(No Model.)

F. K. WRIGHT.

METALLIC TUBE.

No. 459,211. Patented Sept. 8, 1891.

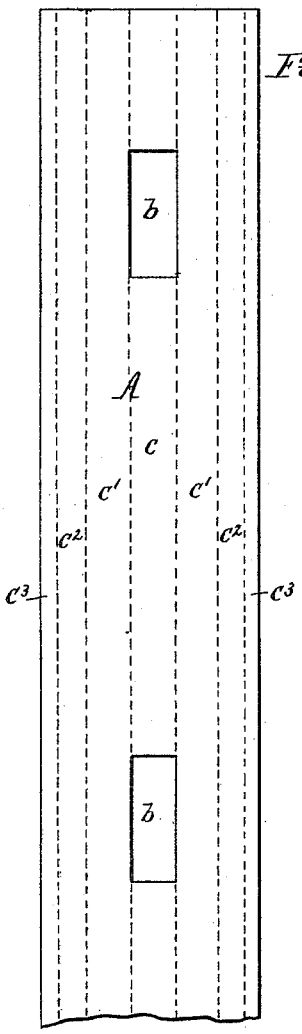


Fig. 1.

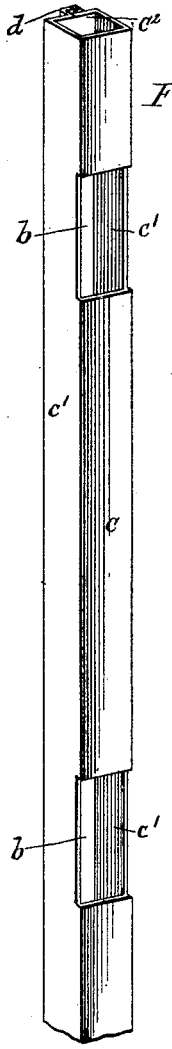


Fig. 2.

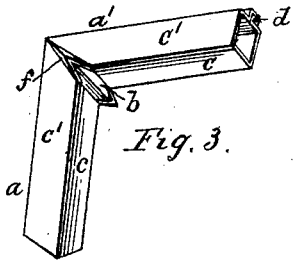


Fig. 3.

Fig. 4.

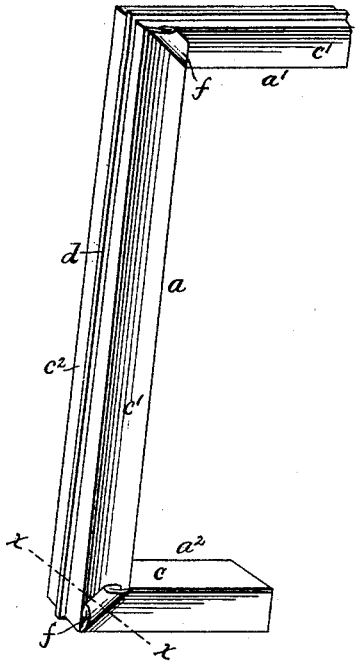


Fig. 7.

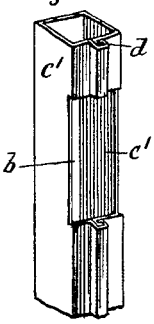


Fig. 6.

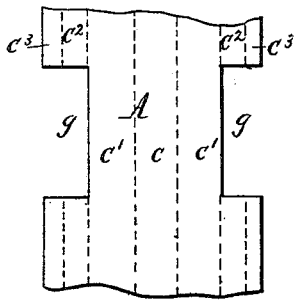
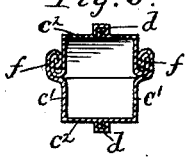


Fig. 5.



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UNITED STATES PATENT OFFICE.

FREDERICK K. WRIGHT, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE STEAM GAUGE AND LANTERN COMPANY, OF SAME PLACE, AND THE R. E. DIETZ COMPANY, OF NEW YORK, N. Y.

METALLIC TUBE.

SPECIFICATION forming part of Letters Patent No. 459,211, dated September 8, 1891.

Application filed December 19, 1890. Serial No. 375,184. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK K. WRIGHT, a citizen of the United States, residing at the city of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Metallic Tubes, of which the following is a specification.

This invention relates to that class of metallic tubes which are made of sheet metal, and which are composed of two or more sections formed of one blank or piece and arranged at an angle to each other, so as to form one or more bends or elbows. Tubes of this kind are extensively used as air-tubes in tubular lamps and lanterns.

The object of my invention is to simplify the construction of such elbow-tubes and to produce a stronger and more durable tube at less expense than heretofore.

In the accompanying drawings, Figure 1 is a view of the blank, of tin or other sheet metal, of which the tube is constructed. Fig. 2 is a perspective view showing the blank bent to form a straight tube of rectangular cross-section. Fig. 3 is a perspective view showing the bend or elbow partly formed. Fig. 4 is a perspective view of the completed tube. Fig. 5 is a cross-section through the elbow portion of the tube in line $x\,x$, Fig. 4. Fig. 6 is a fragmentary view of the blank, showing the same slightly modified by locating the longitudinal seam on the inside of the tube, instead of on the outside or back, as it is arranged in the construction represented in Figs. 1 to 5. Fig. 7 is a fragmentary view of this modified blank bent to form a tube of rectangular cross-section.

Like letters of reference refer to like parts in the several figures.

A represents a blank suitable for forming a lantern-tube, composed of an upright main portion a, an upper horizontal portion a', and a lower horizontal portion a^2. This blank is provided with openings $b\,b$, which are so arranged as to stand on the inner side of the tube opposite the bends or elbows. The blank is bent longitudinally along the dotted lines represented in Fig. 1, so that the central portion c forms the inner wall of the tube, the next outer portions c' the side walls, the next outer portions c^2 the back, and the marginal portions c^3 the seam d on the back, by which the longitudinal edges of the blank are secured together. This seam is formed by interlocking the marginal portions c^3 after the blank has been bent to form a straight four-sided tube. When the tube has been so formed, the openings b appear in the inner wall of the tube only, while the side portions of the tube extend unbroken on both sides of each opening, as represented in Fig. 3. These side portions c' are now bent outward midway between the ends of each opening and the back or outer portion of the tube is bent at the same point, as represented in Fig. 3, until the two parts of the tube stand at the desired angle to each other. When this has been done, each outwardly-bent portion of the side wall of the tube forms a fold f, which projects laterally from the tube, and whose inner sides rest against each other. This fold is now bent down against the side of the tube, preferably by giving it two turns or bends, as represented in Figs. 4 and 5, or, if preferred, it may be simply laid flat against the side of the tube. This construction forms an elbow or bend in the tube without severing the side walls thereof and secures the elbow parts of the tube in the desired relative position by folding the continuous side walls, and so dispenses with soldering for that purpose and produces a more secure and durable construction at less expense and in less time than heretofore. If it is desired to locate the longitudinal seam on the inner side of the tube, the blank is provided with notches g in its side portions, as represented in Fig. 6, so that when the straight tube has been formed these notches will form the openings b in the inner wall of the tube, as represented in Fig. 7.

I claim as my invention—

1. An elbow-tube having continuous side portions, which are folded at the bend or elbow, substantially as set forth.

2. An elbow-tube having its inner wall sev-

ered at the bend or elbow, and continuous side portions, which extend past the opening in the inner wall, and which are bent out and closed down, forming a fold, which retains the parts of the elbow-tube in their proper relative position, substantially as set forth.

Witness my hand this 15th day of December, 1890.

FREDERICK K. WRIGHT.

Witnesses:
FRANK SIVER,
P. L. SALMON.