

No. 620,395.

Patented Feb. 28, 1899.

F. A. WILMOT.

REINFORCED TUBE JOINT FOR METALLIC TUBING.

(Application filed Oct. 20, 1898.)

(No Model.)

Fig. 1.

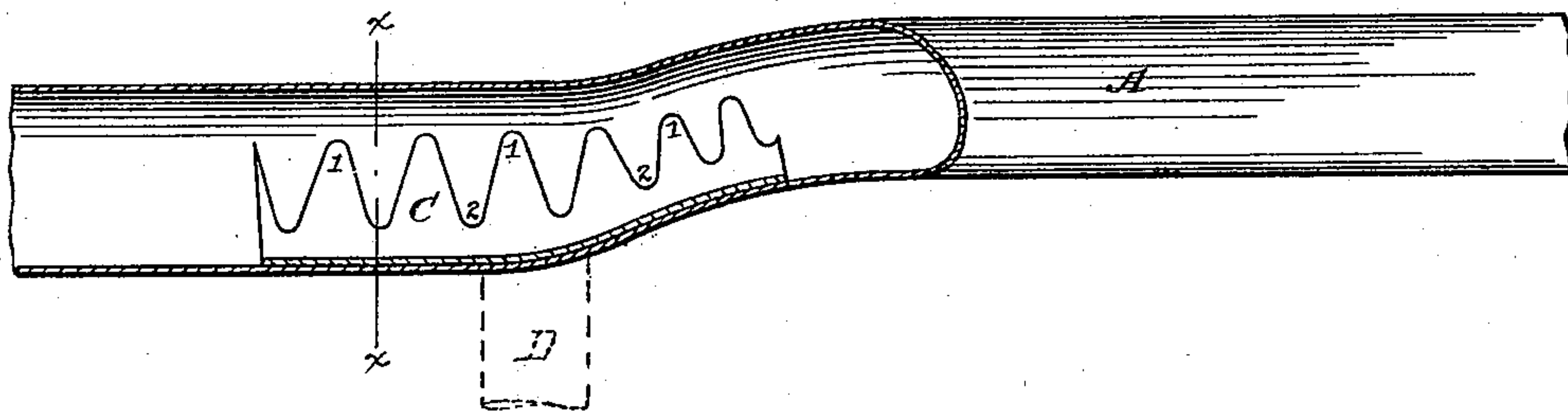


Fig. 2.

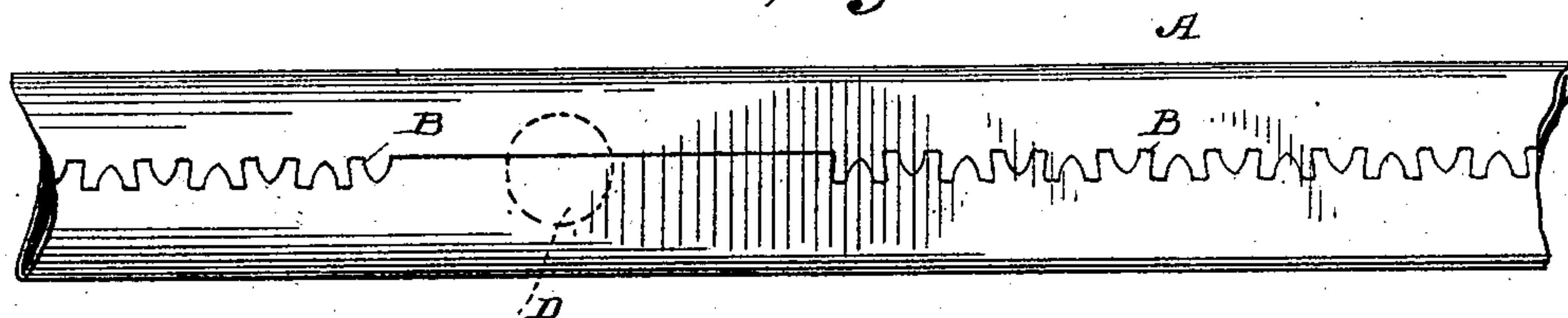


Fig. 5.

