

June 26, 1934.

K. E. STANT

1,964,277

FILLER CAP

Filed Feb. 3, 1931

2 Sheets-Sheet 1

FIG. 1

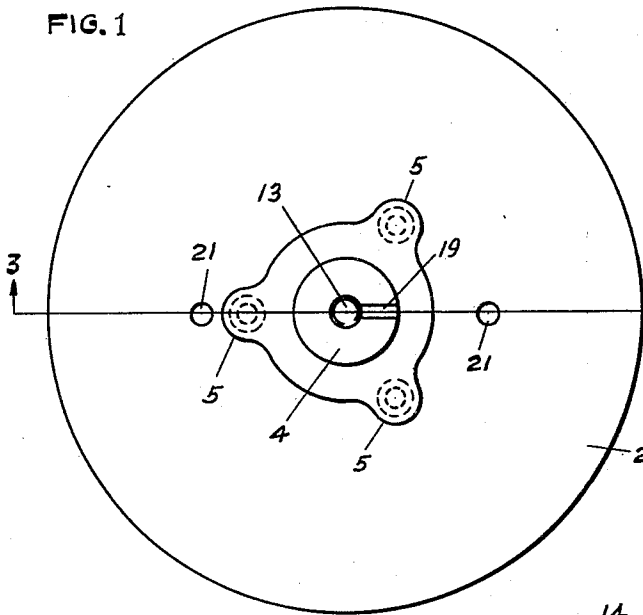


FIG. 2

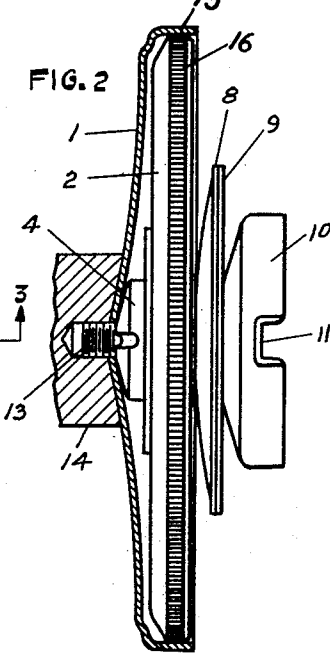


FIG. 3

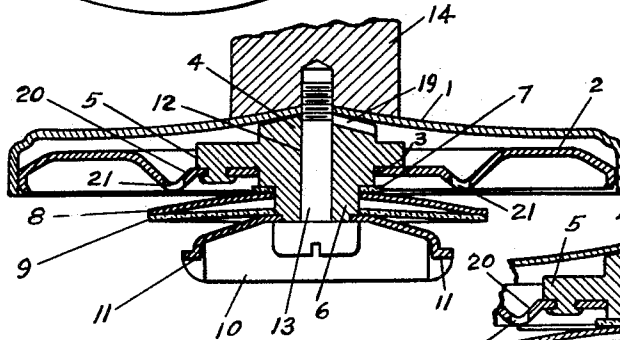


FIG. 5

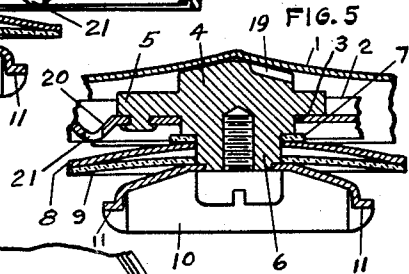
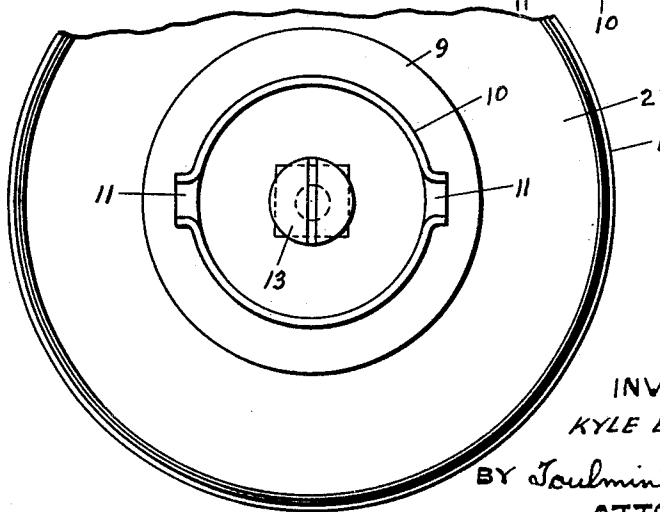


