July 29, 1941. H. L. HIETT 2,250,910

OIL DRAINAGE FUNNEL

Filed July 30, 1940

Fig. 1.

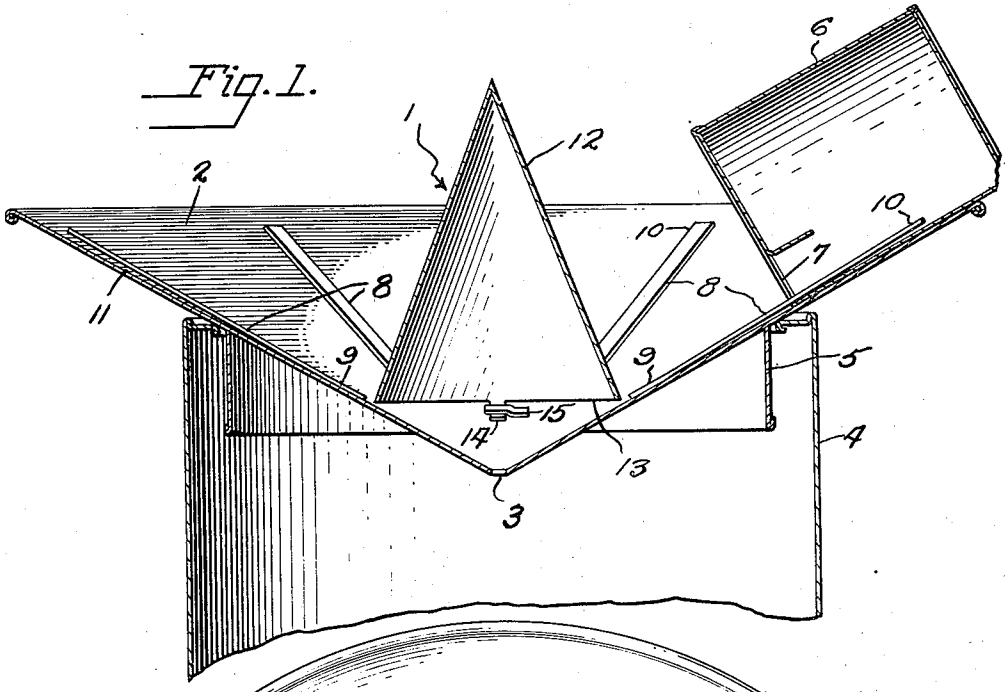


Fig. 2.

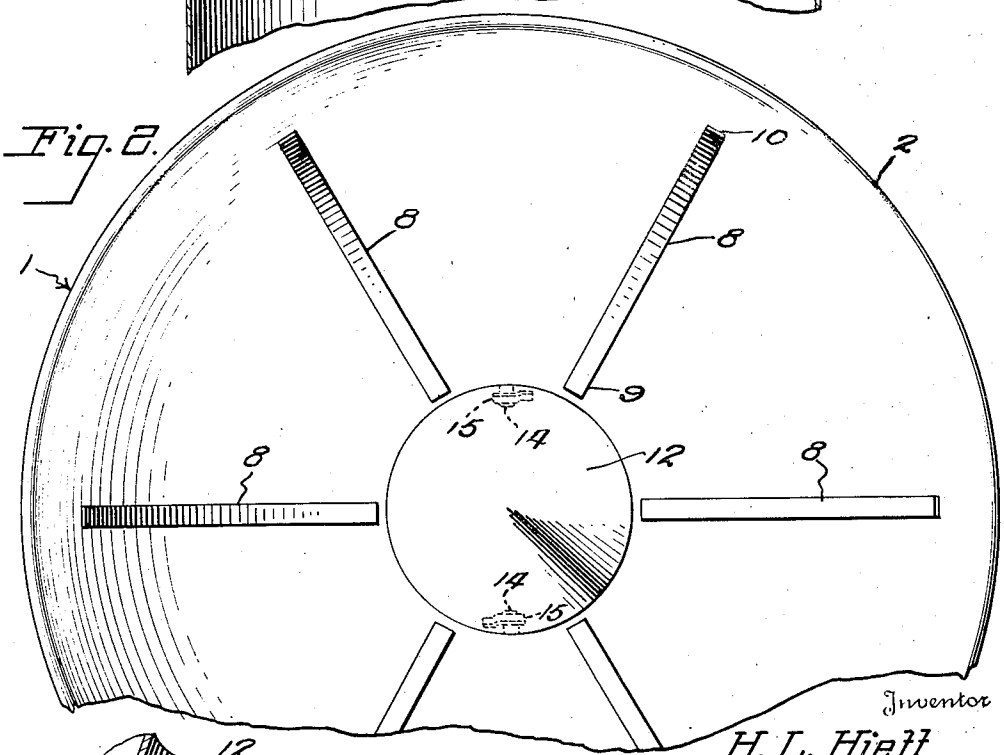
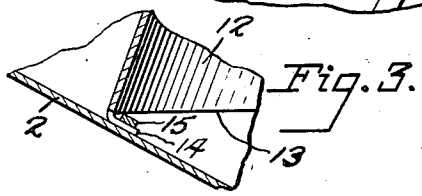