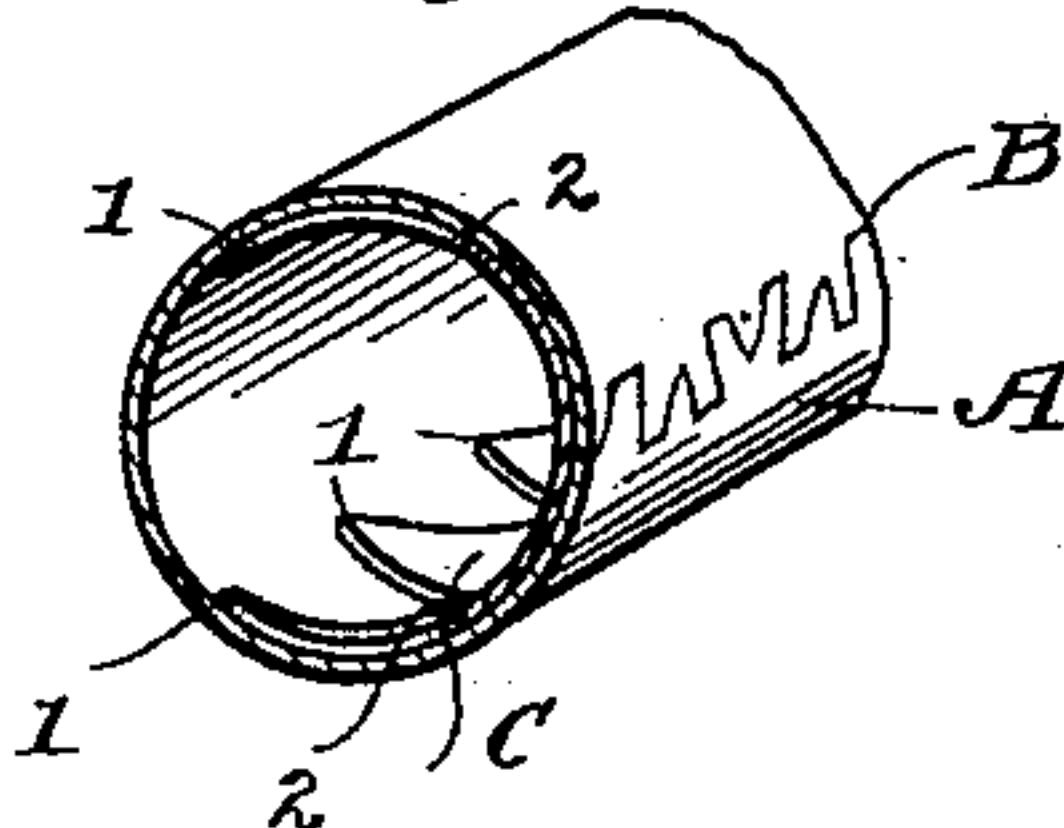


Fig. 4.