FIG. 4



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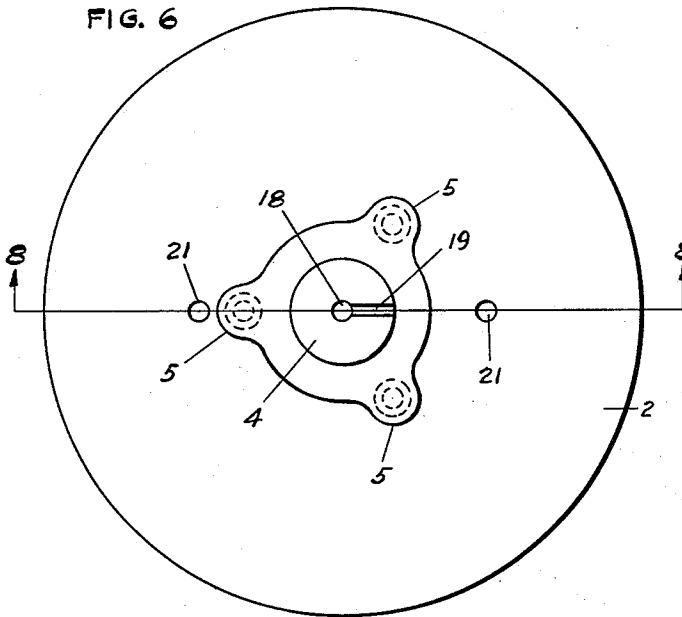
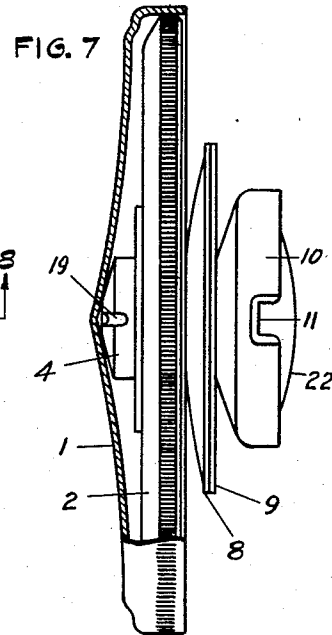
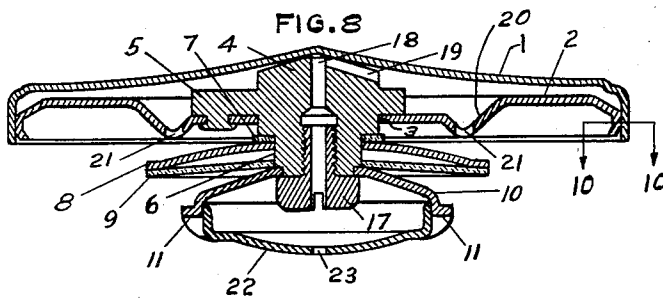
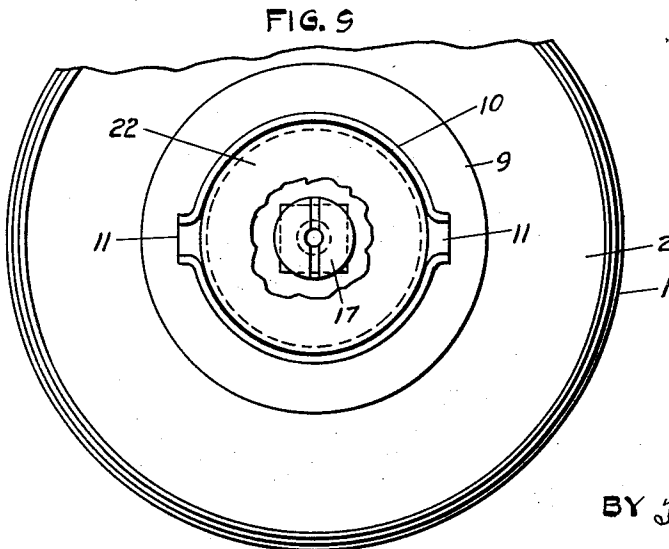
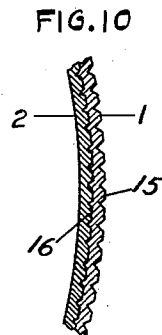
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1,964,277

FILLER CAP

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Application February 3, 1931, Serial No. 513,193

7 Claims. (Cl. 220—40)

This invention relates to improvements in caps for use on automobile radiators or gasoline tanks.

It is particularly the object of this invention to provide a cap adapted to be applied either to a radiator or a gasoline tank, and which may be used either with or without an ornament.

