J. T. SCHLACKS.

RADIATOR HEAD SHEET.

APPLICATION FILED SEPT. 21, 1914.

1,208,022. Patented Dec. 12, 1916.

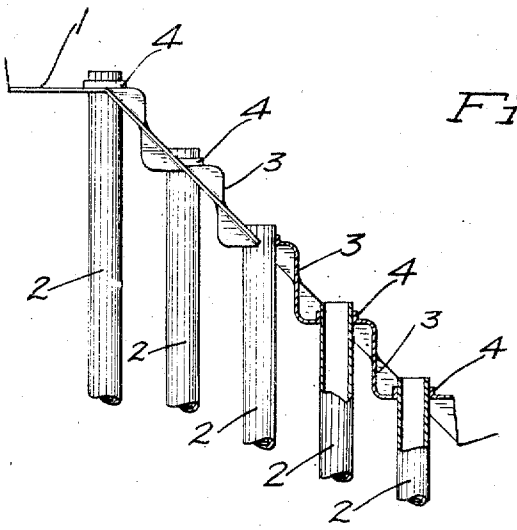
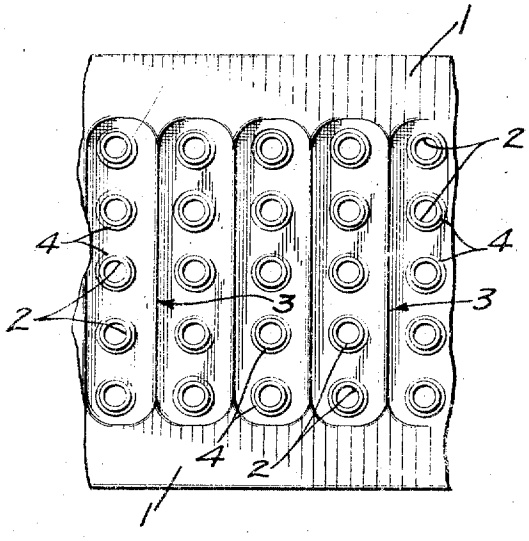


Fig. 1

Fig. 2



WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH T. SCHLACKS, OF DETROIT, MICHIGAN, ASSIGNOR TO McCORD MANUFACTURING COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MAINE.

RADIATOR HEAD-SHEET.

1,208,022. Specification of Letters Patent. Patented Dec. 12, 1916.

Application filed September 21, 1914. Serial No. 862,689.

To all whom it may concern:

Be it known that I, JOSEPH T. SCHLACKS, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Radiator Head-Sheets; 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.

My invention relates to radiators of that type wherein tubes are passed through head sheets and the head sheets are provided with angular corners through which certain of the tubes are passed. In radiators of this type, it has been the custom to punch holes in the angular portions of the head sheet large enough to permit the tubes to be passed therethrough at an angle. These large holes do not closely fit the tubes and make it difficult to apply the solder so as to make a tight and strong joint.

In accordance with my invention, I offset the angular portion of the head sheet at the points where the tubes are passed therethrough, so that the tube engaging portion of the sheet will lie at a right angle thereto. This not only permits the use of small holes which will closely fit the tubes, but also makes it feasible to form the head sheet with small flanges or thimble-like portions, surrounding the tubes, and which will tightly engage the tubes for, say one-sixteenth to one-eighth of an inch. Flanging of the sheet for engagement with a tube passed therethrough at an angle, is a very difficult matter and not commercially practicable.

The invention is illustrated in the accompanying drawings wherein like characters indicate like parts throughout the several views.

Referring to the drawings: Figure 1 is a fragmentary view in front elevation, partly in plan and partly in vertical section, showing the angular or corner portion of the sheet and cooperating tubes, said parts being constructed and connected in accordance with my invention; and Fig. 2 is a plan view of the parts shown in Fig. 1.

The head sheet is indicated by the numeral 1. Its angular portion at points where the tubes 2 are passed therethrough, is offset or stepped, as indicated at 3, so that the tubes pass therethrough at a right angle.

The numeral 4 indicates the flanges on the head sheet which closely engages the projecting ends of the tubes. The tubes after they are inserted through the flanges 4, are rigidly and tightly secured thereto by solder, which may be applied in any suitable way, but preferably by a dipping process.

The construction described very greatly improves the construction of tubular radiators and adds nothing to the cost thereof. Any additional cost incurred in any one respect is more than offset by saving in another.

What I claim is:

In a radiator, the combination with tubes, of a head sheet having a corner portion extending obliquely to said tubes but formed with offsets affording portions through which certain of the said tubes are extended at a right angle, the offsets of said head sheet extending less than from edge to edge thereof, leaving the said edge portions on unbroken lines.

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

JOSEPH T. SCHLACKS.

Witnesses:
H. L. HICKS,
F. J. KOSTAT.