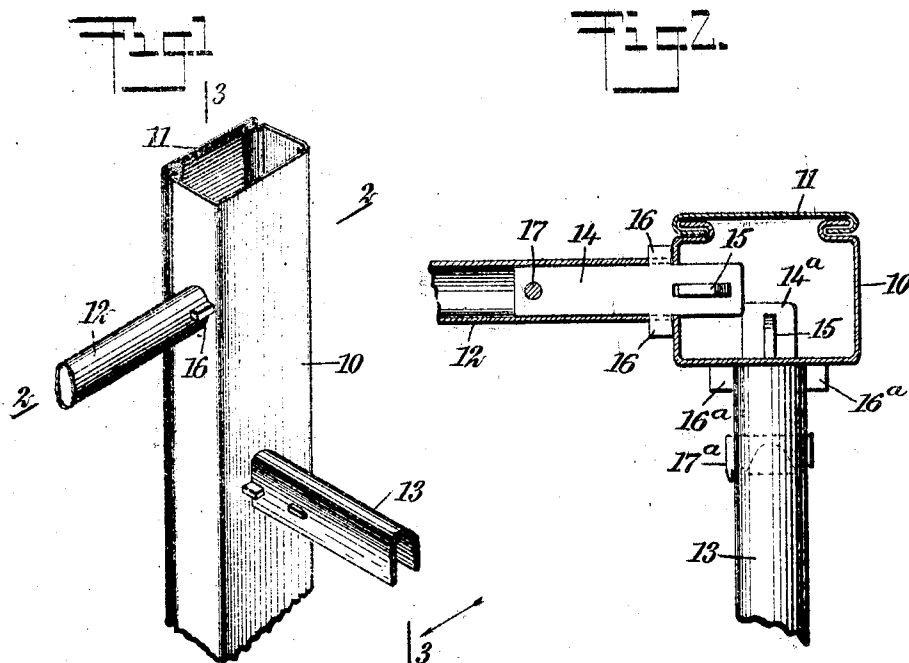
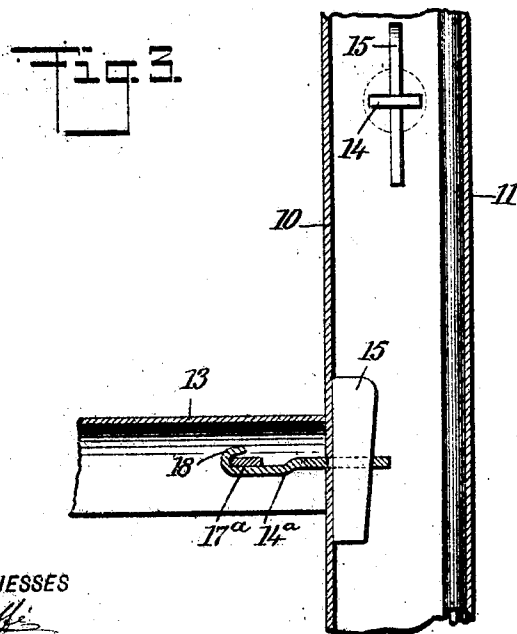


922,919.

Patented May 25, 1909.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM P. LAWRENCE, OF COLORADO SPRINGS, COLORADO.

METAL CONSTRUCTION.

No. 922,919.

Specification of Letters Patent.

Patented May 25, 1909.

Application filed June 15, 1908. Serial No. 432,541.

To all whom it may concern:

Be it known that I, WILLIAM P. LAWRENCE, a citizen of the United States, and a resident of Colorado Springs, in the county of El Paso and State of Colorado, have invented new and useful Improvements in Metal Construction, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in metal construction, and more particularly to means for securing together tubular members formed of sheet metal.

My invention may be utilized in various different arts, but is particularly adapted for use in the formation of metal furniture, for instance, in securing the rails of bedsteads and chairs to the uprights thereof.