It is especially the object of this invention to provide, in connection with a cap, a central boss or core supporting the elements that constitute the complete cap structure and to so form this core that it may be used for supporting the cap upon a radiator spout or upon the gasoline tank of an automobile.

When the cap is used for gasoline tanks in order to provide the necessary ventilation, an opening is made through the boss into a casing formed at the outer end of the boss, and when the cap is used in connection with an ornament a screw opening is made in the boss and by means of a screw which holds the elements of the cap structure together, an ornament may be supported on top of the cap as a whole.

It may be readily seen from the foregoing that the purpose of this invention is to provide a cap adapted to be used on a radiator with or without an ornament, and one that may be used for closing the gasoline tank and at the same time providing the necessary ventilation for the tank.

These and other advantages will appear from the following description taken in connection with the drawings.

Referring to the drawings:

Figure 1 is a top plan view of the cap with the outer shell removed, showing the boss with a hole therein for the attachment of an ornament.

Figure 2 is a view showing the outer shell in section and the other parts of the cap in side elevation.

Figure 3 is a section on the line 3—3 of Figure 1. Figure 4 is a bottom plan view with parts of the shell broken away.

Figure 5 is a section through the boss and the adjacent parts of the cap structure to show the boss as used for a radiator cap without an ornament.

Figure 6 is a view similar to Figure 1, showing the boss formed with a vent hole therein.

Figure 7 is a view similar to Figure 2 but of the form shown in Figure 6.

Figure 8 is a section on the line 8—8 of Figure 6.

Figure 9 is a bottom plan view of the form shown in Figure 6, the shells being partly broken away.

Figure 10 is a section on the line 10—10 of Figure 8.

This apparatus consists essentially of an outer shell 1, an inner shell 2, which has a hole 3 therein, a boss 4 fitting within the hole of the inner shell and constituting the main support for the apparatus, a closure means, and means for locking the cap as a whole on a spout.

The boss, which constitutes the central and supporting part of the apparatus, has on its outer end a plurality of flanges 5. The other end of the boss is reduced in size, as indicated by the numeral 6, and has thereon a washer 7. Around this reduced part and fitting against the washer 7 is a saucer-shaped disc 8, which is composed of metal and is resilient in nature and adapted to press a gasket 9 against the top of the filler spout. The gasket is made of any suitable material.

The end of the boss adjacent the parts 8 and 9 is square and has fitting over it a locking cup member 10, which has in the center thereof a square hole to receive the square end of the boss. In the present instance parts of the walls of the cup are pressed out to form spout-engaging lugs 11. In the present instance two of these lugs are shown. Any number may be provided.

In order to hold the parts assembled on the boss the boss has provided therein a hole 12, which receives a screw 13 the head of which engages the inside of the bottom of the cup locking member to hold this locking member on the boss. This hole may extend partly through the boss, as shown in Figure 5, in which case a screw with a short shank is used. As shown in Figure 3 the boss has attached thereto by any suitable means the inner shell member. In the present instance this shell member is attached to the boss by means of rivets forming parts of the flanges 5.

After the inner shell has been placed in position on the boss the outer shell, which is somewhat cup-shaped, may be slipped over the inner shell in frictional engagement therewith. On the other end of the boss from the two shells are the washer 7, the disc 8, the gasket 9 and the cup-shaped locking member 10. The latter four parts are assembled on the boss and retained by means of the screw 13.

Whenever it is desired that an ornament be mounted on top of the outer shell a hole may be provided entirely through the boss and through the center of the outer shell, for receiving the long shank of a screw which extends through the boss, the outer shell and into an ornament 14, as shown in Figures 2 and 3. The parts shown in these figures are the same as the parts shown in Figure 5 except that no ornament is used in the form shown in Figure 5, and in order that an ornament may be used a hole is bored entirely through the boss to receive the long shank screw 13.

In the forms shown in Figures 6, 7, 8 and 9 the cap is adapted to be used in connection with a spout of a gasoline tank, and in order to adapt the cap member as a whole for use as a gasoline tank closure the form shown in Figure 5 is modified by having a hollow screw 17 in place of the solid screw shown in Figure 5, and extending in line with the hollow screw through the

boss is a vent hole 18 which leads into a drain groove 19 in the upper, outer surface of the boss just beneath the outer shell, and a baffle member 22 with a hole 23 fitted to cup 10.

5 In the inner shell around the boss is a trough 20, which has in the bottom thereof one or more vent holes 21 for the entrance of air or the escape of gases and other materials which accumulate in the casing formed by the inner and outer shells. The outer edges of these two shells have corrugations 15 and 16, as shown in Figures 7 and 10. The outer shell is adapted to fit over the inner shell and to be held thereon by friction between the two. In order to operate the cap as a whole the outer shell is rotated thereby rotating the inner shell, and with it the boss and the locking cup. As shown in Figure 10 the corrugations in these two parts are interlocked.

