

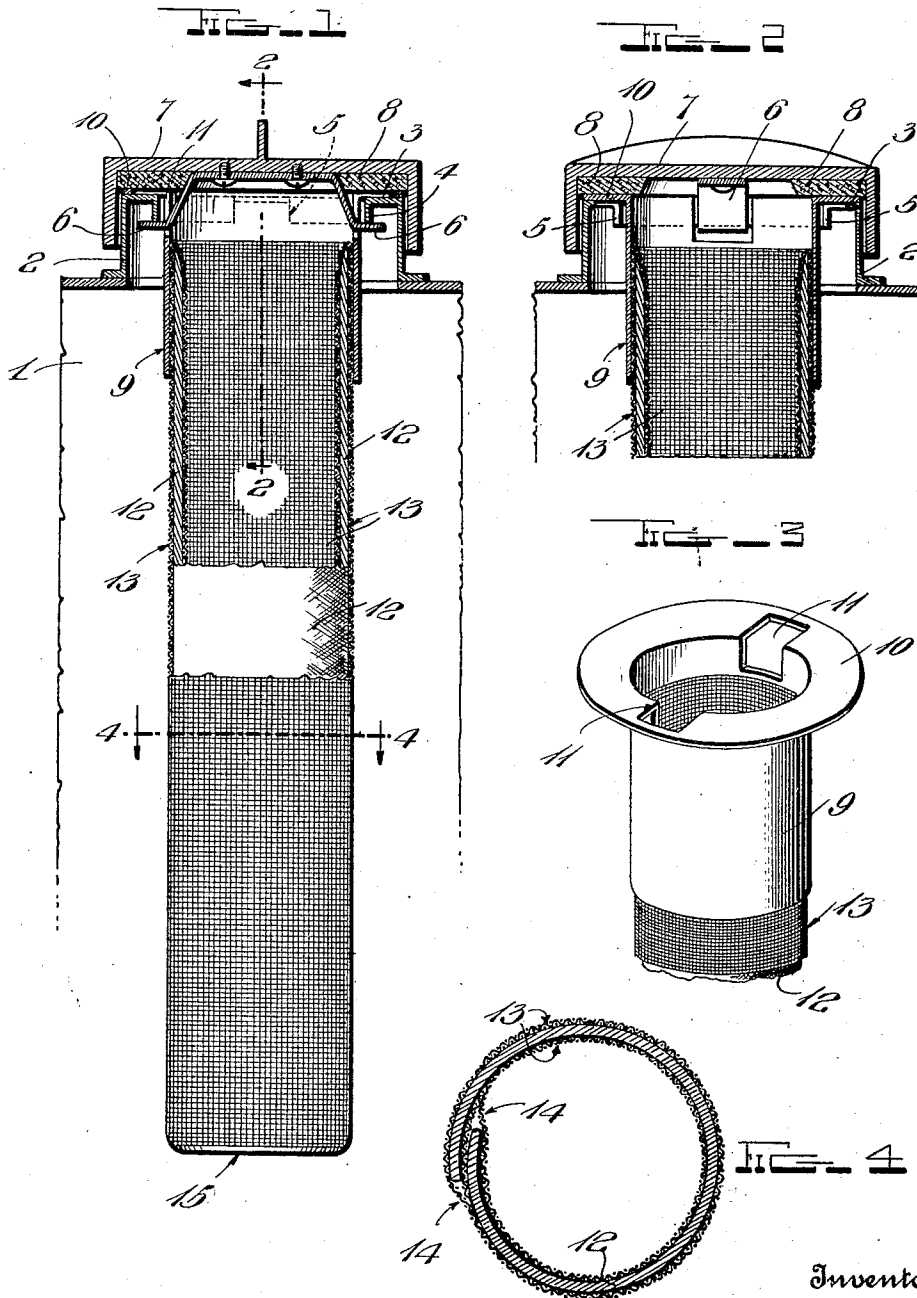
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STRAINER FOR GASOLINE TANKS

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UNITED STATES PATENT OFFICE.

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STRAINER FOR GASOLINE TANKS.

Application filed November 15, 1923. Serial No. 674,933.

