

J. M. FEDDERS.
RADIATOR.
APPLICATION FILED MAY 27, 1911.

1,002,978.

Patented Sept. 12, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

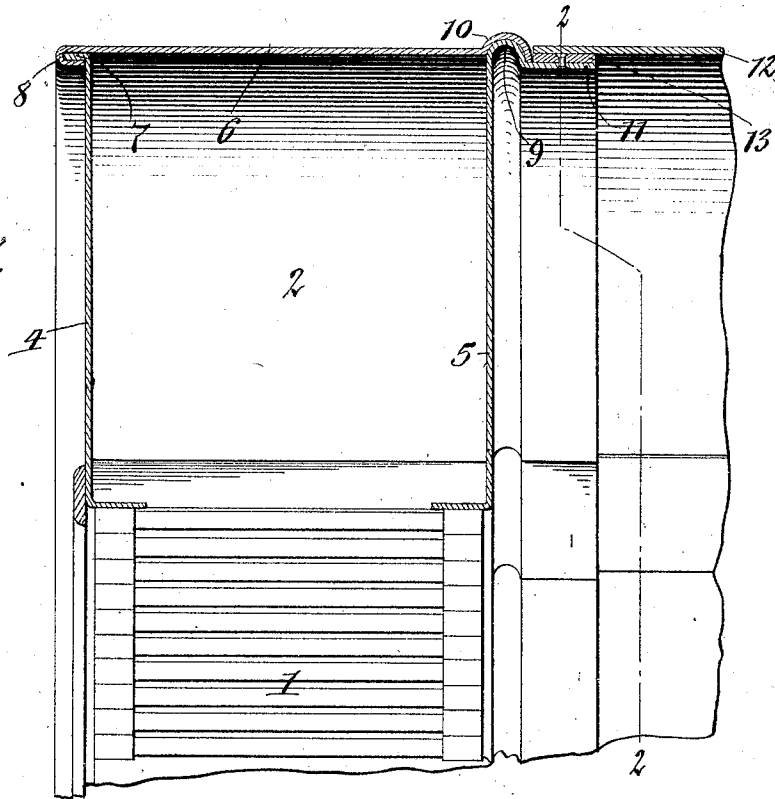
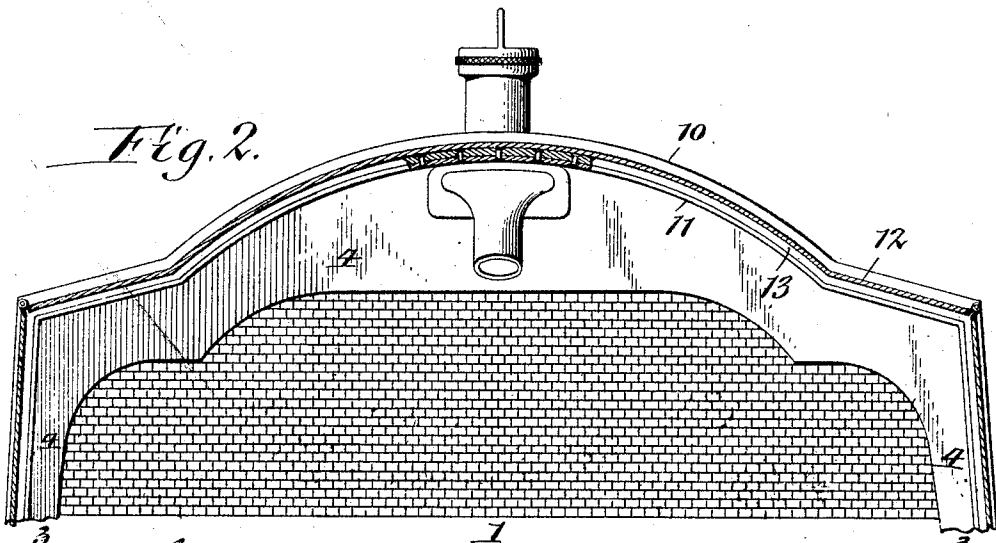


Fig. 2.



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2 SHEETS-SHEET 2.

