

A. J. PASCO.
VENT FOR AUTOMOBILE RADIATORS.
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1,435,331.

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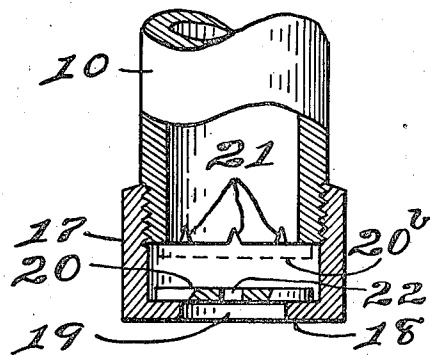
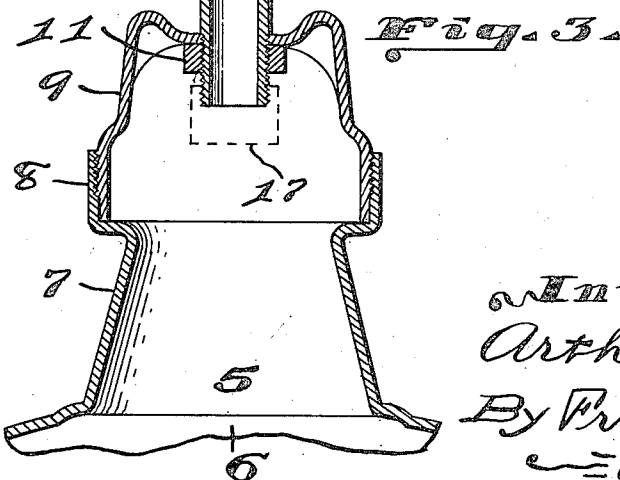
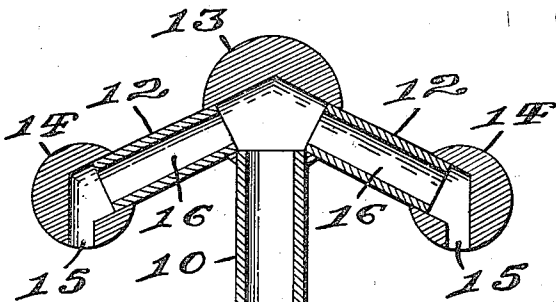
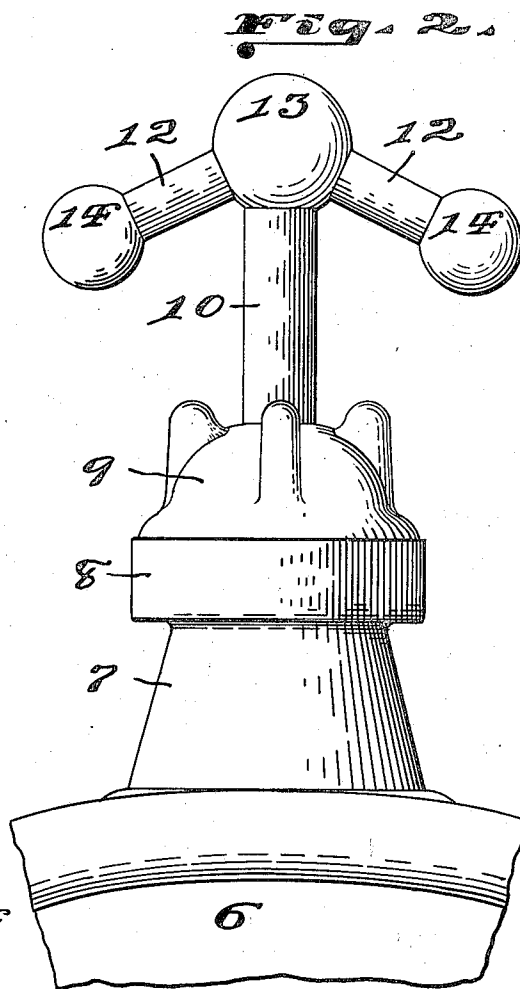
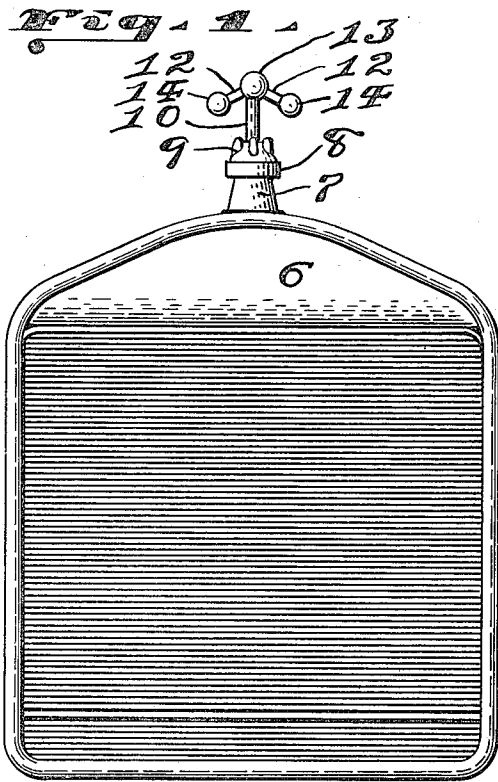


Fig. 4.

