P. H. FRIEL.

PLATE METAL TUBING.

APPLICATION FILED SEPT. 17, 1910.

997,799. Patented July 11, 1911.

Fig. 1.

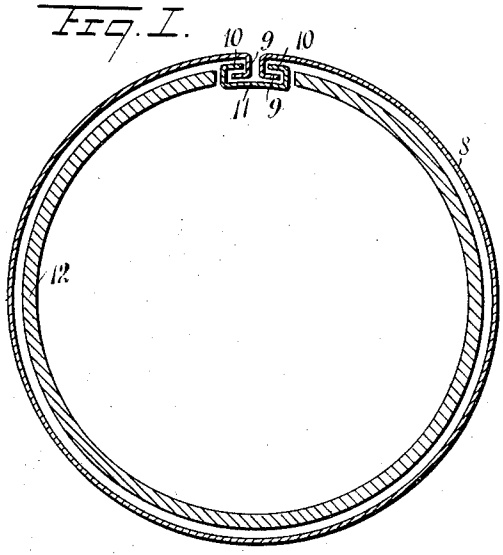


Fig. 2.

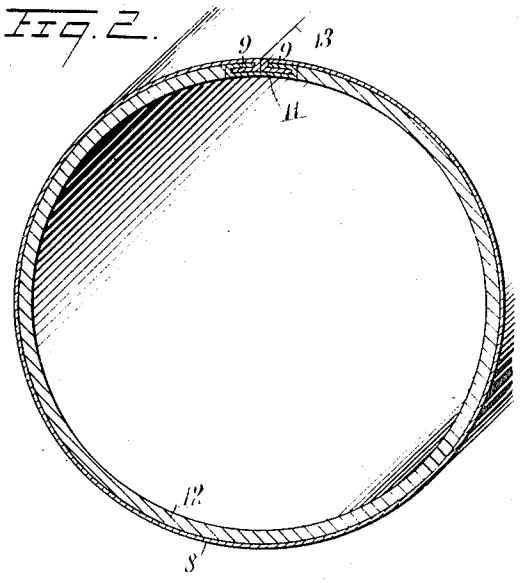


Fig. 3.

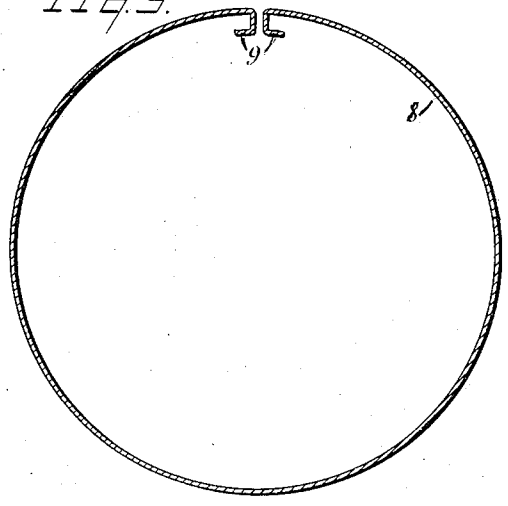
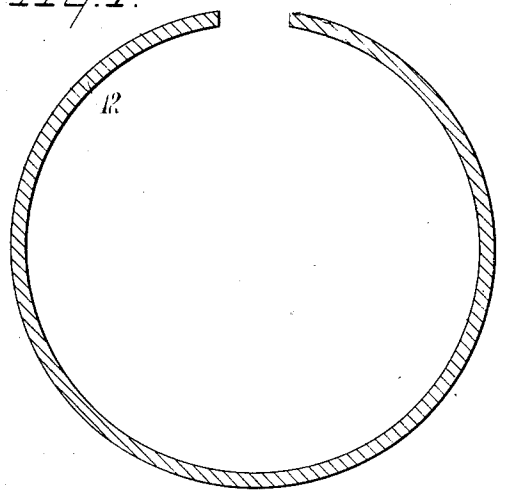


Fig. 4.



WITNESSES:

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PLATE-METAL TUBING.

997,799. Specification of Letters Patent. Patented July 11, 1911.

Original application filed May 20, 1910, Serial No. 562,515. Divided and this application filed September 17, 1910. Serial No. 582,500.

