

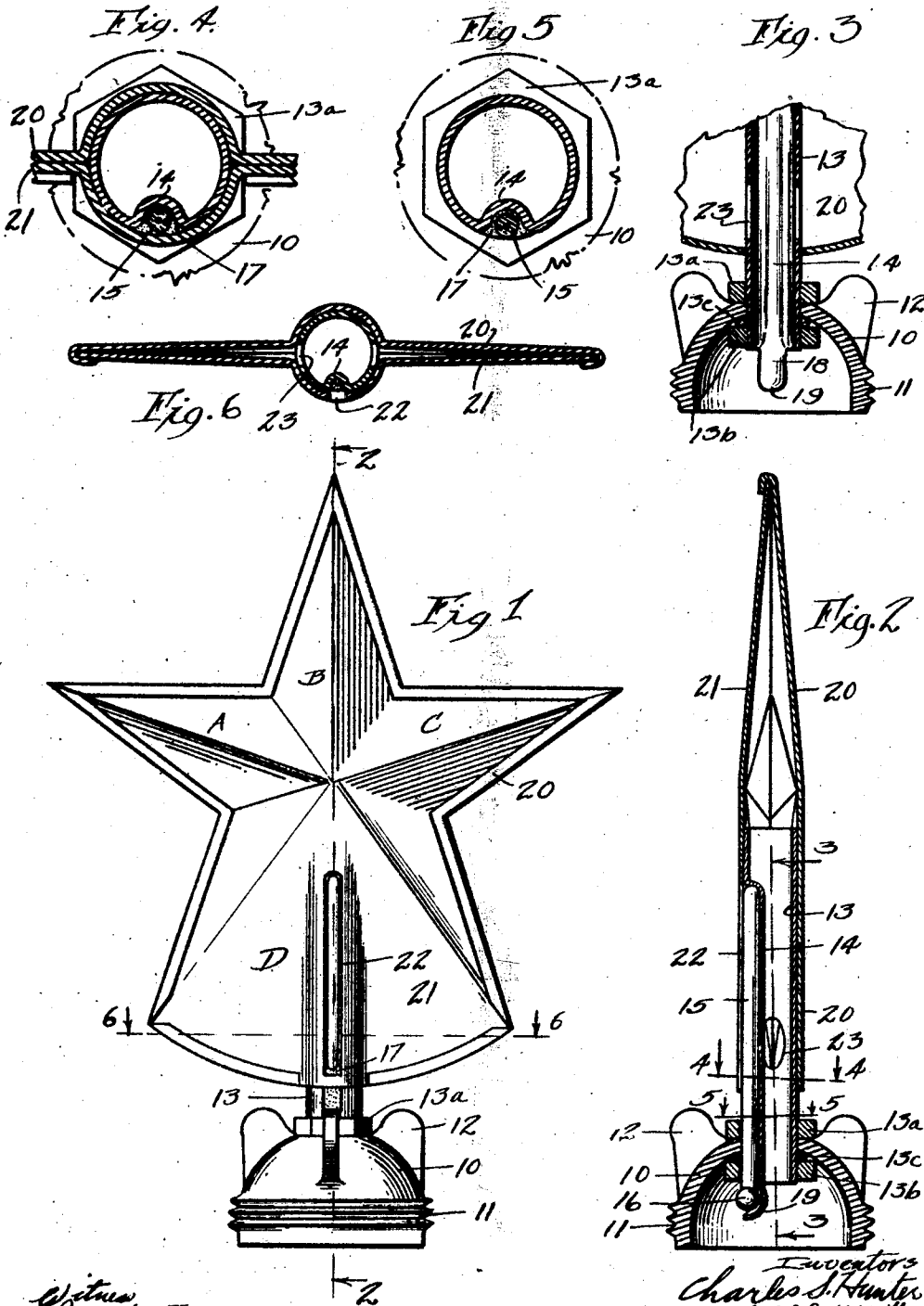
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CONDENSER AND THERMOMETER HOLDER FOR MOTOR VEHICLE RADIATORS

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CONDENSER AND THERMOMETER HOLDER FOR MOTOR-VEHICLE RADIATORS.

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The object of our invention is to provide a condenser and thermometer holder for motor vehicle radiators of simple, durable and inexpensive construction.