To all whom it may concern:

Be it known that I, NELSON M. BOWES, a citizen of the United States, residing at Saybrook, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Strainers for Gasoline Tanks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in strainers of the type which are inserted into the filling necks of the gasoline tanks of automobiles and other vehicles, the principal object being to provide a device of this character which is usable to advantage in connection with a gas tank whose cap is not threaded in place, upon the neck, but is provided with a pair of retaining fingers which are downwardly movable through notches in an inturned flange of the neck and are engageable with the lower portion of this flange, by turning the cap.

Another object is to provide a strainer which may be easily constructed of alternate layers of reticulate metal and filtering material, finely woven brass or copper wire, and felt being preferably used.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawings.

Figure 1 is a vertical sectional view partly in elevation showing the application of my invention to a gasoline tank.

Figure 2 is a vertical sectional view at right angles to Fig. 1, as indicated by line 2-2.

Figure 3 is a perspective view of the upper end of the strainer.

Figure 4 is an enlarged horizontal sectional view on line 4-4 of Fig. 1.

In the drawings above briefly described, the numeral 1 designates a gasoline tank having an upstanding filling neck 2 which is provided with an inturned flange 3 at its upper end, said flange being shown with a downwardly turned inner edge 4. At diametrically opposite points, the flange 3 and its edge 4 are formed with notches 5 through which a pair of retaining fingers 6 carried by the inner side of a cap 7, are insertible. After insertion of these fingers through the notches 5, turning of the cap 7 causes said

fingers to underlie the lower edge of the flange portion 4, so that the cap is held in place. I have shown the inner side of this cap provided with the conventional gasket 8 which usually contacts with the flange 3.

I provide a tubular strainer insertable through the neck 2, the upper end of this strainer being provided with a metal stiffening sleeve 9 whose upper edge is formed with an annular outstanding flange 10 to lie upon the flange 3. The inner edge of the flange 10 and the contiguous portions of the sleeve 9 are formed with notches 11 to register with the notches 5, so that the fingers 6 may move through these registering notches when applying and removing the cap 7. When the fingers are passed downwardly through the notches and the cap is turned, it will be seen that the flange 10 is tightly bound against the flange 3, so that the strainer is held rigidly in place. When the cap is removed, the nozzle of a filling hose may be inserted into the strainer and the construction of the latter is such as to permit the discharge of gasoline through it, as rapidly as it can be pumped from the nozzle.

In constructing the filtering or straining portion of the device, I take a sheet of reticulate material, such as fine woven brass or copper wire and place a sheet of felt 12, or other filtering material upon the sheet of wire or the like. The two sheets are then rolled so that the sheet of wire or the like forms several somewhat spiral convolutions 13, between which the filtering material 12 is held. The inner and outer edges of the sheet of wire or the like, extend beyond the corresponding edges of the filtering sheet 12, as indicated at 14, and they are preferably soldered to the adjacent portions of said first named sheet. The edges of the convolutions 13, at the lower end of the tube, are soldered or otherwise secured to a closing disk 15, and the upper end of the tube is inserted into the sleeve 9 and soldered or otherwise secured thereto.

By providing the novel construction shown and described, a strainer is provided which is simple and inexpensive, yet is highly efficient and desirable, being particularly adapted for use in connection with the filling caps and necks of the type herein described, although it will be obvious that the strainer flange 10 might also engage the upper end of an ordinary threaded neck, in

which instance the cap threaded on said neck, would secure it in place.

As excellent results are obtainable from the details disclosed, they are preferably followed, but within the scope of the invention as claimed, numerous minor changes may be made.

I claim:

1. In combination with a gasoline tank having a filling neck provided with an in-turned flange at its upper end having diametrically opposed notches, and a cap for said neck having retaining fingers insertible through said notches and engageable with the lower side of the flange when the cap is turned; a tubular strainer passing through said neck and having an annular outstand-

ing flange resting on said flange of the neck, the flange of said strainer and the contiguous portions of said strainer having notches registering with the aforesaid notches to receive said fingers.

2. A strainer for the gasoline tank of an automobile comprising a straining tube adapted to be inserted into the filling neck of the tank and having a continuous flange at its upper end to be clamped on top of said neck by the cap therefor, said flange and the contiguous portion of the tube having notches formed therein to receive neck-engaging retaining fingers on the cap.

In testimony whereof I have hereunto affixed my signature.

NELSON M. BOWES.