To all whom it may concern:

Be it known that I, PATRICK H. FRIEL, a citizen of the United States, and a resident of Kenosha, in the county of Kenosha and State of Wisconsin, have invented a new and Improved Plate-Metal Tubing, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: To provide pliable covering material and a rigid body structure inclosed within said covering material and disposed to prevent the opening of the joint of said covering material; to provide a sheet metal tube, the edges whereof are joined longitudinally and are provided with means for locking said joint to prevent the opening of the same; to provide a locking member for infolding and holding the edges of metal, bent to form a tube, said member being disposed within the tube; and to provide a construction for a plate metal tube which is simple, economical and durable.

One embodiment of the present invention is presented in the structure illustrated in the accompanying drawings, in which like characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a cross section of the parts from which a tube is made when constructed and arranged in accordance with the present invention, said parts being shown in position preliminarily to being contracted and completed; Fig. 2 is a perspective view of a tube constructed and arranged in accordance with the present invention; Fig. 3 is a detailed view in cross section, showing the envelop shaped to receive the filling member; Fig. 4 is a detailed view in cross section, showing the filling member bent to be inserted within the envelop.

The present specification and drawings should be read in conjunction with those of an application filed by me May 20th, 1910, having Serial No. 562,515, of which the present case is a division.

The envelop 8, as shown in the accompanying drawings, is preferably constructed from thin sheet planished brass. This material is adapted to receive the high polish much sought in the construction of tubing employed in the manufacture of bedsteads and articles of like character.

The longitudinal edges of the blank from which the envelop 8 is constructed are bent to form inturned hook ends 9, 9. The ends 9, 9, when the envelop is bent to the circle substantially as shown in Fig. 1, are sufficiently closely abutted to pass between the inturned ends 10, 10 of a fillet 11. The fillet 11 is preferably constructed of rigid steel or other suitable metal. The overturned portions of the fillet 11 are such as to permit the hooks 9, 9 to slide easily under the said overturned portions of the fillet, substantially as shown in Fig. 1 of the drawings.

When assembling the parts from which the tubes are constructed, the envelop 8 is first bent to abut the ends provided with the hooks 9, 9, the said hooks being disposed to pass within the channel of the fillet 11. The fillet 11 is then threaded over the hooks 9, 9 to hold the edges of the envelop 8, being previously bent to substantially the form shown in Fig. 1 of the drawings. The edges of the filling member 12 are spread to permit the fillet 11 to fill in between the edges of the said filling member.

With the parts thus assembled the tube is passed through contracting dies which draw to smaller diameter the envelop 8 and the filling member 12, forcing the sides of the hooks 9, 9 rigidly each against the other, and also forcing the edges of the filling member 12 hard upon the interposed fillet 11 to force inward the hook ends of the said fillet to lock in abutted positions the hooks 9, 9 of the envelop 8. By means of external contracting dies applied to the exterior of the tube and a die disposed within the said tube the fillet 11 and the hooks 9, 9 are pressed radially until all the members are firmly and rigidly pressed into the mass, disposed and arranged substantially as shown in Fig. 2 of the drawings.

The completed tube thus formed is held in rigid position, the joint 13 of the envelop 8 being prevented from opening by the fillet 11, in the first instance, and the fillet 11 being prevented from opening by the filling member 12, in the second instance.

It will be remembered that the filling member 12 is constructed from non-resilient or rigid material, which when pressed to shape retains the same.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

1. Plate metal tubing comprising a cover portion formed from relatively soft metal sheet, the edges whereof are curled to form hook shaped edges arranged to be drawn together when said sheet is bent into tube form; an elongated edge channeled strip constructed from a relatively rigid material, the edges whereof are curled in to infold the said hook shaped edges of the said cover portion; and a body filler formed from relatively rigid plate metal having straight longitudinal edges separated to receive therebetween the said channeled strip and to bear against said strip when the said tube is contracted and at opposite sides of the said strip, said filler being formed of a thickness equal to the combined thickness of the said cover and said strip, said strip being bent in the completed tube to conform with and to be disposed in line with the inner surface of said body filler.

2. As an article of manufacture, a metal tube comprising a covering formed from relatively soft metal sheet having juxtaposed hook-shaped edges, the flanges of said hook-shaped edges being turned from each other, an elongated channel strip constructed from relatively rigid material, the edges of said strip infolding the flanges of said hook-shaped edges, and a body filler formed from plate metal having straight longitudinal edges disposed to bear against said strip and at opposite sides thereof, said strip and hook-shaped edges being shaped to form an inner surface for said tube flush with the inner surface of said body filler.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PATRICK H. FRIEL.

Witnesses:

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GEO. W. HARRINGTON.