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MAGNETIC HOLDER FOR GASOLINE FILLING SPOUT CAPS

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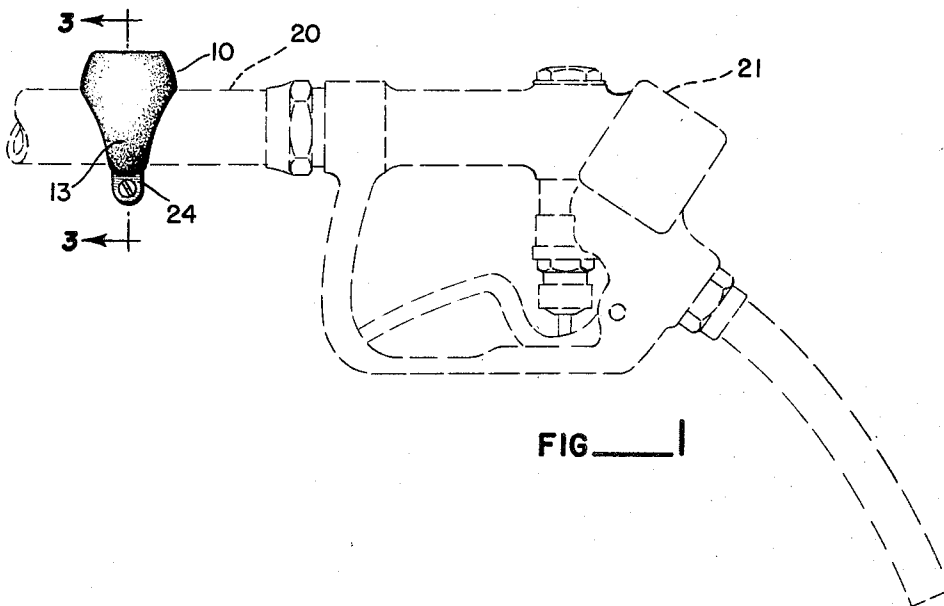


FIG. 1

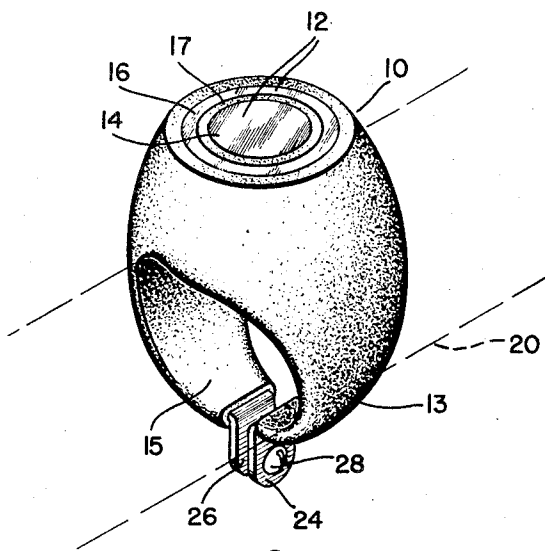


FIG. 2

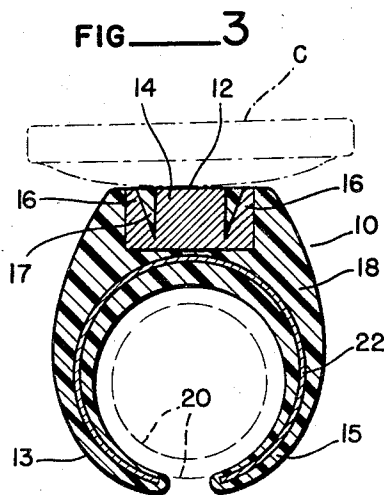


FIG. 3

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MAGNETIC HOLDER FOR GASOLINE FILLING SPOUT CAPS

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2 Claims. (Cl. 248—309)

Our present invention relates to a magnetic holding device, and more particularly, to a magnetic holder for gasoline filling spout caps.

This device includes an annular clamp to be secured on a gasoline pump hose and includes a magnet of a form suitable to hold a gasoline filling spout cap when the latter is removed during the servicing of a car.

The accidental loss of gasoline filling spout caps during servicing of a car has long plagued the automobile owner as well as the gasoline station attendant. The new style automobiles are so shaped that there is often no convenient place on the car to set the cap and, of course, loss may occur even with such resting place.

In recent years many gasoline dispensing pumps have been equipped with automatic shut off nozzles which allow the attendant to start the gasoline flowing into the gasoline tank and leave it to shut off by itself when the tank is full. This means that the attendant, who is normally in the habit of holding the cap in one hand, may carry it to a distant part of the car and there accidentally forget it as he puts it down for a two handed operation. If on the other hand he rests it on a part of the car such as the top of the trunk he may mar the high gloss finish of the car exterior. Many times automobiles entering the stations for gas pull in so that the filling spout is on the opposite side of the car from the gasoline pump island; and in these cases the passing of the hose across the car and holding it away from the car finish makes the filling operation a two handed job so the gasoline cap must be discarded temporarily by the attendant.

The principal object of our invention therefore is to provide means whereby a gasoline filling spout cap may be secured to an object accessible to the attendant filling the gasoline tank in an automobile but in a position which will not interfere with the servicing operation.

A further object of our invention is to provide a gasoline cap holding means which will give a sure gripping of the cap and yet relinquish the cap when a nominal pressure is exerted manually thereon.

