

E. C. F. STREICHERT.
RADIATOR.
APPLICATION FILED OCT. 16, 1911.

1,057,294.

Patented Mar. 25, 1913.

Fig. 1.

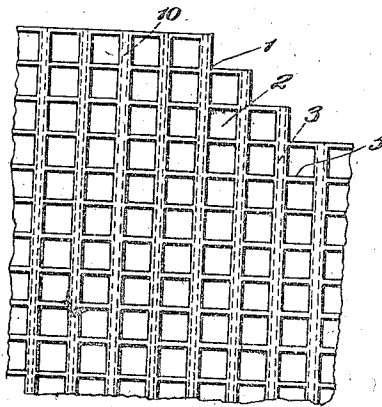


Fig. 2.

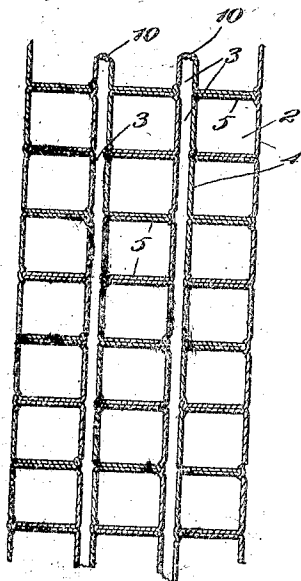
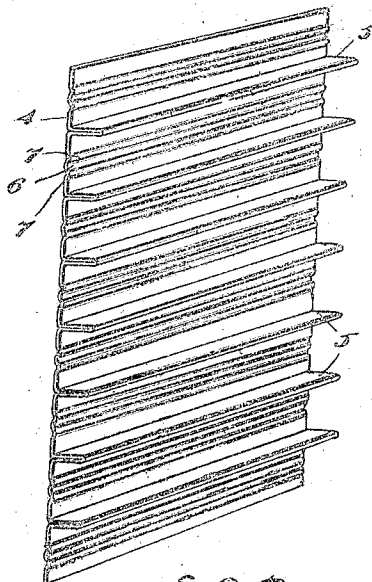


Fig. 3.



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UNITED STATES PATENT OFFICE.

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RADIATOR.

1,057,294.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EMIL CARL FRIEDRICH STREICHERT, a subject of the Emperor of Germany, residing at Lockport, in the county of Niagara and State of New York, have invented certain new and useful improvements in Radiators; and I do hereby 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.

This invention relates to radiators and has for its object to produce a core construction which is more simple in construction and more rigid and efficient in action than those heretofore produced.

To these ends the invention consists in the novel details of construction and combinations of parts more fully hereinafter disclosed and particularly pointed out in the claim.

Referring to the accompanying drawings forming a part of this specification in which like numerals designate like parts in all the views:—Figure 1 is a diagrammatic elevational view of a portion of one of the faces of a radiator built in accordance with my invention; Fig. 2 is a sectional view of the parts shown in Fig. 1; and, Fig. 3 is a perspective view of one of the corrugated distance pieces.

1 indicates the front face of a radiator core provided with the air spaces 2, and the water tubes 3 running at right angles to the air spaces. The air spaces are formed out of complementary distance plates 4 each provided with fins 5 formed by bending the metal upon itself as indicated, and between each pair of fins each plate is provided with a dent or depression 6 having corresponding ridges 7 on each side thereof formed by the action of the dies while shaping the metal. A pair of plates such as 4 are so placed together that one of the fins 5 on one plate seats in the depression 6 between the ridges 7 on the other plate and thereby forms a complete passage 2, as will be clear from Fig. 2.

The ridges 7 serve to hold the extreme edge of a fin 5 in place, and said ridges 7 also facilitate the assembling of the plates 4 together and insure a greater uniformity in the spacing of the projecting tongues. In fact, a radiator provided with the dent or depression 6 and its bounding ridges 7 is

found to have a neater appearance, and is stronger than a radiator which is not provided with said dents 6 in the plates 4. In fact, the said depressions and ridges serve to actually stiffen the metal of the plates 4 between the fins 5, and thus insure a more uniform water space 3, and minimizes the possibility of the said water space becoming clogged.

The fins 5 of each plate are firmly soldered along their entire lengths in the depressions of the other plate; this can be accomplished by placing solder in the depressions 6 and heating the ends of the fins before inserting the latter in said depressions. By this improved construction, the ridges 7 greatly augment the strength of the soldered joints and permit independent vertical expansion and contraction of each distance plate without displacement of the fins thereof.

From the above description, it will be clear that my invention provides an improved construction, in which the fins are firmly soldered along their entire lengths between the ridges 7, thereby enabling the corners of the assembled distance plates to be cut diagonally or to other non-rectangular shapes without weakening the structure or causing leaks therein. In so cutting the radiator cores in previous constructions, it is necessary to solder or otherwise secure the cut end of the fins in position, and frequently to entirely fill up the half radiator squares which are cut through by solder. In other words, by the simple expedient of providing a depression 6 and ridges 7 between the adjacent fins or tongues 5 in each plate 4, and seating the extreme edges of the fins 5 of the one plate into the depressions 6 of the next plate, I am enabled to greatly cheapen the construction of the radiator and also to facilitate the cutting of the radiator without in any way adding to the expense of the whole.

The water tubes 3 may be formed in any suitable manner, as by spacing apart each pair of plates 4 as indicated. This may be conveniently done by soldering wires such as 10 at the front and rear faces of the radiator core, and in between the pairs of plates.

It is obvious that those skilled in the art may vary the details of construction as well as the arrangement of parts without departing from the spirit of my invention, and

therefore I do not wish to be limited to such features except as may be required by the claim.

What I claim is:—

- 5 In a radiator, the combination of a pair of thin metal distance plates folded to form fins having contacting double walls of uniform width throughout connected along their outer edges, each plate being bent
10 across its entire width to form pairs of stiffening ridges projecting from the same face of the plate as said fins to provide recessed

seats for the outer edges of said fins of the other plate, and means for rigidly securing the fins of each plate in such recessed seats 15 of the other plate.

In testimony whereof, I affix my signature, in presence of two witnesses.

EMIL CARL FRIEDRICH STREICHERT.

Witnesses:

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