(No Model.)

G. C. BOWKER.

Joint for Sheet Metal Tubes.

No. 231,262. **Patented Aug. 17, 1880.**

FIG. 1.

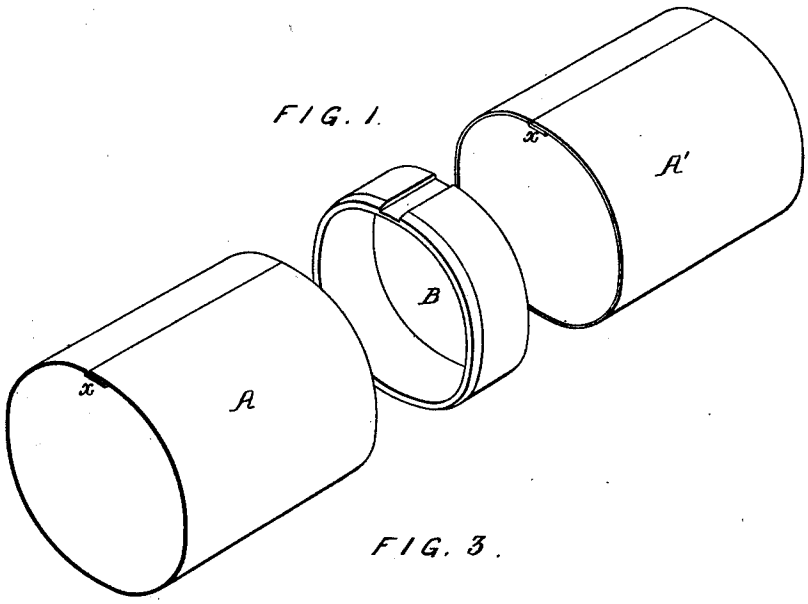


FIG. 3.

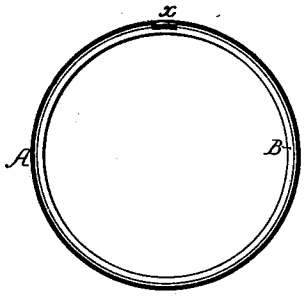
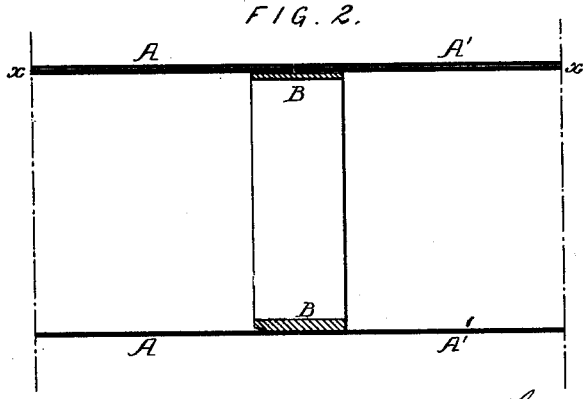


FIG. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE C. BOWKER, OF PHILADELPHIA, PENNSYLVANIA.

JOINT FOR SHEET-METAL TUBES.

SPECIFICATION forming part of Letters Patent No. 231,262, dated August 17, 1880.

Application filed May 28, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. BOWKER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improvement in Joints for Sections of Sheet-Metal Tubes, of which the following is a specification.

The object of my invention is to so connect the ends of adjoining sections of a sheet-metal tube that the surface of the said tube at the joint will be perfectly true both longitudinally and circumferentially; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the parts which comprise the joint; Fig. 2, a longitudinal section of the completed joint, and Fig. 3 a transverse section.

A A′ represent the adjoining ends of two sections of a sheet-metal tube, such as is used in the manufacture of rub-rolls, drying-cylinders, &c. In order to make the joint between these sections, I take a ring, B, of cast or wrought iron, and, by turning, filing, or otherwise, reduce the surface of the same to perfect cylindrical form. The adjoining ends of the two sections of tubing are then fitted to the ring and secured thereto by soldering or brazing, the ends of the sections abutting against each other.

The ring B should be recessed at one point for the reception of the longitudinal seam *x* of the tube, and it is preferable to bevel the edges of the ring, so as to insure the entrance of the same more readily into the ends of the tubes. The surface of the ring being rendered absolutely true in the first instance, the ends of the sections A A′, as they are driven over the ring, must have like truth imparted to them, so that the joint when completed will be true both circumferentially and longitudinally, no objectionable rib being formed, such as is produced by overlapping the ends of the tubes in the usual manner.

It is preferable, in order to insure a perfect union of the ends of the tube-sections and the ring, to provide the latter with a light coating of tin prior to the application of the ends of the tube-sections thereto, as said coating insures the penetration of the solder to all parts of the joint.

I am aware that the adjoining ends of tube-sections have been fitted to an internal ring in the manufacture of stove-pipes, tin spouting, &c.; but such joints do not possess the essential qualities of my improved joint. Without claiming, broadly, therefore, the combination of tube-sections with an internal ring at the joint,

I claim as my invention—

The combination of the abutting ends of adjoining sections A A′ of a sheet-metal tube with an internal ring, B, having its surface reduced to true cylindrical form, the ends of the tube-sections accurately fitting said ring and being secured thereto by soldering or brazing, as set forth.

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

GEORGE C. BOWKER.

Witnesses:

JAMES F. TOBIN,

HARRY SMITH.