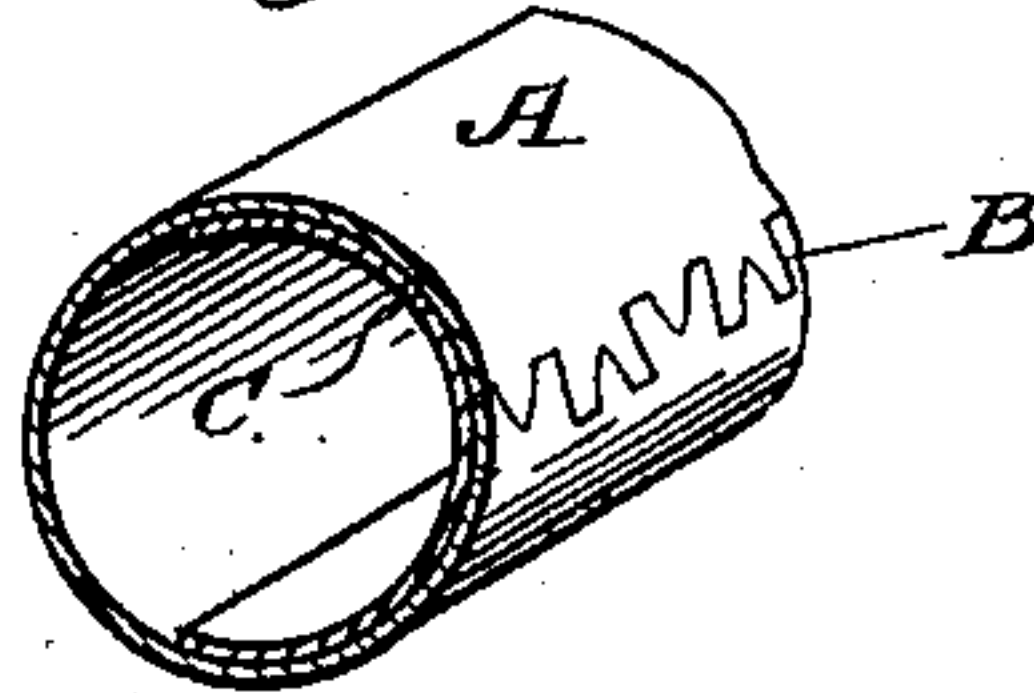
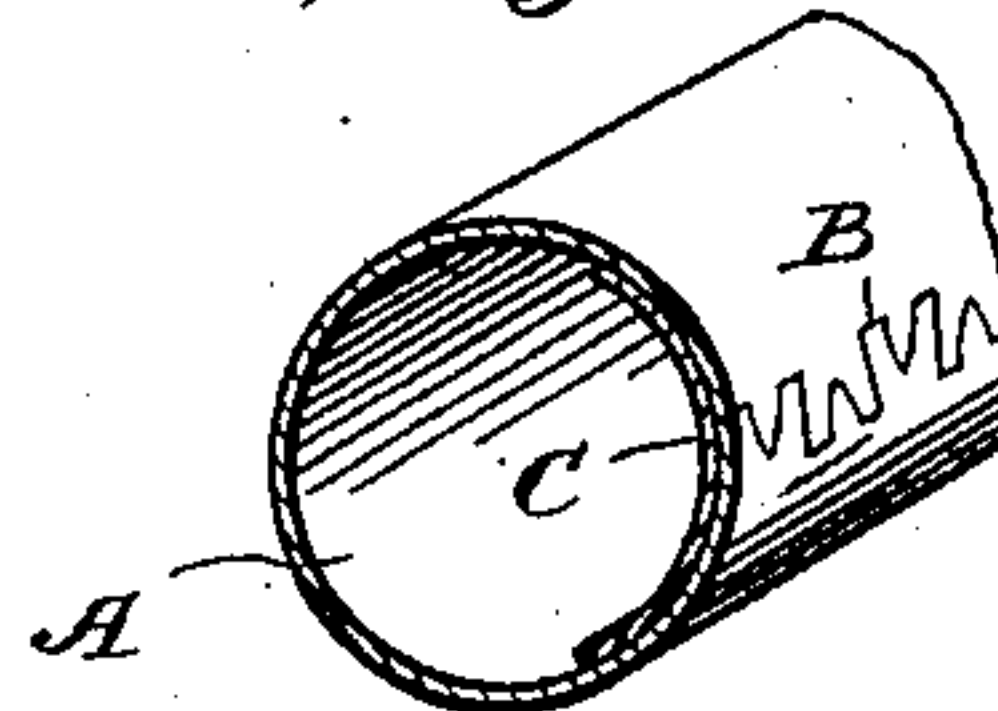


Fig. 3.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## REINFORCED TUBE-JOINT FOR METALLIC TUBING.

