United States Patent

Oswalt

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[54] **OIL CHANGE KIT**

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[73] Assignee: **Cato Oil and Grease Co.,** Oklahoma City, Okla.

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[52] **U.S. Cl.**.....**206/47 R,** 206/16 R, 206/65 C

[51] **Int. Cl.**.....**B65d 79/00,** B65d 85/62

[58] **Field of Search**.....206/47 R, 1 R, 16 R, 65 C, 206/46 L; 224/46 T, 48 R; 220/103, 1 C

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[57] **ABSTRACT**

A packaged kit comprising a drain pan, a plurality of cans of oil, an adapter mountable within the drain hole of an oil pan for a remote opening and closing thereof, a collapsible funnel, and a plurality of flexible sealable liquid containers, all confined within a transparent wrapper.

11 Claims, 4 Drawing Figures

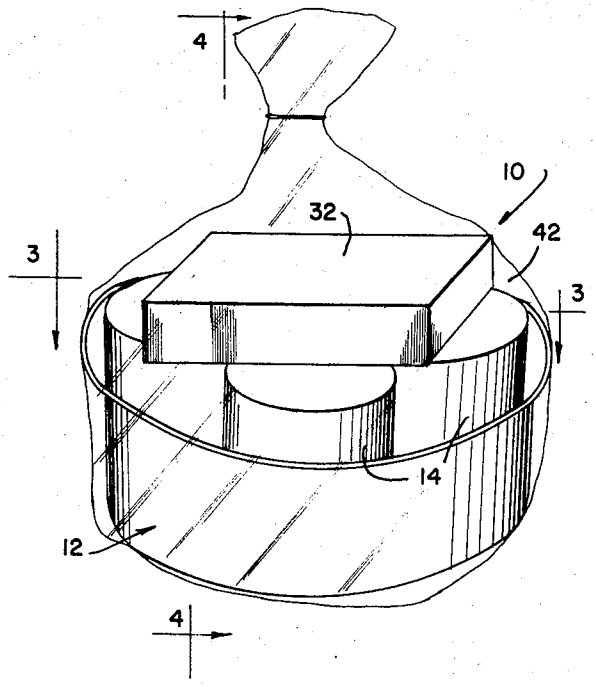


FIG. 1

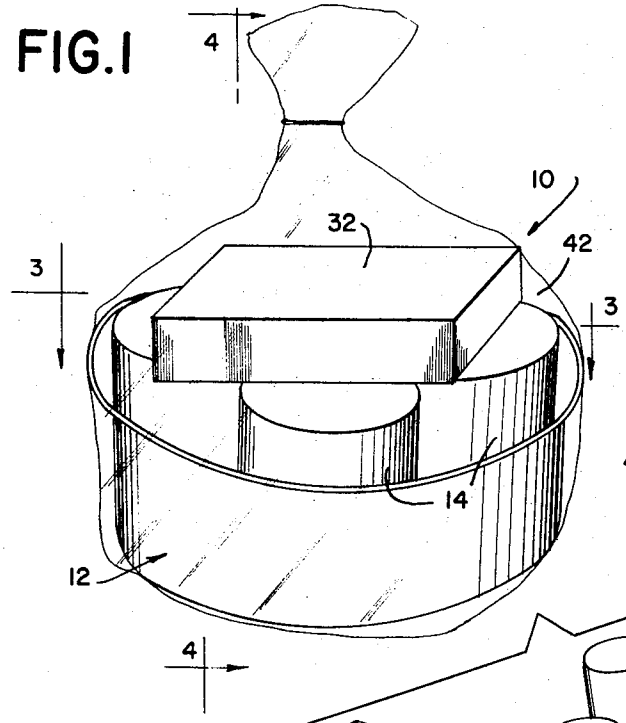
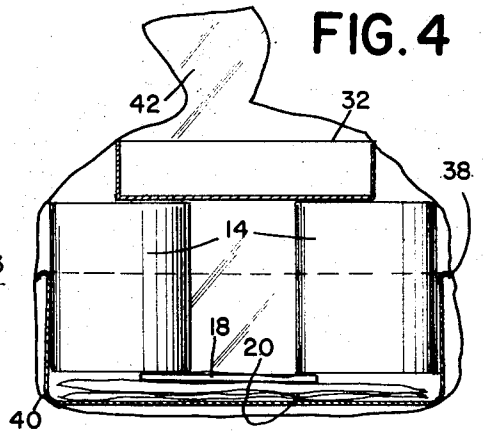


