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MORIO TAKENOUCI

3,329,231

OIL-DROP CATCHER

Filed May 26, 1965

FIG. 1.

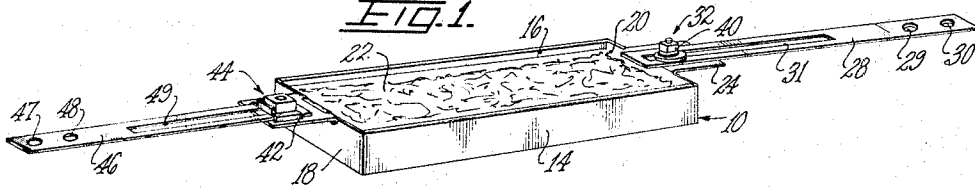


FIG. 2.

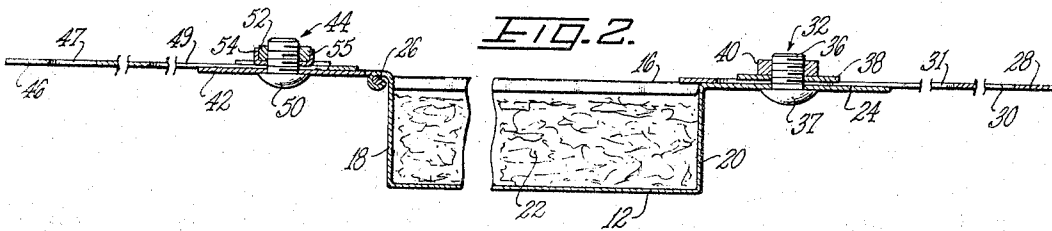


FIG. 3.

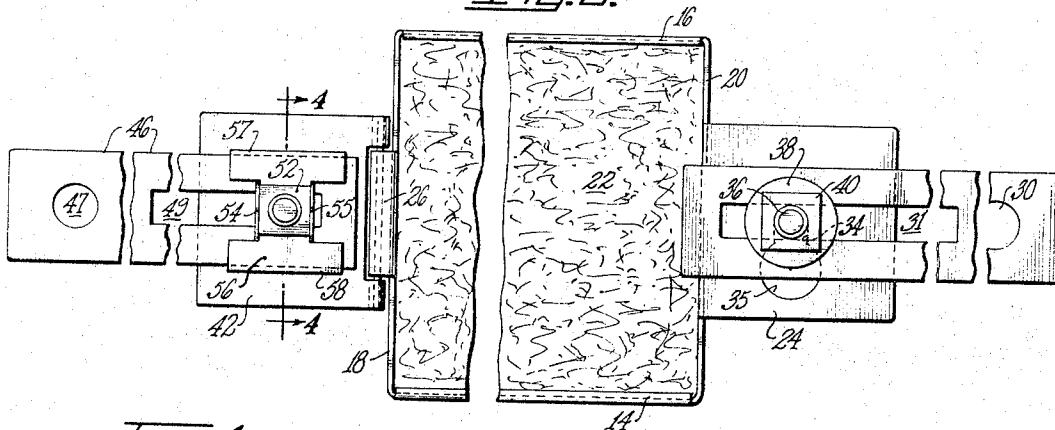


FIG. 4.

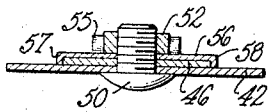


FIG. 6.

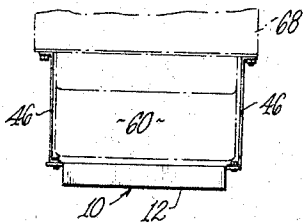
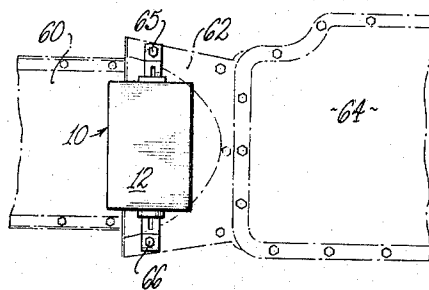


FIG. 5.



