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PROCESS OF MAKING RADIATOR CORES

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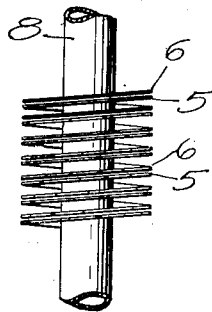
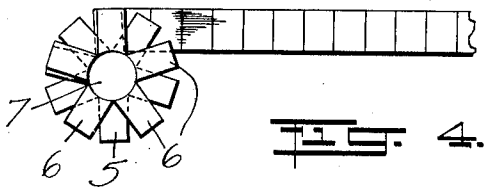
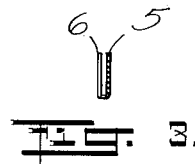
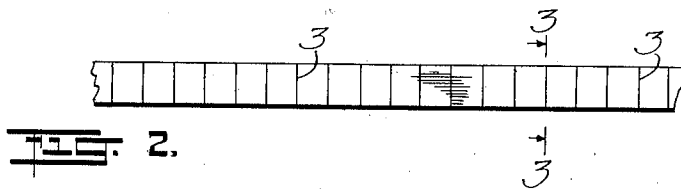
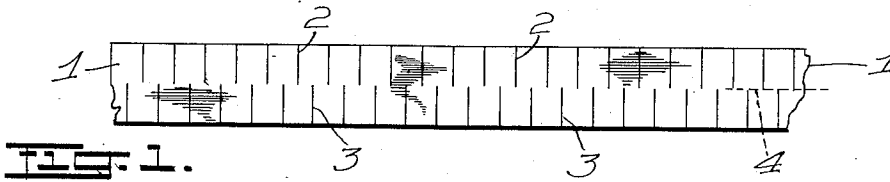


FIG. 5.

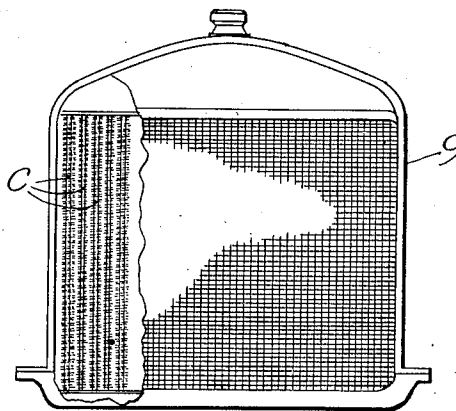


FIG. 6.

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PROCESS OF MAKING RADIATOR CORES.

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My invention relates to improvements in processes of making radiator cores, and it consists in the steps hereinafter described.

An object of my invention is to provide a process by means of which a radiator core may be economically made in that there is no loss of material.

A further object is to provide a process in which a further saving is made in the labor of assembling the parts.

A further object is to provide a process by which a radiator core having tubular members may be provided with fins mounted thereon in a spiral arrangement in such a manner that the core may be constructed in various lengths without wasting any material.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which—

Figure 1 shows a portion of a blank from which the fins are made,

Figure 2 shows the blank folded,

Figure 3 is a section along the line 3—3 of Figure 2,

Figure 4 shows a portion of the folded strip bent in spiral form,

Figure 5 shows a portion of a radiator tube with the fins secured thereto, and

Figure 6 is a front view of a radiator, a portion being cut away to show the arrangements of the radiator cores.

In carrying out my invention, I make use of a strip of metal 1 which is a good conductor of heat, such as copper or the like. This strip of metal is cut from each side, as shown in Figure 1. In the drawing, it will be observed that cuts 2 extend inwardly from one edge to substantially the center line, while similar cuts 3 extend in from the opposite edge, the cuts 3 alternating with the cuts 2.

The strip is now folded on the center longitudinal line 4 and has the appearance shown in Figure 2. This provides for two rows of fins 5 and 6.

The strip containing the two rows of fins

is now bent or curved in the form of a spiral and this spreads out the fins in the manner shown in Figure 4 so that the fins virtually radiate from the center. The bending of the fins is performed preferably upon a mandrel or other suitable form, and this leaves an opening 7 at the center.

The spiral strip may be made as long as necessary, and it may be cut as desired to fit a tube of any suitable length. In Figure 5, I have shown a tube 8 which passes through the opening 7 in contact with the strip of fins. The latter may be secured to the tube by soldering in any suitable manner and forms a complete core for the radiator 9. In Figure 6, I have shown the position of these cores as indicated at C.

In making the spiral, the individual fins, as stated, are separated from each other and in practice they are bent away from the adjacent row slightly so that the air currents will be broken up and get to all parts of the radiating surface.

It will be observed that in making radiator cores in the manner described no metal is wasted, since all of the metal is used in making the finished product. This cuts down the cost without sacrificing the efficiency. It provides a relatively large radiating surface in comparison with the metal used.

Since the spiral strip can be made of any length desired, it can be cut to accommodate the particular length of tube which is desired. The mandrels or forms upon which the spiral is wound are of such a size as to permit it to be easily slipped over the tube but to remain in close contact therewith, so that the soldering of the strip is easily accomplished.

I claim:

1. The herein described steps in a process of making a radiator core, which consists in making a series of cuts extending inwardly from opposite sides of a strip of metal to provide a plurality of fins, in folding the strip along its central longitudinal axis to bring the outer ends of the fins in substantial registration, in bending the strip along the inner common edges of the fins into spiral form, and placing said spirally-formed strip over a conducting tube.

2. The herein described steps in a process of making a radiator core, which consists in making a series of cuts extending inwardly from opposite sides of a strip of metal to provide a plurality of fins, in folding the strip along its central longitudinal axis to bring the outer ends of the fins in substantial registration, in bending the strip along the inner common edges of the fins into spiral form, placing said spirally-formed strip over a conducting tube, and securing the tube to the spiral strip. 10

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