

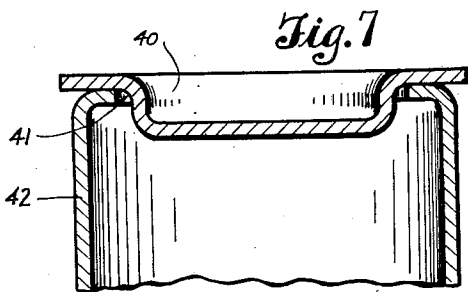
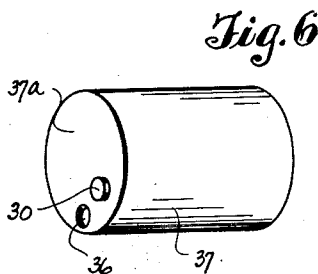
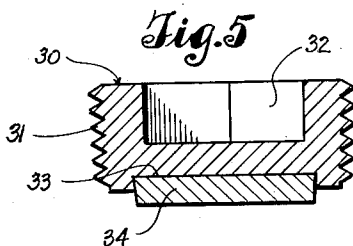
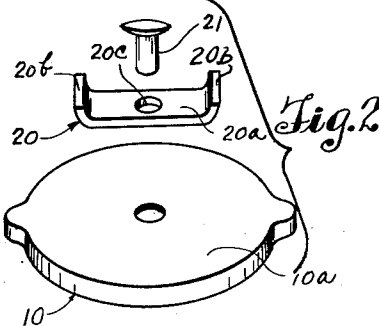
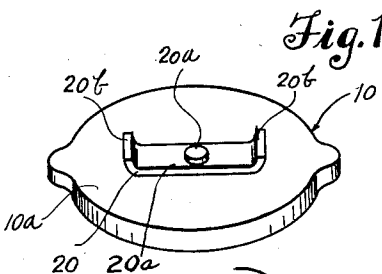
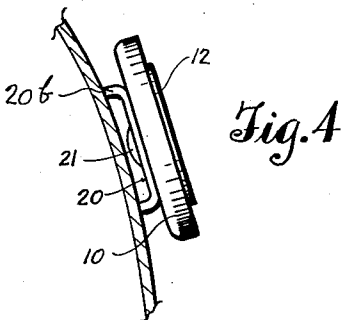
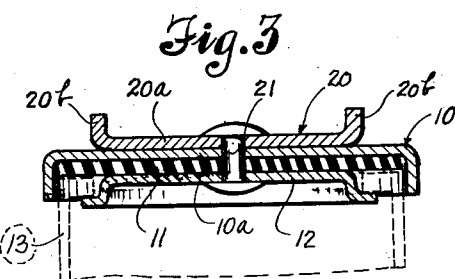
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2,826,328

CLOSURE WITH MAGNETIC RETAINING MEANS

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2,826,328

CLOSURE WITH MAGNETIC RETAINING MEANS

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1 Claim. (Cl. 220—40)

This invention relates to closure devices and more specifically to closure caps or plugs. More particularly, it relates to a new and improved means for securing a closure cap or plug in a fixed position when removed from the opening which it is adapted to close or seal.

It is the principal object of this invention to provide new and improved means, which is relatively simple and inexpensive for holding or retaining a closure device, such as a metal gasoline cap, drum plug and the like, in a fixed position when the closure device is removed from the opening for which it is adapted.

It is also an object of this invention to provide a closure device retaining means which is permanently secured to the closure device and which is magnetized so that the closure device may be securely applied to and retained by any readily available metal surface which is compatible or magnetically attractive.

A further object of this invention is to provide closure securing devices which may be readily applied to gas caps, drum plugs and the like which are commonly and presently in use.

Further objects of our invention will become more apparent as the description proceeds when taken in conjunction with the drawings in which:

Fig. 1 is a perspective view of a conventional cap or closure device for an automobile gasoline tank with our new securing means applied thereto.

Fig. 2 is a perspective view showing the gas cap and its securing device illustrated of Fig. 1, in separated relationship for explanatory purposes.

Fig. 3 illustrates a gas cap, equipped with the present holder, as disposed in the gasoline tank opening.

Fig. 4 illustrates the cap removed from the gas tank opening and magnetically secured to the body of the automobile.

Fig. 5 illustrates in cross-section a plug or bung for a metal drum and a magnetic securing device applied to the under surface of the plug.

Fig. 6 illustrates the plug of Fig. 5 as secured to the end of the drum.

Fig. 7 illustrates a closure device wherein the entire closure device is magnetized and retained in the opening by magnetic attraction to container.

It is common and an everyday problem that when gas caps and the like are removed from their normal position of use, such as serving as a closure for an automobile gas tank, the caps are placed in the gas station attendant's pocket, laid on the ground or on the splash guard between the bumper and body of the car. Oftentimes, the attendant inadvertently neglects to replace the cap and it becomes lost. The same is true of plugs for oil drums and the like. It is, therefore, the principal object of my invention to provide an inexpensive, simplified means whereby the cap or plug when removed from its place of use may be secured to or retained in removably fixed position on the automobile or drum so that even though the attendant neglects to replace it in its normal closure position, the cap will not become lost.