FIG. 4



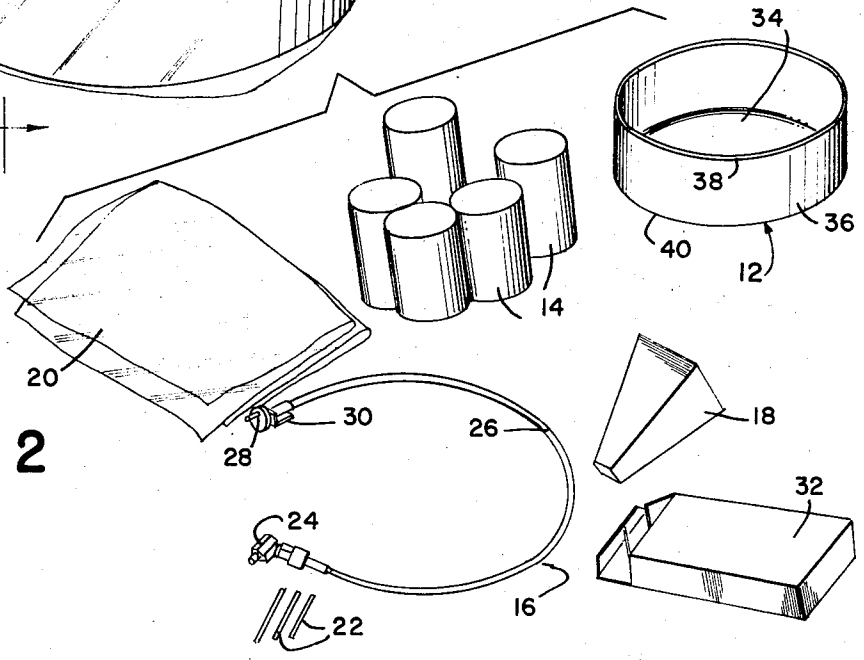


FIG. 2

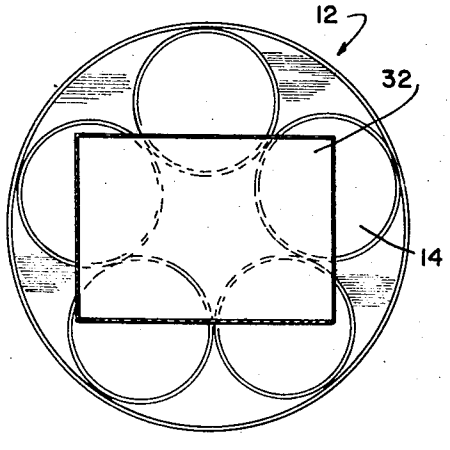


FIG. 3

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OIL CHANGE KIT

SUMMARY OF THE INVENTION

The invention herein is directed to a do-it-yourself oil change kit.

More particularly, the invention relates to a packaged kit which incorporates a supply of oil, an adapter which, when mounted, provides a permanent means for remotely controlling the opening and closing of the drain hole in an automobile oil pan, and waste oil collecting and disposal means.

The components of the kit are interrelated in a compact package wherein the drain pan provides a protective container for the oil supply cans and the adapter is provided in a box overlying the cans, all of which are enclosed within a sealed transparent wrapper.

The objects of the invention include, primarily, the provision of means which will make the changing of the supply of oil in an automobile a simple and convenient task easily performed by the individual owner; and the packaging of the components of the kit in a unique manner wherein the oil supplied therewith is protectively enclosed within a drain pan which forms the base of the stacked and wrapped components.

Additional objects include relating the size of the drain pan to the number of oil cans provided whereby the cans are snuggly received within the pan and precluded from shifting relative thereto, stacking the components in a generally upwardly tapering pile to provide a conveniently handled and carried package, and utilizing a transparent wrapper wherein the components of the kit, along with any promotional material thereon, are readily visible to the prospective purchasers.

DESCRIPTION OF THE DRAWINGS

Other objects and advantages will become apparent upon a consideration of the following specification and claims taken together with the drawings wherein:

FIG. 1 is a perspective view of the packaged kit;

FIG. 2 is an exploded view of the components of the kit;

FIG. 3 is a horizontal cross-sectional view taken generally in a plane passing along line 3—3 in FIG. 1; and

FIG. 4 is a vertical cross-sectional view taken generally on a plane passing alone line 4—4 in FIG. 1.

PREFERRED EMBODIMENTS

Referring now more specifically to the drawings, reference numeral **10** is used to designate the packaged kit of the instant invention.

With reference to FIG. **2** in particular, it will be noted that the components of the kit comprise a drain pan **12**, a plurality of cans **14** of oil, an adapter **16**, a funnel **18**, a supply of flexible bags **20**, and a supply of bag ties **22**.

Turning first to the adapter **16**, such includes, at one end thereof, a valved plug **24** mountable within the drain hole of an automobile pan. The valved plug **24** is operative to selectively open and close the drain hole for a draining of the oil pan as desired. The operation of the valved plug **24**, when mounted, is to be from a remote location more convenient than the oil pan itself. Accordingly, an elongated sheathed control cable **26** extends from the valved plug **24** and is provided with a knob **28** at its remote end whereby an opening and closing of the valved plug **24** is achieved by a manipulation of the knob **28**. The knob preferably will be mounted directly under the hood, for example on one of the fender inner walls, by an appropriate bracket **30**. In the packaged kit **10**, the adapter **16** will be contained within a relatively flat box **32**.

