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H. D. SCOTT

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METHOD OF MANUFACTURING DECORATED TUBING

Filed April 5, 1930

Fig. 1.

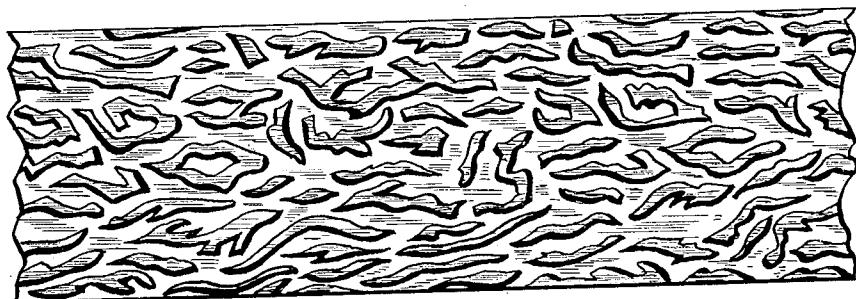
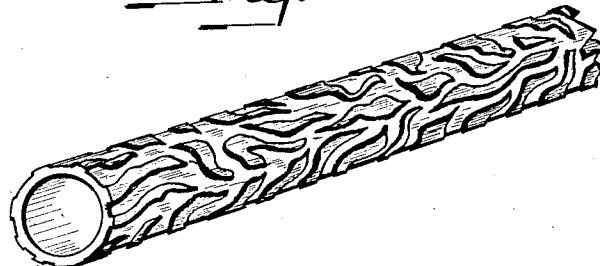


Fig. 2



WITNESS

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UNITED STATES PATENT OFFICE

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METHOD OF MANUFACTURING DECORATED TUBING

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My invention pertains to the art or process of producing ornamental embossed tubing such as is used, for example, in decorative metal work, standards for floor and table lamps, and the like.

Tubular material is widely used in house furnishings and the like, as, for instance, in the standards of floor lamps, ash trays, etc., and it is generally desired to embellish such material by surface designs of one character or another. Brass or other soft metal is sometimes employed, as designs can be impressed on metals of this character while in tubular shape. However, because of the cost of brass and the like, it is customary to use light gage tubing, which does not give sufficient strength and is often too thin for screw-threading, which latter is often desirable. Where iron or steel is used, it is common to treat the metal by hand in order to get the desired effects, for example, that of an antique hammered finish. In either case, the cost of the ornamented material is considerable, and even then, due to efforts to reduce the cost, the resulting product is often not satisfactory.

It is the object of my invention to provide a process by which ornamental tubing, particularly steel tubing, of satisfactory thickness may be produced at very little, if any, increase of cost over that of producing plain unornamented tubing.

To illustrate my invention, I have shown in Fig. 1 of the accompanying drawings a piece of flat skelp of the general character employed in making tube, such skelp having, however, impressed or embossed thereon the design which is to ornament the finished tube. Fig. 2 shows the finished ornamental tube, produced by bending the skelp of Fig. 1, and welding its seam, by methods well understood in the tube-making art.

In carrying out my invention I apply the design which is to appear on the finished tube to the flat skelp, which is preferably rolled steel. This may be done in numerous ways, as by rolling the design into the skelp when cold. A method which I prefer is to roll in the design by means of one of the finishing rolls of the skelp mill as the skelp is made.

Any desired design may be formed in such finishing roll by turning, milling, hammering or stamping, etching sand-blasting, etc.

The skelp, with the desired design thereon, is then bent into tubular form by methods well known in tube-making, as by drawing it through a bell-die, passing it through rolls, or the like. One such method which I have found to give satisfactory results is to heat the ornamented skelp to welding temperature and then simultaneously bend and butt-weld it into a tube by pulling it through a bell-die, and then passing it through sizing and straightening rolls if necessary. It would naturally be anticipated that such pulling of the skelp through a bell-die for welding it, and passing it through sizing or straightening rollers, or the like, would obliterate or spoil the relief design originally applied to the skelp, but I have found that this is not the case, and that the designs are retained and excellent results given.

By the process of my invention I am enabled to produce steel tubing having thereon practically any design which may be desired, at a cost which is little, if any, greater than that of producing plain tubing from the same material. In fact, when the design is applied to the skelp in the course of the making of the latter, the increase of cost, over that of ordinary butt-welded tubing, is only that incidental to the production of the special finishing roll, which is negligible when large quantities of tubing, having thereon the same design, are to be produced.

I claim:

The process of making welded steel tubing having an ornamental design in substantial relief thereon, comprising forming a design in substantial relief upon a surface of a flat piece of skelp, heating the skelp to a welding temperature, and passing the skelp through apparatus for applying external pressure thereto to bend the skelp into tubular form and weld its abutting edges without substantially modifying the ornamental relief design thereon.

In testimony whereof I sign my name.

HENRY D. SCOTT.

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