5 A further purpose of the invention disclosed herein is to provide a condenser adapted to be mounted on the cap of the radiator of a motor vehicle in such manner as to communicate with the interior of the radiator to permit the flow of vapor into the condenser for cooling the vapor, where it will be subjected to the action of passing air and to provide in such a device structure peculiarly adapted to hold a temperature indicator with its graduations visible.

10 With these and other objects in view, our invention consists in the construction, arrangement and combination of the various parts of our device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in our claim, and illustrated in the accompanying drawings, in which:

15 Figure 1 shows a front elevation of the condenser embodying our invention.

20 Figure 2 shows a vertical, sectional view taken on the line 2—2 of Figure 1.

25 Figure 3 shows a vertical, sectional view taken on the line 3—3 of Figure 2.

30 Figure 4 shows a horizontal, sectional view taken on the line 4—4 of Figure 2.

35 Figure 5 shows a horizontal, sectional view taken on the line 5—5 of Figure 2; and

40 Figure 6 shows a horizontal, sectional view taken on the line 6—6 of Figure 1.

In the drawings herewith, wherein our invention is illustrated, we have used the reference numeral 10 to indicate a radiator cap having the external screw-threads 11 and the projecting ears 12, which ears facilitate the manipulation of the cap.

45 Our improved condenser comprises a tubular member 13 mounted on the cap 10 and communicating with the interior thereof as shown in Figures 3 and 4. The tube 13 may be secured by means of the nuts 13^a and 13^b, threaded upon the end of the tube. The packing ring 13^c is used to form a steam-tight joint.

50 The tubular member 13 has in one wall a channel 14. A thermometer 15 is received in the channel 14 with its lower portion as at 16, projecting into the interior of the cap 10. The thermometer is secured in place by cement or the like 17.

A shield 18 forming a continuation of the channel 14 below the bottom of the tube 13, covers the lower part of the thermometer as shown in Figure 3 and is preferably bent 60 around the bulb at its lower end, as at 19 in Figure 2.

Mounted on the tubular member 13 is a hollow condenser casing comprising walls 20 and 21, the walls being secured together 65 at their outer edges and spaced apart from each other at their central portions.

The condenser casing may have projecting portions A, B and C somewhat like star points and a larger lower portion D, as 70 shown for instance in Figure 1.

The lower part of the walls 20 and 21 are shaped to fit the tubular member 13 as shown in Figures 1 and 2 and are snugly secured thereto by joints, which are water- 75 tight around the thermometer.

The cement 17 serves as a packing between the wall 21 and the thermometer tube, completely enclosing the latter as shown in Figures 1 and 4.

80 The wall 21 has a sight opening 22 which permits inspection of the thermometer 15.

The lower edges of the walls 20 and 21 are so arranged as to cause the condenser casing to drain toward the tubular member 13. 85 The tubular member 13 is provided with openings 23 adjacent to the lower edges of the walls 20 and 21.

It is well-known that it is desirable to be able to easily ascertain the temperature of 90 the radiator.

It is also well-known that there is considerable loss of water from the radiator, due to the escaping of steam and that where a cooling fluid, such as alcohol with a low 95 freezing point is used, the loss by evaporation is considerable.

In the practical use of our improved condenser, it will be obvious that if the sight opening 22 is turned toward the driver's 100 seat, the driver can easily see the condition of the fluid in the thermometer and thus determine whether or not his car is overheated.

The vapor of water or alcohol or the like passes upwardly from the radiator through 105 the cap and through the tube 13 into the condenser casing, where it is subjected to the cooling effect of passing air and is condensed. Thereupon the liquid of condensation will flow downwardly, drain into the lowermost 110 point of the condenser casing, and downwardly and out through the tube 13.

It will be noted that the member 18 serves both as a shield and as a support for the thermometer.

It will also be noted that the shield extends upwardly to such a point that the liquids of condensation drain from the condenser casing at a point below the upper end of the shield. This protects the thermometer from direct contact with the liquids of condensation.

It will of course be understood that the general form and outline of the condenser casing may be changed in a great variety of ways and that the details of the structure may be modified, and it is our intention to cover by our claim, any modified forms of structure or use of mechanical equivalents,

which may be reasonably included within its scope.

We claim as our invention:

In a device of the class described, a condenser adapted to be mounted on a radiator cap comprising a tubular member mounted thereon and communicating with the interior thereof, having an outwardly opening channel in its wall, a shield and support extending downwardly from said tubular member, and a condenser casing mounted on said tubular member provided with a sight opening registering with said channel.

Des Moines, Iowa, September 15, 1923.

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