A further object is to provide means for securing the gasoline cap to the gasoline pump hose so that the cap will be called to the attention of the attendant when the gasoline nozzle is removed from the filling spout after servicing.

An additional object of this invention is to provide a gasoline cap holding device which is easily yet solidly positioned at any point along the gasoline pump hose and may be removed quickly and readily therefrom.

Further objects and capabilities of our invention will be apparent from the following description and drawings in which:

Figure 1 is a side elevation of my gasoline cap holding device in relation to the gasoline pump hose and nozzle shown in phantom;

Figure 2 is a perspective view of our gasoline cap holder; and

Figure 3 is a sectional view taken along line 3—3 of Figure 1 with a modified clamping arrangement.

As shown in the drawings, our gasoline cap holder consists of the main body portion 10 which houses the gripping magnet 12 positioned to grip magnetically the cap C. The magnet 12 as is shown in Figures 2 and 3 is an annular permanent magnet which fits our rounded design of the body 10. It must be understood however that in certain cases a square or rectangular body por-

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tion may be desired and in such cases the normal type horseshoe magnet may be employed.

The magnet shown in cross section in Figure 3 has a center pole 14 and an outer pole 16 which completely encircles the center pole 14. The two poles 14 and 16 are of opposite polarity and are joined at their lower edges so as to allow better conductivity of the magnetic flux. The space left between the inner core 14 and the outer ring 16 may be left open or may be filled with any non conductive material. We prefer to fill this space with annular rubber spacer 17 so that it will not become filled with steel particles which would cut down the efficiency of the magnet. Having both poles 14 and 16 on the cap engaging surface is imperative for efficient operation. In the form shown, the magnet will perform its task effectively. The magnet is embedded within a molded rubber body 18. This may be formed of a resilient plastic but at present a synthetic type rubber is the most practical due to the ease of molding as well as its resistance to mineral oil solvents in which gasoline is classed. This molded rubber extends substantially one half the distance around the hose 20 from each side which forms the gripping arms 13 and 15. For tight positive gripping of hose 20 close to the nozzle 21 we have provided a spring member 22 which is also embedded within the rubber portion 18.

In some gasoline dispensing stations, such as the large stations of the major oil companies, or the presently popular "serve yourself" stations, the theft of the gas cap holder from the pump hose is possible. We therefore have provided the ends of spring 22 with outwardly extending lugs 24, 26 each of which is provided with a hole therethrough so they may be secured together by means of a bolt 28, as shown, or a rivet. By this means a gas station attendant does not have to worry about loss of our cap holder while he is not watching it. On the other hand, a small station, with only one set of pumps, is never very far from the "island" and therefore the alternate form in Figure 3 is provided. In this case the lugs 24 and 26 are eliminated from the spring member 22 and the ends of the spring are covered completely by the rubber casing 18. This eliminates the possibility of scratching the finish on the car or gasoline pump and makes the holder easy to remove if the owner wants to take it off each night as might be desired.

The gasoline spout cap C is placed on holder 10 as the attendant removes the cap and inserts the pump nozzle into the automobile's gasoline filling spout. When the tank is filled the attendant removes the nozzle. Even if the attendant is not thinking of replacing the cap, his attention is directed to the cap either as he removes the nozzle or as he returns the nozzle and hose to its position on the pump. In addition to providing a safeguard against loss, this holder is convenient to use and the cap is never placed on the car body where it might dissolve the wax finish if it were wet with gasoline.

It is believed that it will be clearly apparent from the above description and the disclosure in the drawings that the invention comprehends a novel construction of a magnetic holder for gasoline filling spout caps.

Having thus disclosed the invention, we claim:

1. A magnetic holder for automobile gasoline filling spout caps adapted to be clamped on a gasoline pump hose assembly, comprising: a dielectric body including a main body portion and a pair of inwardly-bowed gripping arms extending from said main body portion and forming together an annular enclosure broken at the free ends of said arms on the opposite side of said enclosure from said main body portion and a member positioned within said body portion and having outwardly turned ends extending from the ends of said arms and means securing together said outwardly turned ends; a permanent magnet embedded in said body, on the opposite side of said main body portion from said arms, in a manner so as to leave a substantially exposed face, said exposed face of said magnet having a central pole and having an annular pole, of opposite polarity, encircling said central pole in spaced apart relationship thereto, said poles being joined together on the opposite side of

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the magnet from the exposed face, and dielectric material filling the space between said poles.

2. A magnetic holder for automobile gasoline filling spout caps adapted to be clamped on a gasoline pump hose assembly, comprising: a resilient, dielectric body including a main body portion and a pair of inwardly-bowed gripping arms extending from said main body portion and forming together with said main body portion an annular enclosure broken at the free ends of said arms on the opposite side of said enclosure from said main body portion and a spring member in the form of a split ring positioned in said body with the break in the enclosure and the ring coinciding, said spring member and arms having sufficient resiliency to pass the maximum size object fitting in said enclosure and being adapted to grip a gasoline pump hose or the like; a permanent magnet embedded in said body, on the opposite side of said main body portion from said arms, in a man-

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ner so as to leave a substantially exposed face, said exposed face of said magnet having a central pole and having an annular pole, of opposite polarity, encircling said central pole in spaced apart relationship thereto with their exposed faces coplanar and dielectric material filling the space between said poles.

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