Fig. 3

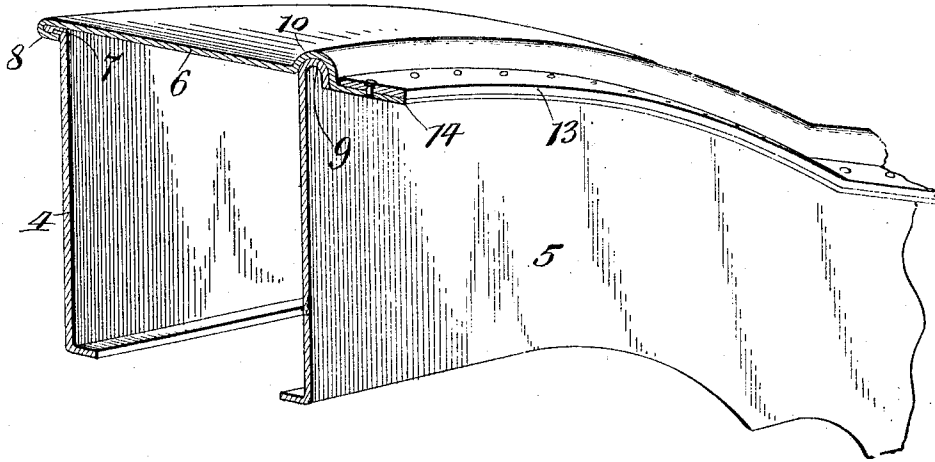
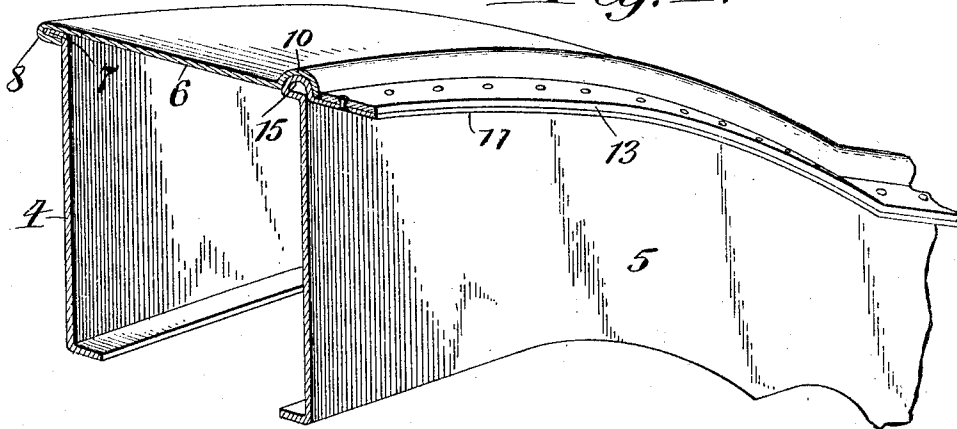


Fig. 4



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UNITED STATES PATENT OFFICE.

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RADIATOR.

1,002,978.

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To all whom it may concern:

Be it known that I, JOHN M. FEDDERS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Radiators, of which the following is a specification.

In radiators for automobiles as heretofore constructed it has been customary to provide the rear vertical wall of the upper water box or header and the upright water legs on opposite sides of the cellular part of the radiator with a ledge, flange or shelf for supporting the hood of the engine, which shelf was usually separate from this wall and connected therewith by solder. It has also been customary to provide the periphery of the radiator near its rear end or side with an outwardly projecting ornamental bead.

When soldering the hood supporting flange to the rear wall there is great danger of opening the soldered joint between the rear wall and the periphery of the radiator and cause leakage. Furthermore, the engine hood resting upon the supporting ledge or flange is liable to wear the adjacent part of the rear wall of the radiator, owing to the constant vibration of the machine, thereby causing leakage.

It is the object of this invention to provide a radiator in which the hood supporting shelf and the ornamental peripheral bead are both formed integrally with the walls of the radiator and interlocked with each other in such manner that a perfectly tight joint is produced between the rear wall and the peripheral wall and any wear which is produced by the movement of the engine hood relatively to the radiator will be unable to produce openings in the radiator through which water can escape.

In the accompanying drawings consisting of 2 sheets: Figure 1 is a fragmentary vertical longitudinal section of the upper part of an automobile radiator embodying my invention. Fig. 2 is a vertical transverse section, on a reduced scale, in line 2-2, Fig. 1. Figs. 3 and 4 are fragmentary perspective views showing forms of radiators embodying my invention which differ slightly from that shown in Figs. 1 and 2.

Similar numerals of reference indicate corresponding parts throughout the several views.