The drain pan **12** includes a flat round bottom **34** with an integral circular wall **36** rising vertically from the periphery thereof to terminate in a smooth rolled edge **38**. The transition corner **40** between the flat bottom **34** and the peripheral wall is rounded to smoothly accommodate the package wrapper **42**.

The oil capacity of the particular engine will determine the capacity of the kit **10**. For example, assuming a five quart engine capacity, the kit **10** will contain five quart cans **14** of oil. The drain pan **12** is to be of a size so as to, noting FIG. **3** in particular, receive the cans **14** snuggly with each can **14** having a portion of the wall thereof engaged against the wall **36** of the pan **12**, the cans **14** being arranged in a circular pattern within the drain pan **12**. Thus, any undesirable shifting or moving of the cans within the package is precluded. It will also be noted that the wall **36** of the drain pan **12** extends upward for a major portion of the height of the cans **14** to provide a protective enclosure therefor. The liquid capacity of the pan is to be equal to or greater than the combined liquid content of the cans to accommodate a complete draining of the oil from the oil pan.

In order to make the oil changing operation cleaner and simplify the disposal of the waste oil, the disposable liquid tight bags **20** are provided. In use, a bag **20** is placed in the drain pan **12** and the pan placed under the drain hole incorporating the previously mounted adapted **16**. The hole is then remotely opened and the waste oil allowed to drain into the pan held bag **20** which conforms to the shape of and is stabilized by the drain pan **12**. When all the oil has drained out, the bag **20** is sealed by using one of the bag ties **22** and appropriately disposed of. The drain pan **12** itself remains clean.

After a complete draining of the oil pan, the drain hole is closed, by operation of the remote knob **28**, the cans **14** opened, and the new oil introduced through the filler port using the kit funnel **18**.

The funnel **18** itself is collapsible into a flat state and formed of coated cardboard or other appropriate shape sustaining material which will not be adversely affected by the oil.

Noting the vertical section of FIG. **4**, the supply of bags **20** and the funnel **18** are folded and placed within the drain pan **12** below the cans **14**, thus being both conveniently retained and providing a "cushion" between the pan **12** and the cans **14**.

In the packaged kit **10**, the adapter box **32** overlies the pan received cans **14**. This box is of a size so as to be entirely positionable within the periphery defined by the outer extremities of the cans **14**, thus allowing for a smooth gathering of the wrapper **42** upwardly thereover for a tying of the wrapper **42** above the box **32**. In this manner, a neat upwardly tapering easily handled package is provided. The wrapper **42**, as previously indicated, is preferably transparent to expose the oil cans **14** and adapter box **32** in particular, along with

any labels, promotional material, or the like associated therewith.

Subsequent to the initial use of the kit **10**, it will be appreciated that additional oil changes will necessitate only a replenishing of the oil supply.

The foregoing is considered illustrative of the invention and not definitive of the scope of the invention.

What is claimed is:

1. An oil change kit comprising, in a package unit, a drain pan, a containerized supply of oil, an adapter, said adapter comprising a valve unit mountable within the drain hole of an oil pan and a remote control for selectively opening and closing said valve unit to enable a draining and subsequent filling of the oil pan, said containerized supply of oil being received within said drain pan, and wrapper means enclosing said drain pan, supply of oil, and adapter.

2. The kit of claim **1** wherein said containerized supply of oil comprises a predetermined number of cans of oil, said drain pan being of a size, relative to said cans, to snuggly receive said cans in a manner whereby relative movement therebetween is generally precluded.

3. The kit of claim **2** wherein said adapter is contained within a box overlying said oil cans, said box being of a size so as to fall within an area defined by the outermost portions of said cans.

4. The kit of claim **3** wherein said wrapper means comprises an open top bag completely receiving the stacked drain pan, cans and box therein, and tie means for closing the open top of said bag above said box.

5. The kit of claim **4** wherein said bag is transparent for a visual disclosure of the contents thereof.

6. The kit of claim **5** including at least one sealable liquid container positionable within the drain pan for a collection of oil draining therein for subsequent disposal.

7. The kit of claim **6** wherein said liquid container is collapsed within the kit until use thereof is desired.

8. The kit of claim **7** including a collapsible funnel.

9. The kit of claim **8** wherein said cans of oil are five in number, each can having a portion of the side thereof engaged with the side of the drain pan.

10. The kit of claim **1** including at least one sealable liquid container positionable within the drain pan for a collection of oil draining therein for subsequent disposal.

11. An oil change kit comprising, as a packaged unit, a supply of oil provided within a plurality of cans, an adapter mountable within the drain hole of an oil pan for enabling a remote opening of the hole and a draining of the oil, a drain pan, said drain pan receiving said cans therein and defining a support container therefor; said drain pan including a peripheral wall surrounding said cans for a substantial portion of the height thereof, the liquid capacity of said drain pan being at least as great as the combined contents of said cans.

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