One object of my invention is to provide an improved fastener which will serve to rigidly connect the end of one sheet metal tubular member to the side of a second sheet metal tubular member, but at the same time permit of their being readily taken apart if occasion demands.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a perspective view of an upright having two rails secured thereto; Fig. 2 is a transverse section on the line 2—2 of Fig. 1; and Fig. 3 is a longitudinal section on the line 3—3 of Fig. 1.

In the specific form illustrated, I employ an upright 10 constructed of sheet metal and substantially tubular in form. The upright may be of any desired ornamental configuration, but is illustrated herein as being rectangular and having three sides thereof formed of one piece of sheet metal and the fourth side 11 beaded or seamed thereto. I have illustrated two different forms of rails 12 and 13, the former being circular in cross section and the latter being in the form of an inverted U. The tubular rail 12 is secured to the tubular upright 10 by means of a tongue 14 and a key 15. The tongue extends into the end of the rail 12 and is provided with outwardly-extending flanges or shoulders 16 which fit into recesses in the end of the rail, to limit the inward movement of the tongue in respect to the rail and also prevent lateral movement of said tongue. The tongue is held in place by a transverse pin 17 driven through an aper-

ture in the tongue and in the sides of the rail. The pin 17 may be slightly wedge-shaped, so as to draw the tongue into position and hold it rigid in respect to the rail. The end of the tongue extends beyond the rail and is adapted for insertion within a slot in the side of the upright. The portion of the tongue within the upright is provided with a slot through which the wedge-shaped key 15 may be driven to hold the flanges or shoulders 16 and the ends of the rail in firm engagement with the side of the upright.

The means for fastening the tubular rail 13 to the upright may be the same as that employed for fastening the rail 12 in position, but I have illustrated a slightly different construction. In this form, the tongue 14^a instead of being held within the rail by a pin extending through an aperture in the tongue, is provided with a hook-end 18, which engages with a transverse pin 17^a. This pin, as shown in Fig. 2, may be slightly wedge-shaped, so as to draw the shoulders 16^a of the tongue into engagement with the recesses in the end of the rail, and the end of the key may be riveted to prevent it from working loose. The inner end of the tongue 14^a is the same as the inner end of the tongue 14, the same wedge or key member 15 being employed to draw it into position and prevent its return movement. As will be noted, the tongue in both forms extends into the end of the upright, and is held against longitudinal movement in one direction by its shoulders, and against longitudinal movement in the other direction by the transverse key. In each instance, the tongue extends through an aperture in the wall of the tubular member 10 and is held there by a wedge or key.

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

1. In combination, a tubular sheet metal upright, a sheet metal rail having an end thereof in engagement with the side of the upright, a sheet metal tongue extending into the end of said rail and through an aperture in the side of said upright, a pin extending transversely of said rail and in engagement with said tongue for rigidly securing said tongue to said rail, and means within said upright for rigidly securing said tongue thereto.

2. In combination, a tubular sheet metal

member. . . second tubular sheet metal member having the end thereof in engagement with the side of the first-mentioned member, a tongue having shoulders extending into recesses in the sides of said second-mentioned member adjacent the end thereof, a transverse pin extending through said second-mentioned member and in engagement with said tongue for holding the tongue and member rigid in respect to each other, the end of said tongue being extended through an aperture in the side of said first-mentioned member, and securing means within said first-mentioned member and in engagement with the end of said tongue.

3. In combination, a tubular sheet metal upright, a rail having the end thereof in engagement with the side of said upright, a

tongue having shoulders extending into recesses in the sides of said rail adjacent the end thereof, a transverse pin extending through said rail and in engagement with said tongue for holding the tongue and rail rigid in respect to each other, the end of said tongue being extended through an aperture in the side of said upright, and a wedge or key in engagement with the end of said tongue.

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

WILLIAM P. LAWRENCE.

Witnesses:

MATTHEW KENNEDY,
THOS. C. PEASE.