

UNITED STATES PATENT OFFICE.

MARIO CARRAU, OF MONTEVIDEO, URUGUAY.

FUNNEL.

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To all whom it may concern:

Be it known that I, MARIO CARRAU, a citizen of Uruguay, and a resident of Montevideo, Uruguay, South America, have invented a new and Improved Funnel, of which the following is a description.

My invention relates to means for filling a vessel from a container and more particularly relates to a funnel having a special usefulness in penetration of and the pouring of liquids from hermetically sealed containers.

The general object of the invention is to provide a funnel having self-contained means for puncturing the container for causing the contents to flow to the funnel.

A further object of the invention is to provide a funnel that will constitute a support for the container of fluid fuel and especially useful in the filling of the gasoline tanks in automobiles, launches, motor boats, aeroplanes, tractors and fixed motors, as well as the fuel tanks used for domestic and industrial uses.

An object of the invention also is to provide a funnel adapted to be permanently made a fixed part of a tank or the like.

The nature of the invention and its distinguishing features and advantages will appear as the description proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely practical examples of the invention.

Figure 1 is a side elevation of a funnel embodying my invention in one form illustrating the same in fixed position on the tank of an automobile shown in part, the view including the liquid container from which the liquid is to be withdrawn, showing said container supported on the funnel;

Figure 2 is an enlarged vertical section of a funnel with a fragment of a conductor pipe;

Figure 3 is a plan view of the funnel and conductor pipe, the cover being partially broken away;

Figure 4 is a vertical section of another form of my improved funnel embodied as a permanent part of a tank;

Figure 5 is a view similar to Figure 2 but illustrating a modification employing a screen.

Referring at first more particularly to Figures 1 to 3 of the drawings the funnel

body 10 is adapted to be disposed obliquely with the upper end in a horizontal plane or substantially so. A cover 11 is provided hinged to the body 10 at the exterior as at 12 and said cover in practice advantageously has an indurated fiber or other suitable material at the under side to make a tight closure with the edge of the body 10.

Within the funnel body 10 and ranging lengthwise thereof is a filler tube 14, the upper end 15 of which is in the form of a puncturing device, said edge being sharpened and terminating in an entering punch or entering point as clearly seen in Figure 3. The tube 14 and its puncturing front end is spaced from the walls of the body 10 to provide ample venting of the funnel in filling a gasoline tank or other receptacle. Said tube 14 is made rigid with the body 10 as by soldering, brazing, or the like at one side as at 16.

The funnel is adapted to be mounted permanently on a tank A, Figure 1, on an automobile for example. A conductor pipe 17 is shown to which the body 10 is secured in Figures 1 to 3, said pipe in practice being permanently connected with the tank such as A on the automobile, said conductor pipe having a form and length to suit the particular position of the tank.

In Figure 4 the body 110 of the funnel is welded or otherwise made a fixed and integral part of the tank B. The cover 111 is shown as hinged as at 112 on the tank 113 adjacent the funnel and has a packing ring 114 at the under side. A tube 115 having a puncturing point 115 is shown as secured on a bracket 116 at the interior of the tank B, the inner end of the tube being rigid with a sleeve 216 on said bracket.

The funnel body 10 or 110 constitutes a support for the can or container C holding the fuel or other liquid to be poured through the funnel, thereby eliminating the trouble and inconvenience of manually supporting the can while pouring. The upper end of tube 14 or 114 for its major portion is below the upper edge of the funnel. The supporting of the can also eliminates the waste of the liquid by spilling or by the evaporation due to the wind, sun rays, and the like upon the exposed gasoline. Also, rain and dust are effectually excluded from the can and from the liquid being poured. In Figure 5 the body 210 leads to conductor pipe 317 in which is fitted a screen 18.

In use, a corner of the can is entered into the open top of the funnel body after the cover has been raised and is pressed against the end 15 or 115 for puncturing the can or removing a corner thereof leaving a single hole for the outflow of the fluid and the inlet of venting air. The funnel cannot overflow because the puncture end of the corner of the can is within the funnel body and therefore the rising of the fluid in the funnel body to the height of the can corner will effect a liquid sealing of the can thereby preventing the entrance of air and the further outflow of the fluid. Thus, the invention does away with the need for forming two holes in the can as is usual and does away with the necessity of seeking a convenient tool for the purpose.

While a supply hose may be employed to direct the liquid to the funnel as is usual, the device is advantageous in making unnecessary the use of the hose and is more eco-

nomical. The can is left in such a condition as to be useful for general purposes.

I would state in conclusion that while the illustrated examples constitute practical embodiments of my invention, I do not limit myself strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claim.

Having thus described my invention, I claim:

As a new article of manufacture, a funnel comprising a tubular body having a filler tube therein ranging lengthwise of the body and open at the top and bottom, said tube being spaced from the walls of the body throughout the length of the tube except at the point of attachment between the tube and funnel body and the upper end of the filler tube constituting a puncturing device.

MARIO CARRAU.