Fig. 3.



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OIL DRAINAGE FUNNEL

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5 Claims. (Cl. 221—69)

This invention relates to a drainage funnel for collecting the residual oil adherent to the inside surfaces of the original cans from which lubricating oil is dispensed into the crank cases of auto vehicles.

The conventional system of servicing automobile engines with lubricating oil at service stations is to provide oil cans, generally of quart capacity, sealed, so that the purchaser will be sure of getting the brand called for. These cans are punctured in the presence of the purchaser, and the oil discharged into the crank case.

A little adherent oil is left in each can, which is generally discarded with the can. In the course of a day a great many emptied cans may be discarded, resulting in the aggregate wastage of a considerable amount of oil.

It is the purpose of the present invention to prevent this waste.

One of the objects of the invention is to provide a drainage funnel having means for supporting the cans in inclined inverted position, and for holding them in definite circumferential position with the discharge aperture at the lowest point.

Another object of the invention is the provision of a drainage funnel with a central aperture, and a protective hood overlying said central aperture, having its peripheral edge narrowly spaced from the adjacent surface of the funnel, forming a crack that will pass oil, but which will exclude foreign particles that may blow or drop into the funnel.

Other objects of the invention will appear as a preferred and practical embodiment thereof proceeds.

In the drawing which accompanies and forms a part of the following specification, and throughout the several figures of which the same characters of reference have been employed to designate identical parts—

Figure 1 is a vertical section through a drainage funnel embodying the principles of the invention;

Figure 2 is a top plan view; and

Figure 3 is a detail in section, showing the interlocking means for holding the protective hood in place.

Referring now in detail to the several figures, the numeral 1 represents in general the drainage funnel of the present invention, which comprises a surrounding downward convergent wall 2. This wall, as shown, is conical, but other shapes are within the purview of the invention. At its point of convergence, the wall 2 is provided with the drainage opening 3.

It is designed to set the funnel over the open top of a suitable receptacle, such as the oil drum 4, for the collection of the oil, and to prevent the funnel from slipping out of place it is preferably provided on the under side with a downwardly extending flange 5, which in the embodiment shown has the form of a cylindrical annulus.

It is, of course, well known to the motoring public that the sealed cans of oil are punctured eccentrically, the discharge aperture being formed closely adjacent the rim of the can on one side, the purpose being to secure as complete drainage as possible of the contents of the can into the crank case of the engine. The present invention provides means for holding the cans in inclined inverted position with the discharge aperture at the lowermost point in the circumference of the top of the can. Figure 1 shows the can 6 having the discharge aperture 7.