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**OIL-DROP CATCHER**

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**ABSTRACT OF THE DISCLOSURE**

An open-top container shaped to carry a replaceable package of oil-absorbing material is closely attached underneath a vehicle motor such as jointly underlying the fly-wheel housing and the rear edge of the oil pan, by means of a pair of adjustable-length arms, one of which is hinged to the container and the other being detachable therefrom, for the purpose of down-tilting the mounted container in order to inspect or to insert a package of oil-adsorbent material.

This invention relates to a device provided for attachment against the oil-drop area of the underface of a motor vehicle, particularly beneath a bottom seal or gasket of the oil sump, in order to catch or accumulate in the device the occasional droppings which would otherwise disfigure a driveway or garage floor where the automobile may be parked repeatedly or for some time, such as overnight. As gaskets or oil seals become aged, a small cumulative leakage may develop, which at first is insufficient in amount to stimulate the car operator to immediately replace the gasket, but may nevertheless prove intensely disagreeable to the sightliness of a driveway where the car is customarily parked, even if the dropage amounts merely to two or three drops repeated during each overnight stand. In fact such amount of "leakage" may be considered normal for the average car, but may still within a few weeks at most, mar the appearance of a meticulously groomed or landscaped villa where such car is customarily left standing in the driveway even if only during the day. For example, when the driveway is esthetically covered with uniformly sized and colored gravel, the appearance of such oil spots may prove extremely irritating, particularly in contrast to their light background.

Accordingly, it is an important object of this invention to provide a drop-catching device having adjustable attachment means by which it can be readily affixed to various sizes or makes of cars, which device will not greatly lower the underbody clearance of the vehicle, and which, after attachment, can be easily opened from time to time (such as when the car is placed over a hoist for its periodic lubrication) in order to replace a contained pad or wad of oil-absorbent material with a fresh packet thereof.

Other objects are to gain the particular advantages of the invention as set forth and to achieve other ends as will become more fully apparent as the description proceeds.

In the drawings, which illustrate a presently preferred embodiment of the invention,

FIGURE 1 is a perspective view of my device by itself as viewed from above;

FIGURE 2 is a longitudinal vertical sectional view through the device;

FIGURE 3 is a top plan view of the same;

FIGURE 4 is a transverse sectional view taken along the line 4—4 of FIGURE 3;

FIGURE 5 is a bottom plan view of a portion of an auto—in phantom—showing my device mounted thereon in position to catch oil drops;

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FIGURE 6 is a front elevational view of my device attached to a vehicle engine block beneath the oil pan.

Essentially there is provided a relatively shallow, open-top container 10, conveniently although not necessarily of rectangular shape and formed of flat bottom 12, longitudinal sides 14, 16, and transverse ends 18, 20. Within the container is loosely disposed a pad or wad 22 of oil absorbing material such as cotton batting, cellulose, or even loose clay or sand, which minerals or materials may be contained in a small porous sack or wrapper such as will readily fit into the container and then be removable as a unit when later replaced by a fresh "charge." Cellulose, sawdust, small pieces of fabric, shredded paper, excelsior, etc., can likewise be enclosed in such a form-filling sack or the like.

One end wall 20 is turned outward approximately perpendicularly to form a flat attachment tab 24. The other end 18 is oppositely curved downward to form the bearing tube 26 of a hinge. A longitudinal attachment arm 28, formed of stiffly bendable material such as metal or plastic, is provided distally with a couple of apertures 29, 30 to be engaged by at least one upwardly inserted bolt (as 65, 66) which may be initially present on the automobile underface. By means of an elongated slot 31 and locking means 32, the arm 28 is detachably coupled to the tab 24. The tab 24 is formed with a bulbous cross-slot (FIG. 3) having a small end 34 of a size to receive the shaft 36 of a bolt, and a large end 35 adapted to pass the bolt head 37 therethrough. The bolt 36 inserted successively upward through the tab opening 34 and the overlying bracket slot 31 has its upper end retained collectively by a lock washer 38 and nut 40. Thus, the container 10 being mounted against the underface of the engine or housing, it can readily be downswung on the hinge 26 in order to remove and replace the absorbent material 22, simply by slightly loosening the bolt 36 (as by applying a screwdriver to the head 37) and then sliding the bolt (and arm 28) sideways to the opening 35, at which position the tab 24 and container 12 arc downward from the hinge 26.

