, floor 4 and oil reservoir 5, of the crank case are of any usual and suitable construction. A vertical cylindrical tube 6 is long enough to reach from the bottom level of the oil reservoir 5 to or preferably above the highest or maximum level of the oil in said case. This tube may be of any suitable material, preferably aluminum, and screws into the threaded flange of a bottom member 7. The member 7 has a threaded hole through its bottom for clean-out purposes which is closed by a plug 8, and there is a threaded hole through its side to receive a pipe 9. The other end of the pipe is screwed into an L-shaped member 10 discharging from the extreme bottom of the oil reservoir 5. The pipe is bent as shown to bring the bottom of the tube 6 approximately on a level with the bottom of the reservoir 5 so the level of lubricant in the reservoir 5 will be shown in the tube. The tube 6 is closed at its upper end by a cap 11, in which a small pipe 12 is seated. The tube 6 is located so that pipe 12 extends up through the floor of the car to the dash 3, to which its upper end is secured by a clip 13.

Within the tube 6 is a hollow spherical float 14, preferably made out of celluloid or other light material that will not absorb the oil to add to its weight, or corrode or gum up in any degree. This float is of sufficiently less diameter than the inside diameter of the tube 6 to insure free movement of the float without hindrance by contact with the sides of the tube. The spherical shape of the float and its unattached assembly afford freedom of movement and distribution of wear that greatly extend its durability and usefulnes.

Resting upon the float 14 is a cap 16, having a concavity to receive the float of the same curvature as the latter and extends over enough of the float to hold it from vibrating and striking the sides of the tube 6 by the movement of the car. The drawing shows the cap slightly elevated above the float, but this is only for purposes of illustration, to make clear that the two members are separable, and in use the cap will rest upon the float.

Secured to the cap 16 is a rod 17, which passes up through the small pipe 12, and terminates beyond said pipe in a horizontal indicator 18, formed by bending the rod at right angles to its body-portion and then bending it in a reverse direction 180° upon itself and extending this horizontal member equally on both sides of the vertical body of the rod. A dial plate 20 is secured to the dash opposite the indicator, and is provided with suitable markings, as shown, to interpret to the driver the height of the oil in tube 6, and therefore in the oil reservoir 5.

The oil in the tube stands at the same height as the oil in reservoir 5, the float rides on the surface of the column of oil in the tube, and the cap resting on the float holds the rod and its indicator at a position opposite the dial plate to show the height of oil in the reservoir 5.

The operation of my invention is so obvious from the drawing and in connection with what has been said, that further explanation is unnecessary, and while I have here shown and described the best form of my device now known to me, it is obvious that many variations are possible without departing from the spirit thereof, and I therefore do not desire to be limited unduly nor any more than is required by the appended claims, and what I claim as new and wish to secure by Letters Patent, is:—

1. In an oil gage, a vertical tube having communication at its lower end with a recep-

tacle the contents of which is to be measured, a spherical float in the tube and of considerably less diameter than the bore of the tube, said float being free and unattached, a concave cap resting upon and receiving a portion of the float, a dial permanently located above the tube, and a rod attached at its lower end to the cap and having an indicator at its upper end coöperating with the dial.

2. In an oil gage for motor cars having a dash and an oil receptacle the contents of which is to be measured, a vertical tube having communication at its lower end with the bottom of the oil receptacle, a spherical float in the tube considerably less in diameter than the bore of the tube, a concave cap resting upon and receiving a portion of the float to restrain the lateral movement of the float which is otherwise unrestrained, a dial located upon the dash in sight of the driver of the car, and a rod attached at its lower end to the cap and having an indicator at its upper end coöperating with the dial.

3. In an oil gage for motor cars having a dash and an oil receptacle the contents of which is to be measured, a vertical tube, a pipe connecting the lower end of the tube with the bottom of the oil receptacle, a cap for the tube, a pipe attached to the cap and extending to and secured to the dash, a dial located on the dash, a spherical float free to move vertically in the tube, a concave cap resting upon and receiving a portion of the float to restrain the lateral movement of the float which is otherwise unrestrained, and a rod attached at its lower end to the cap and having an indicator at its upper end cooperating with the dial.

Signed at Indianapolis, Indiana, this the 18th day of April, 1921.

LEWIS E. KITCHEN.