It is obvious that by the use of a cap of this nature the only thing necessary to convert the cap from an ordinary cap, such as that shown in Figure 5, to one supporting an ornament is that the hole for receiving the screw be extended entirely through the boss so that a long shank screw, such as that shown in Figures 2 and 3, may be used. This screw has its threaded end forced into the end of the ornament, and in order to convert the form of boss shown in Figure 5, to one for use in connection with a cap for a gasoline tank, it is necessary to remove the screw shown in Figure 5 and replace it by a screw such as that shown in Figure 8 and form in the boss a vent hole 18.

These parts are composed of suitable material, the boss being of such material that the necessary holes may be bored therein for converting the cap from one form to another. The cap may be easily converted from an ordinary cap, such as that shown in Figure 5, and from a gasoline tank cap, such as that shown in Figures 6, 7 and 8, to an ornament-carrying cap such as that shown in Figures 1, 2 and 3.

This cap is adapted to be used on most any form of spout, but more particularly it is adapted to be used in connection with a filler spout which has its upper edge turned in and down to form cam surfaces to be engaged by the parts 11 of the locking cup.

Whenever the cap is to be placed in position the locking cup is forced within the upper end of the spout and the cap as a whole is turned so that the parts 11 engaging cam surfaces force the parts 8 and 9 to frictionally engage the upper surface of the spout to form a tight, close fit therewith, the parts 8 and 9 being adapted to rotate around the boss while the parts 1, 2 and 10 move with the boss and are affixed thereto for operating purposes.

I desire to comprehend within my invention such modifications as may be embraced within my claims and the scope of my invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In combination, a boss, an inner shell fixed to said boss, an outer shell fixed to the inner shell, closure means rotatably mounted on said boss and spaced from the inner shell, a lock member on said boss, an ornament, means passing through the boss, the outer shell and into the ornament to hold the parts assembled.

2. In combination, a boss, a plate fixed to said boss, a casing fixed to said plate, spout closure

means rotatably mounted on said boss, locking means for holding the closure means on the boss and locking the closure means on a filler spout, an ornament on said casing, and means engaging the ornament and the locking means to hold the parts assembled.

3. In combination, a filler spout, a boss, an inner shell fixed to said boss, an outer shell fitting over the boss and frictionally engaging the inner shell at its periphery, an ornament on the outer shell, closure means for said filler spout on said boss, and means engaging the ornament and the closure means and passing through the boss to hold the parts together.

4. In a closure, in combination, an outer shell and an inner shell, said shells being secured together at their peripheries but otherwise spaced apart, a separate boss member secured to the inner shell at the central portion thereof and extending adjacent the central portion of the outer shell, a rigid locking member secured to the boss member, and a sealing plate carried by said boss member.

5. In a cap structure, in combination, a primary shell and a secondary shell, said shells being secured together at their peripheries but otherwise spaced apart, a boss secured to the central portion of the primary shell, one end of said boss extending through said primary shell and supporting a locking member and sealing means, the other end of said boss extending adjacent the inner surface of the secondary shell, an ornamental member carried on the outside surface of the secondary shell, screw means extending through the locking member, the boss and secondary shell and engaging the ornamental member, whereby the primary shell, secondary shell and boss are clamped together without deforming the secondary shell.

6. A closure structure comprising in combination an inner plate, a thinner outer ornamental shell, said plate and shell being secured together at their peripheries but otherwise spaced apart, a boss member secured to said inner plate and extending axially from both sides thereof, a locking member carried by said boss, clamping means retaining said locking member against rotation relative to said boss, said boss extending adjacent the inside surface of the ornamental shell adapted to retain said shell in spaced relation to said inner plate.

7. A cap structure comprising in combination, an inner shell and an outer shell, said shells being secured together at their peripheries but otherwise spaced apart, a boss member secured to the inner shell and extending axially from both sides thereof, one end of said boss engaging the inner surface of the outer shell at substantially its central portion, a locking member carried on the other end of said boss, cooperating means on the boss and locking member preventing rotation of said locking member relative to said boss and shells, an ornamental member engaging the outside surface of the outer shell at substantially its central portion, means on said ornamental member passing through said outer shell and engaging said boss, whereby the outer shell, inner shell, boss, locking member and ornamental member are clamped together with the outer shell continuously spaced from the inner shell except at their peripheries.

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