In its general organization the radiator shown in the drawings for illustrating the application of my invention comprises a cellular body 1 forming external horizontal air passages and vertical internal water channels or passages, an upper header or water box 2 connected with the upper ends of the water channels or spaces of the cellular body, and two water legs 3, 3 arranged vertically on opposite sides of the cellular body and connecting opposite ends of the upper header with the lower header or water box of the radiator which is not shown in the drawings but which is of the usual construction.

4 represents the vertical or upright front wall of the upper water box and the water legs, 5 the vertical or upright rear wall of the same and 6 the peripheral outer wall which is connected with the outer edges of the front and rear vertical walls.

The front edge of the peripheral wall may be connected with the outer edge of the front wall in any suitable manner but preferably by providing the outer edge of the front wall with a forwardly projecting flange 7 which is secured within an inwardly turned channel 8 formed on the front edge of the peripheral wall by means of solder.

The rear edge of the peripheral wall and the outer edge of the rear wall may be connected with each other in various ways in accordance with my invention. In the form shown in Fig. 1 the outer edge of the rear wall is provided with a laterally and rearwardly projecting bead 9 formed integrally therewith and of substantially semi-circular form and the rear edge of the peripheral wall is provided with a corresponding laterally and rearwardly projecting bead 10 formed integrally therewith and fitting over the outer side of the bead of the rear wall. These two beads may be connected with each other in any suitable manner so as to form a water tight joint between the same but preferably by soldering this joint.

The rear edge of the bead of the rear wall is provided with a rearwardly projecting flange 11 formed integrally therewith and constituting a shelf or ledge upon which the front edge of the hood 12 is supported which covers the space in which the engine and associated parts of the automobile are arranged. The outer side of this supporting

flange is provided with a cushion 13 of fibrous material, such as leather, for the hood to rest upon and thus prevent noise due to the vibration of the machine when the engine is in operation.

When the hood rests upon the cushion of the supporting flange the front edge of the hood engages with the rear edge of the bead of the peripheral wall of the radiator so as to form a close joint with the same.

If in course of time the front edge of the hood, due to vibration of the machine, should wear the beads of the peripheral and vertical rear wall of the radiator to a considerable extent, such wear will not impair the efficiency of the radiator inasmuch as the walls of the radiator are still intact and no leakage can therefore occur as would be the case if the radiator hood were supported in engagement with the rear wall of the radiator and thus constantly tend to wear the same. Furthermore, the integral formation of the hood supporting flange with the rear wall of the radiator dispenses with the separate solder joint which has been employed heretofore for connecting this flange with the radiator in addition to the solder joint which connected the rear wall and peripheral wall, thereby avoiding the liability of loosening up the joint between the radiator walls and preventing leakage while attaching the hood supporting flange to the radiator.

By forming the beads integrally on the rear and peripheral walls of the radiator and interlocking the same in the manner described these parts are not only held more reliably in place relatively to each other but they also permit of dispensing with a separate bead which has heretofore been secured to the radiator for ornamental purposes.

Instead of forming the hood supporting flange on the rear edge of the bead of the rear wall of the radiator this flange may be formed on the rear edge of the bead of the peripheral wall, as shown at 14 in Fig. 3.

The bead of the rear wall instead of pro-

jecting laterally and rearwardly from the same, as shown in Fig. 1, may also project forwardly and laterally therefrom in the form of a loop, as shown at 15 in Fig. 4.

In all of the several constructions described the rear and peripheral walls of the radiator are provided respectively with integral beads which interlock with each other and one of these beads is provided with a supporting flange upon which the engine hood is supported in such manner that the wear of this hood is taken up by the beads and the adjacent wall of the radiator is saved from such wear so that leakage does not occur.

I claim as my invention:

1. A radiator having a vertical wall provided at its edge with a bead and a peripheral wall provided with a bead which engages with the bead of the vertical wall, one of said beads being provided with a flange for supporting an engine hood.

2. A radiator having a vertical rear wall provided at its edge with a laterally projecting bead and a peripheral wall provided at its rear edge with a laterally projecting bead which engages with the outer side of the bead on said rear wall, one of said beads having a rearwardly projecting flange which is adapted to support an engine hood.

3. A radiator having a vertical rear wall provided at its edge with a bead which projects laterally and rearwardly from said rear wall and is provided at its rear edge with a rearwardly projecting flange adapted to support an engine hood, and a peripheral wall provided at its rear edge with a bead which projects laterally and rearwardly and which is secured over the bead of said rear wall.

Witness my hand this 25th day of May, 1911.

JOHN M. FEDDERS.

Witnesses:

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