At the other end of the container 10 there is hingedly mounted another attachment tab 42 which by coupling means 44 is adjustably secured to an outwardly extending, permanent attachment arm 46. The latter, similar to the detachable arm 28, is formed with a pair of distal bolt holes 47, 48, and an elongated slot 49 through which a bolt 50 is upwardly inserted after first traversing the tab 42. A nut 52 is threadedly mounted on the bolt and is held against rotation by upstanding arms 54, 55 of a keeper 56. The keeper itself is restrained against turning by means of oppositely crooked, or downturned edges 57, 58 which loosely overlie the longitudinal edges of the arm 46 so as to provide a slide channel therefor. Accordingly, by reason of the lengthwise adjustability of both arms 28 and 46 (i.e., by movement along the slots 31, 49) as well as by the spacing provided by the bolt holes 29, 30, 47, 48 and the possible (limited) bending of the attachment arms 28, 46 for initial fitting against the oil pan or undersurface of the motor vehicle, the container 10 can be satisfactorily located and retained with its upper margin approximately flush with the oil-drip area. The shallow height of the container side walls then diminishes the vehicle clearance very little. At the same time, the envelope or packet of absorbent material (which may even fill the container so completely as to actually wipe against the oil-drip area) can be readily changed from time to time, merely by momentarily loosening one bolt 37.

A particularly satisfactory location for my oil-drop catcher is one at which it jointly underlies the fly-wheel housing 62 and the rear edge of the oil pan 60 which is forward from the transmission 64, that is, embracing a

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crosswise length of the intersection which is formed between these two structures. The oil-drop catcher **10** may thus extend in both directions from the intersection so as to catch drippings from each of these normally "oily" locations. Or my catcher can be located entirely beneath either one of these structures, to a certain extent its position dictated by the site of existing leakage, but in any event conveniently attached to the already existing underbody bolts such as hold the inspection cover of the fly-wheel housing or normally retain the oil pan in place. Likewise my two attachment arms **28, 46** may be bolted to the underbody elements so as to dispose them angularly to each other (rather than perpendicular to the length of the frame), and the container itself may even be disposed angular to each arm so as to underlie two or more specifically identified drop points. It may be observed, however, that most oil droppage from the oil pan (**60**) is along the rear edge thereof and consequently this area is the most frequent location for my device.

It will be clear to those skilled in the art that various changes of construction and operation may be made within the scope of the present invention without departing from the spirit thereof, and therefor this disclosure is not to be limited by the precise details shown in the drawings or particularly described in the specification by way of example, but it is my intention to hereafter claim the invention broadly in its distinction from the prior art.

I claim:

1. An open-topped container adapted to have a quantity of oil-absorbent material disposed therein in position to retain drippings from a leaky oil seal and the like, said container being formed with oppositely out-turned attachment tabs, one of which is fixedly secured and the other hingedly secured to the container;

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a pair of oppositely extending, longitudinally adjustable attachment arms, at their respective outer ends each having means for attachment to the underface of a vehicle element or the like, and at their inner ends each being coupled to one of said attachment tabs; the attachment arm which is coupled to the fixed attachment tab being secured thereto by readily detachable means in order to enable replacement of oil-absorbent material in the mounted container; and the other attachment arm being coupled to said hingedly secured attachment tab by bolt means upstanding jointly through an aperture of the tab, through a longitudinal slot formed in the attachment arm and through a keeper and nut which is non-rotatably held by the keeper, said keeper being characterized by oppositely crooked edges which jointly embrace and form a slideway for the attachment arm for lengthwise adjustment of the same.

2. The container of the preceding claim **2**, which contains a quantity of said oil-absorbent material held within a porous envelope disposed closely fitting within the interior of said container.

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