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2,718,344

FUNNELS

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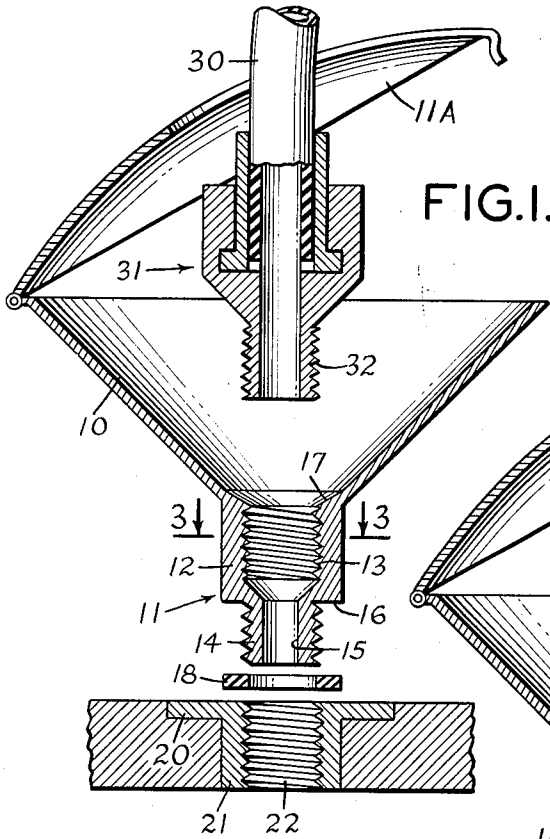


FIG. 1.

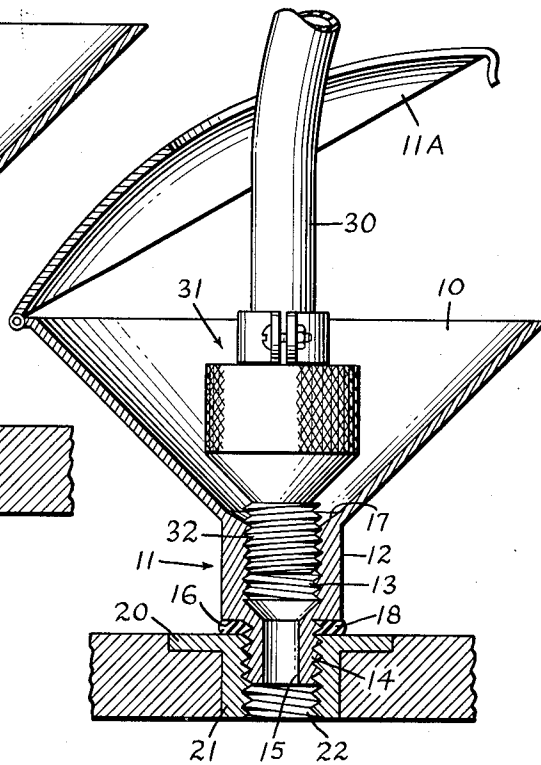


FIG. 2.

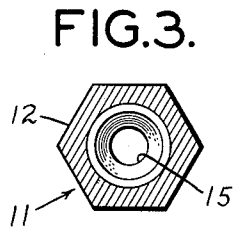
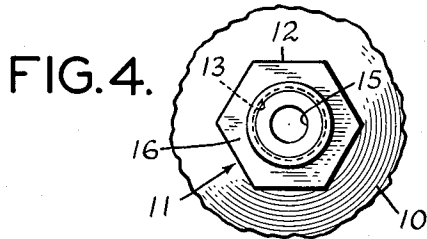


FIG. 4.

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FUNNELS

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4 Claims. (Cl. 226—38)

This invention relates to an improvement in funnels, and especially to the provision of a device of simple construction, which may be interposed between a nozzle and a receptacle and form a tight connection with the receptacle.

The specific object is to provide a structure which may be fitted tightly into the intake fixture of a fuel oil tank to facilitate the filling operation and prevent spilling of the oil around such fixture although it is not limited to this particular use. Such intake fixtures are often in conspicuous places and become unsightly by waste oil dropped around them either before or after and sometimes during the filling operation. By the use of my invention, this difficulty and annoyance are eliminated.