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In Figs. 1 to 4, we have illustrated a conventional gas cap which we have designated in its entirety by reference numeral 10. The cap is of conventional construction, and as illustrated in Fig. 3, it comprises a shallow, cup-shaped body, fitted within its bottom with a resilient sealing gasket 11 and the usual securing clip or flange 12 by which the cap is retained in removably fixed position and service as a closure for the filling opening of a pipe leading to the gas tank; such a pipe being designated at 13 in Fig. 1.

The device employed for retaining the cap in a fixed position, when removed from the closure, is designated in its entirety by reference numeral 20 and it comprises a permanently magnetized bar or strip of material such as cobalt steel, which is secured flatly against the outer or top surface 10a of the gas cap. The strip 20 may be secured to the cap in any desirable or convenient manner. In the present instance, we have shown it secured by means of a rivet 21 which passes through the cap and gasket to likewise secure the clip or flange 12 to the underside of the cap and in holding engagement with the gasket 11. If desired, the magnetized bar or strip 20 may be welded in place or secured in any other convenient manner.

The retaining device illustrated in Figs. 1 to 4 comprises a flat body portion 20a and angularly turned opposite end portions 20b and 20c. This construction permits the making of the magnetic member from a flat strip or bar and it may be made in a simple stamping operation. Also, the required hole 20c for the attaching rivet 21 may be formed at the same time. In this construction, only the end portions 20b—20c which turn outwardly wardly from the cap will engage the surface to which the cap is applied for fixed support when removed from its normal closing position.

In Fig. 5, we have illustrated in cross-section, a conventional plug or bung such as are commonly employed as a closure member for an oil drum or the like. The plug is designated in its entirety by reference numeral 30 and is exteriorly threaded as at 31. It includes the wrench socket 32 provided in the outer surface thereof and a shallow recess 33 in its under end surface, within which recess a permanently magnetized securing member 34 is fitted and secured; this member being in the form of a flat plate. If desired, we could employ merely a magnetized ring which could be secured in the recess in a similar manner.

When the magnetized member 34 is utilized and joined to the plug, the plug upon being removed from the opening 36 in a drum or barrel 37, can be magnetically secure to the end 37a of the barrel and held in fixed position so that it will not become lost or misplaced.

In Fig. 7, we have illustrated a completely magnetized closure member 40 which is held in removably secured position over an opening 41 in a container 42. Such closure means are adaptable and satisfactory for use with metal containers for granular material and the like. The closure member 40 may be readily removed but will not shake or jar loose from normal use or handling. When removed, it may be applied flatly to the sidewall or end of the container to prevent its loss or misplacement.

Magnetized securing means may be attached or affixed to various caps, plugs, or other closure devices in various ways and the particular manner in which the magnetized member is secured is not necessarily an important, or controlling, feature of my invention. It is only necessary that the magnetized member be secured in a permanent manner to the closure cap or plug and that it extends outwardly from a surface of the closure member so that it may be applied against a magnetically attractive surface. Also, the shape or size of the magnetized member

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may be varied as desired or required. It is only necessary that it be of sufficient size and so placed to permit its utilization for its desired purpose or function.

Having thus described our invention, what we claim as new therein and desire to secure by Letters Patent is:

A closure member for an automobile gasoline tank comprising a cap having a flat main body portion provided with a circumferential depending flange, a retainer member disposed on the outer side of said main body portion opposite said flange, said retainer member including an elongate, generally rectangular strip of magnetized material positioned in face-to-face contact with said outer surface of the cap, said strip having its opposite ends projecting perpendicularly away from said cap in a direction opposite said depending flange whereby such ends may be placed against a ferrous supporting surface while maintaining the intermediate portion of said strip in spaced relation therefrom, a securing member positioned within said cap on the side thereof opposite said retaining element for cooperation with the flange of a gasoline

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tank filler neck, and a headed fastening element projecting through said retaining element, said cap and said securing member to rigidly interconnect these elements as a unitary assembly, the headed portion of said fastening element lying on the outer side of said cap being at a height less than the height of the surface engaging ends of said opposite ends of the retainer member whereby the same is held out of contact with a substantially planar supporting surface.

References Cited in the file of this patent

UNITED STATES PATENTS

Re. 20,291	Bock	Mar. 9, 1937
1,641,880	Cohen	Sept. 6, 1927
2,214,268	Brooks	Sept. 10, 1940
2,242,830	Lisle	May 20, 1941
2,609,970	Blumson	Sept. 9, 1952
2,717,096	Henderson	Sept. 6, 1955
2,758,743	Smith	Aug. 14, 1956