The funnel 1, as shown, is provided with a plurality of radial fingers 8. These fingers are preferably made of resilient, although stiff, sheet material and are suitably secured to their lower ends 9 to the wall 2 of the funnel. The upper ends 10 and the major portions of the fingers 8 are free from the wall 2 and are arranged at a small angle thereto, as shown at 11 in Figure 1. It is, of course, not essential to the invention that the fingers 8 be positioned radially, it being only necessary that their upper ends be conveniently located for insertion into the discharge aperture 7 of the can. The can is simply pushed onto the finger 8, being cramped between said fingers and the wall 2 and thus held fixedly in position with the aperture 7 at the lowermost point.

In general, the drainage funnel of the present invention will be employed out of doors, and preferably in a position to catch the sunshine which will heat the parts and reduce the viscosity of the oil, speeding up the drainage from the cans and resulting in a higher recovery of oil. At best, however, the gravitational drainage of the oil from the cans is a relatively slow process, so that there is considerable opportunity for foreign particles such as leaves, trash, insects, etc., to blow or drop into the funnel. In order to prevent the contamination of the reclaimed oil by such particles or bodies, a protective hood 12 is employed which overlies the discharge aperture 3 and the peripheral edge 13 of which is narrowly spaced from the adjacent surface of the wall 2. The

width of the space is preferably such as will permit the passage of the draining oil film but will exclude foreign particles of the type referred to. The protective hood 12 is preferably detachably affixed to the wall 2 of the funnel by interlocking lugs 14 and 15 secured respectively to the hood and to the wall 2 of the funnel. By slight rotation of the protective hood 12, its lugs 14 may be engaged with or disengaged from the lugs 15 on the wall 2. The hood 12 is made removable so that the oil passage between said hood and the wall 2 may be kept clean for it may eventually become more or less clogged by the accumulation of foreign matter.

While I have in the above description disclosed what I believe to be a preferred and practical embodiment of the invention, it will be understood to those skilled in the art that the specific details of construction and the arrangement of parts as shown and described, are by way of example, and not to be construed as limiting the scope of the invention defined by the appended claims.

What I claim as my invention is:

1. Can draining funnel comprising a receptacle including a surrounding downwardly convergent wall terminating in a discharge aperture, and spring fingers each secured adjacent its lower end to said wall and having its free portion extending at a small angle with respect thereto in an upward direction adapted to enter the aperture of a can and forming a clamp with the adjacent wall for holding said can in definite draining position.

2. Can draining funnel comprising a receptacle including a surrounding downwardly convergent wall terminating in a discharge aperture, and yielding radially disposed spring fingers each secured adjacent its lower end to said wall and having its free portion extending at a small angle with respect thereto in an upward direction adapted to enter the aperture of a can and forming a clamp with the adjacent wall for holding said can in definite draining position.

3. Can draining funnel comprising a receptacle having a surrounding downwardly convergent wall terminating in a discharge aperture, resilient fingers each secured adjacent its lower end to said wall and having its free portion extending at a small angle with respect thereto adapted to enter the aperture of a can forming a clamp with the adjacent wall for holding said can in definite draining position, and a hood overlying said aperture having its peripheral edge narrowly spaced from the adjacent surface of said wall.

4. Can draining funnel as claimed in claim 3, said wall and hood being provided with cooperating interlocking means by which said hood is detachably secured to said wall.

5. Can draining funnel comprising a receptacle including a surrounding inverted conical wall terminating in a discharge aperture, yielding fingers on the upper side of said wall each secured adjacent its lower end to said wall at a small angle with respect thereto and having a free upper portion adapted to enter the aperture of a can and cramp said can between said finger and wall in definite draining position, a flange on the under side of said wall adapted to enter the mouth of a collecting receptacle and a detachable hood overlying said discharge aperture having its peripheral edge narrowly spaced from the adjacent surface of said wall.

HENRY LEE HIETT.