These objects of the invention will be set forth in more detail in the following specification in which I will describe the invention fully and will set forth its novel features in the claims.

Referring to the drawings, Fig. 1 is a sectional elevation of a funnel which is made according to and embodies the invention and of similar separated parts of a filling hose and nozzle and of the intake fixture of a storage tank with its cover plate removed.

Fig. 2 is a similar view of the parts shown in Fig. 1 assembled, but in this figure the filling hose and nozzle are not sectioned.

Fig. 3 is a sectional plan view of the funnel. The section in this view is taken on the line 3—3 of Fig. 1.

Fig. 4 is an inverted plan view of the lower part of the funnel.

10 designates the body of the funnel which in the present showing is in the form of a hollow truncated cone, open at the top. At the lower end of this cone is an extension 11, the outside of the upper part of which is hexagonal as shown at 12 in Figs. 3 and 4, and has an internally threaded bore 13. The lower part of this extension 11 forms an externally threaded neck 14 through which is a bore 15 of smaller diameter than that of the bore 13. Between the upper and lower parts of the extension a flat shoulder 16 is formed normal to the axis of the cone. If desired, a slotted cover 11A may be provided to close the top of the funnel.

17 designates a downwardly sloping conical surface between the lower part of the inner surface of the cone 10 and the upper end of the threaded bore 13. Thus all inner surfaces of the structure slope downwardly toward the bore 13.

20 designates the inlet fixture of a storage tank (not shown). This has a hollow extension 21 which is internally threaded as at 22 to receive the externally threaded neck 14 of the funnel.

30 is a filling hose from any suitable source of supply. 31 is a nozzle externally threaded as at 32 to fit the threads 13 in the funnel.

When the nozzle 32 is screwed directly into the fixture

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22, in the usual manner, any leakage, during the filling operation, at the connection thus made will be spilled around the fixture. There is inevitably some leakage at this point when, at the end of the filling operation, the nozzle 32 is removed from the fixture 22. This results in an unsightly mess around the fixture 22.

According to my invention, the neck 14 of the funnel is screwed into the fixture 22 first (Fig. 2). As it is important that this should form a leak-proof connection, a washer 18 may be interposed between the shoulder 16 and the top of the fixture 22. Then the nozzle 32 is screwed into the threaded bore 13 of the funnel.

The nozzle will be removed from the funnel at the end of the filling operation before the funnel is removed from the intake fixture. If any oil leaks at the connection between the nozzle and the fluid, or drips from the nozzle when it is removed, it will accumulate in the funnel. As the entire inner surface of the funnel slopes downwardly, as has been pointed out, such accumulated oil will run down into the tank and the area surrounding the intake fixture will not be soiled. For this reason, this device is called "the last drop funnel."

Various modifications in construction, mode of operation, method and use of an invention may and do occur to others, especially after benefitting from knowledge of such disclosures as that herein presented of the principles involved, but the invention itself is not confined to the present showing.

I claim:

1. A funnel having a body and an extension from its lower end constructed with an internally threaded bore and an externally threaded neck below said extension having a bore therethrough of smaller diameter than that of said internally threaded bore, said neck being adapted to be screwed into an internally threaded intake fixture of a receptacle.

2. A funnel having a conical body and an extension from its lower end constructed with an internally threaded bore and an externally threaded neck below said extension having a bore therethrough of smaller diameter than that of said internally threaded bore, said neck being adapted to be screwed into an internally threaded intake fixture of a receptacle, said bores being in axial alignment with the axis of said body.

3. A funnel having a body and an extension from its lower end constructed with an internally threaded bore and an externally threaded neck below said extension having a bore therethrough of smaller diameter than that of said internally threaded bore, said neck being adapted to be screwed into an internally threaded intake fixture of a receptacle, said body having an unobstructed inner surface sloping downwardly to the top of said inwardly threaded bore.

4. A funnel having a body and an extension from its lower end constructed with an internally threaded bore and an externally threaded neck below said extension having a bore therethrough of smaller diameter than that of said internally threaded bore, said neck being adapted to be screwed into an internally threaded intake fixture of a receptacle combined with a nozzle externally threaded to fit the internally threaded bore in the funnel.

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