SPECIFICATION forming part of Letters Patent No. 620,395, dated February 28, 1899.

Application filed October 20, 1898. Serial No. 694,116. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK A. WILMOT, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Reinforced Tube-Joint for Metallic Tubing, of which the following is a specification.

My invention relates to the class of metal tubes which are formed from blanks of sheet metal whose edges are provided with interlocking projections and recesses which when united form a lock-joint, and has for its object to provide a reinforce for the joint which when applied to portions of the joint where the tube is to be bent or flattened will prevent the edges from separating or springing inward and will serve as an additional support for a cross-brace, as in the rear forks of bicycles.

With these ends in view I have devised the novel reinforce-joint which I will now describe, referring by reference characters to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a section of a piece of tubing having a bend or offset and flattened upon one side and showing the application to the joint of one form of my novel reinforcing-strip; Fig. 2, a face view of an offset and flattened piece of tubing, both of said figures indicating in dotted lines the position of a cross-brace, as in the rear forks of a bicycle; and Figs. 3, 4, and 5 are perspectives of the ends of pieces of tubing, illustrating slightly modified forms of the reinforce for the joint.

A denotes a piece of tubing formed from a blank of sheet metal the edges of which are secured together by a lock-joint B, formed by means of interlocking projections and recesses on the edges of the blank; D, (see dotted lines,) a cross-brace, as in the rear forks of bicycles, and C denotes a curved metallic reinforce which is brazed or soldered upon the inner side of the joint, said reinforce being brazed, soldered, or otherwise united to both edges of the blank and to the interlocking projections.

In Fig. 3 I have shown a reinforce consisting of a straight-edged strip of metal overlapping the joint and firmly secured to both edges thereof and to the interlocking projec-

tions. In Fig. 4 I have shown a reinforce consisting of a similar straight-edged strip of metal made wide enough so as to extend more than half-way around the inner side of the tube—in other words, made wide enough so that the edges will extend past the center of the tube on both sides, so that instead of there being a tendency on the part of the reinforce when not brazed to place to spring away from the joint the shape of the reinforce itself, especially if said reinforce when bent to shape be given a diameter at its widest point in cross-section slightly greater than the tube within which it is to be placed, will act to hold it closely down in contact with the inner face of the joint.

In Fig. 5 I have shown a reinforce similar in principle to that illustrated in Fig. 4; but instead of a straight-edged strip of metal I have shown a toothed strip of metal which reduces the weight and makes an appreciable saving in metal, and, moreover, possesses all the advantages of the other form in that the shape of the reinforce itself retains it in position in contact with the joint irrespective of the brazing by which the reinforce is secured to the joint, so that all strain or tendency of the reinforce to spring away from the joint in bending or flattening or in resisting the thrust of a cross-brace is wholly done away with. It will be noted that the points of the teeth, which are indicated by 1, extend past the center line of the tube on both sides, the points of the teeth corresponding approximately with the edges of the strip in Fig. 4, and that the bases of the teeth, which are indicated by 2, lie within the center line of the tube, the bases of the teeth in Fig. 5 corresponding approximately with the edge of the strip in Fig. 3.

Having thus described my invention, I claim—

1. A tube formed from a blank of sheet metal whose edges are provided with interlocking projections and recesses which when united lie in the curved plane of the tube and form a lock-joint the inner face of said joint being braced and strengthened by a curved metallic reinforce whose edges extend past the center line of the tube on both sides, for the purpose set forth, said reinforce lying in



contact with and being firmly united to both edges of the blank and to the interlocking projections.

2. A tube formed from a blank of sheet  
5 metal whose edges are provided with interlocking projections and recesses which when united form a lock-joint, the inner face of said joint being braced and strengthened by a toothed edged curved metallic reinforce secured upon the inner side thereof, the points

of said teeth extending past the center line of the tube on both sides and the bases of the teeth lying within the center line of the tube.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK A. WILMOT.

Witnesses:

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