Nov. 27, 1934. L. E. TREMBLEY 1,982,362

METHOD OF PRODUCING FLATTENED METAL TUBES

Filed Dec. 30, 1933

Fig. 1.

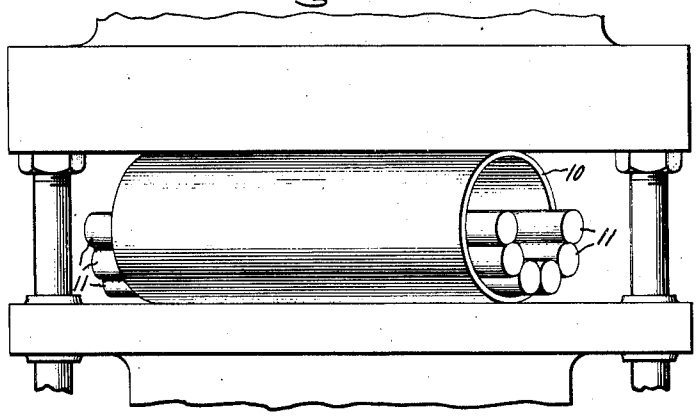


Fig. 2.

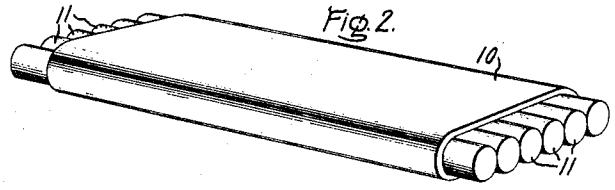
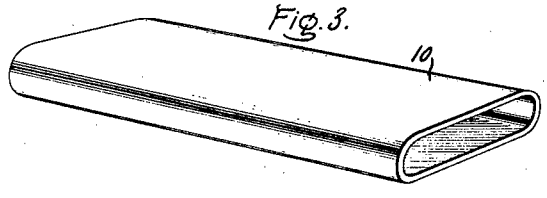


Fig. 3.



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METHOD OF PRODUCING FLATTENED METAL TUBES

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4 Claims. (Cl. 153—10)

My invention relates to methods of producing flattened metal tubes. This type of tube is used extensively in heat radiators for transformers and for various other purposes. It is usually most economical and convenient to produce a flattened tube by first producing a round or cylindrical tube and then flattening the round tube to give it the desired width and thickness. The general object of the invention is to provide an improved method of flattening a tube which is initially round or which is at least thicker and narrower than desired.

The invention will be explained in the following description taken in connection with the accompanying drawing in which Fig. 1 shows a round metal tube in a press ready to be flattened in accordance with the invention, and Figs. 2 and 3 show the tube after it has been flattened.

Like reference characters indicate similar parts in the different figures of the drawing.

A round or cylindrical metal tube 10 is shown in Fig. 1 in a press suitable for flattening the tube. Before the tube 10 is flattened, a plurality of cylindrical steel rods 11 are placed longitudinally and side by side in the tube and the tube is then flattened by the press until the sides of the tube are pressed tightly against the rods as indicated in Fig. 2. The rods 11 are all preferably alike and of equal diameter, the diameter of each rod 11 being equal to the shorter transverse inside dimension of the tube after it is flattened and the sum of the diameters of all the tubes being equal to the longer transverse inside dimension of the tube after it is flattened. The rods 11 should be so selected that the inner circumference of the tube will equal twice the sum of the diameters of $n-1$ rods plus the circumference of one rod where n is the number of rods. Then the rods will fit tightly in the flattened tube and the pressure of the outer two rods will force each longitudinal edge of the tube to assume a smooth semi-cylindrical form of pleasing appearance as indicated in Fig. 2. After the tube 10 has been flattened, the rods 11 are removed from the tube as indicated in Fig. 3.

If the rods 11 are all exactly alike, then the longer transverse inside dimension of the flattened tube will be a whole multiple of its shorter transverse inside dimension. However, the invention provides a process which may be conveniently used to produce many different sizes of flattened tubes depending upon the initial size of the tube and the number and size of the rods which determine the extent to which it is flattened.

The invention has been explained by describing and illustrating the steps of flattening a particular tube in accordance therewith but it will be apparent that changes may be made without departing from the spirit of the invention and the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. The process of producing a flattened tube, said process including the steps of placing a plurality of rods side by side in a tube, and flattening the tube with the rods therein.

2. The process of producing a flattened tube, said process including the steps of placing a plurality of rods side by side in a cylindrical tube, and flattening the tube with the rods therein.

3. The process of producing a flattened tube, said process including the steps of placing n rods in a tube having an inner circumference substantially equal to twice the sum of the diameters of $n-1$ rods plus the circumference of one rod, and flattening the tube with the rods therein.

4. The process of producing a flattened tube, said process including the steps of placing a plurality of cylindrical rods of equal diameter in a tube, and flattening the tube with the rods therein.

LOUIS E. TREMBLEY.