Inventor
Arthur J. Pasco.
By Frank P. Shepard.
Attorney

UNITED STATES PATENT OFFICE.

ARTHUR J. PASCO, OF OKLAHOMA, OKLAHOMA.

VENT FOR AUTOMOBILE RADIATORS.

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To all whom it may concern:

Be it known that I, ARTHUR J. PASCO, a citizen of the United States, and a resident of Oklahoma city in the county of Oklahoma and State of Oklahoma, have invented certain Improvements in Vents for Automobile Radiators, of which the following is a specification, reference being had to the accompanying drawings.

The object of the invention is to provide a suitable vent for automobile radiators.

Figure 1 of the accompanying drawings is a front elevation of the radiator of a "Ford" automobile, with the improved vent in place thereon.

Figure 2 is an enlarged reproduction of the upper portion of Figure 1.

Figure 3 is a sectional view on the same scale and in the same direction as Figure 2.

Figure 4 is a sectional view in the same direction as Figures 2 and 3 and on still larger scale, showing means for preventing water from spouting out of the vent of the radiator.

Like characters of reference designate like parts in all the figures.

The radiators of practically all automobiles are provided with upper openings to allow them to be filled with water, each opening being provided with a closure which engages it by screw threads or by some other suitable holding means.

The opening 5 of the Ford radiator 6 shown in the present instance is surrounded by a neck 7 whose upper end terminates in an upstanding flange 8 adapted to act as a funnel in pouring water into the radiator; and a closure 9 is screwthreaded into said flange.

The temperature of the water in the radiator often rises to the boiling point and remains at or above said point if the closure 9 is screwed down tightly enough to retain steam or vapor.

In this instance the closure 9 is provided with an outlet in the form of a vertical tube 10, this tube being screwthreaded down through the top of the closure and being locked thereto by a jam nut 11.

The upper end of the tube 10 is provided with diametrically-opposed drooping tubular arms 12 which are attached to it by a spherical connection 13.

The tube 10 and arms 12 may be soldered or screwthreaded into the connection 13.

The outer ends of the arms 12 are fin-

ished with end pieces 14, of spherical shape, and these end pieces are ported downward as at 15 as an outlet for the bore 16 of said arms.

The steam or vapor generated in the radiator 6 may freely pass up the tube 10 and out the arms 12.

From different causes the water in the radiator 6 often spouts upward into the neck 7, and if the closure 9 has a permanently open vent the water will occasionally slop out said vent and onto the radiator or other part of the vehicle.

To prevent this action of the water, a small cup-shaped valve-cage 17, shown in full lines in Figure 4 and by dotted lines in Figure 3, is screwed onto the lower or inner end of the tube 10.

The bottom 18 of this valve-cage 17 has a central opening 19 through which the vapor may pass, and the opening is covered and closed by a very light metal disc 20 which is of smaller diameter than the inside of the valve-cage.

When the vapor pressure in the radiator 6 is only, say, one-tenth of an ounce to the inch the vapor will pass or leak up past the disc 20 with sufficient freedom and without perceptibly raising said disc off the bottom 18 of the valve-cage 17; but if the water suddenly spouts upward through the openings 5 and 19 it raises said disc bodily and seats it upward against the lower end of the tube 10 in the position shown by the dotted representations 20^b in Figure 4.

The lower end of the tube 10 is provided with one or more notches 21 so that the disc 20 cannot seat against it with a steam-tight or vapor-tight fit and cannot be permanently held in seated position by steam pressure that might be set up; but the seating of the disc effectually prevents the ascension of water through the tube 10, the latter being tall enough and of sufficient capacity to retain the small amount of water that might pass through the notches 21 during sudden stopping of the automobile or other periods of agitation of the water.

The small amount of water that is thrown up into the tube 10 through the notches 21 will readily flow back down into the radiator 6 when the short spouting period terminates, and the disc 20 is provided centrally with a small opening for that purpose.

The following is claimed:—

In combination with the closure of a radi-

ator opening, a vent tube extending upward
from the closure, the lower end of the vent
tube extending down through the closure
and being provided with a valve-cage, a
5 valve carried in the valve-cage and adapted
to be temporarily seated against the lower
end of the vent tube by the upward spout-

ing of water in the radiator, the lower end
of the vent tube being notched to prevent
a permanent seating of the valve. 10
Witness my hand this 22nd day of Sep-
tember, 1921.

ARTHUR J. PASCO.