J. H. SEAMAN.

Manufacture of Tubes.

No. 228,947. Patented June 15, 1880.

Fig. 1.

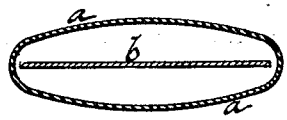


Fig. 2.

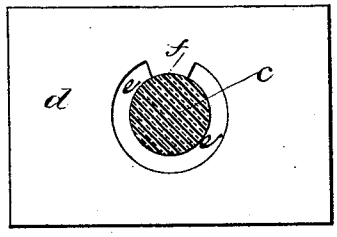


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN H. SEAMAN, OF BROOKLYN, NEW YORK.

MANUFACTURE OF TUBES.

SPECIFICATION forming part of Letters Patent No. 228,947, dated June 15, 1880.

Application filed February 11, 1880.

To all whom it may concern:

Be it known that I, JOHN H. SEAMAN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in the Manufacture of Tubes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 shows a section of a tube before being drawn through the draw-plate. Fig. 2 shows a side view of a draw-plate and cross-section of the mandrel. Fig. 3 shows a section of a completed tube.

Similar letters indicate corresponding parts.

This invention relates to tubing or piping which is constructed of substantially flat tubes curved or brought to an approximately semicircular form in cross-section; and my invention consists in a novel method of making such tubes, whereby the walls of the tube are prevented from being pressed into contact with each other when bringing them to the shape described.

In carrying out my invention I take either an ordinary round tube or an elliptically-shaped tube—by preference the latter form, as shown in Fig. 1. This tube is inserted into and drawn through a draw-plate, *d*, and around a mandrel arranged as shown. The hole of the draw-plate *d* is circular, except that a segmental projection, *f*, extends toward the center of said hole and forms a rest for a mandrel, *c*. The mandrel *c*, which passes through the draw-plate, is nearly surrounded by a segmental opening or passage, *e*, the ends of which are separated by the projection of the plate against which the mandrel rests. When, now, the tube shown in Fig. 1 is drawn longitudinally through this opening or passage and around the mandrel, its walls *a a* are pressed nearer to each other, whereby the tube is flattened and caused to assume the shape shown in Fig. 3. Before being drawn through the draw-plate a piece of sheet metal, *b*, is inserted into the tube *a a*, which forms a partition or division wall within the pipe, whereby the walls of the tube are prevented from being pressed into contact with each other; and after the tube is shaped as shown at Fig. 3 this piece of sheet metal is withdrawn, and a free passage is thus left between the walls of the tube for the gas, liquid, or other body to flow through. Instead of sheet metal, card-board may be employed, which could be afterward burned out; or any other means may be employed for this purpose.

If the passage *e* in the plate, as well as the core *c*, instead of being circular in shape, be made elliptical, polygonal, or of any other suitable or ornamental shape, the finished tube will have a similar form after having been drawn through the same.

This tube can be used in gas-fixtures and sliding chandeliers with great advantage. In coolers or ice-machines, also, this form of tube may be used very advantageously, since by passing the cooling or freezing mixture through the tube the walls of the tube are cooled with very little expenditure of the cooling or freezing mixture.

These are some of the uses to which this form of tube may be applied; but I do not wish to limit myself to its employment for these purposes only.

What I claim as new, and desire to secure by Letters Patent, is—

The within-described method of making tubes, the same consisting in arranging a division or partition plate through the tube, then drawing the latter longitudinally over a mandrel and through a segmental opening formed in a draw-plate, substantially as described, whereby the longitudinal edges of the tube are brought in proximity to each other, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 4th day of February, 1880.

JOHN H. SEAMAN. [L. S.]

Witnesses:

E. F. KASTENHUBER,

J. VAN SANTVOORD.