Aug. 10, 1926. 1,595,564

F. NEUHAUS

FLANGED TUBE OR THE LIKE AND METHOD OF MAKING SAME

Filed Sept. 27, 1924

Fig. 1.

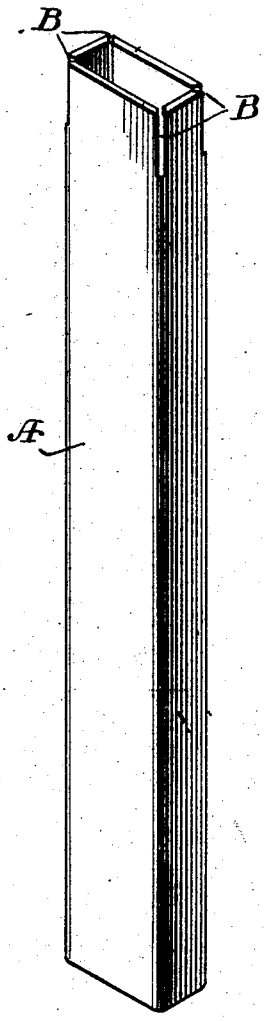


Fig. 2.

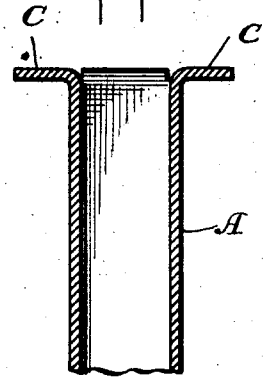


Fig. 3.

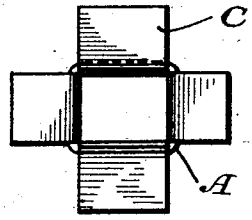
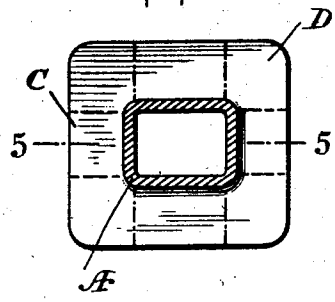


Fig. 4.



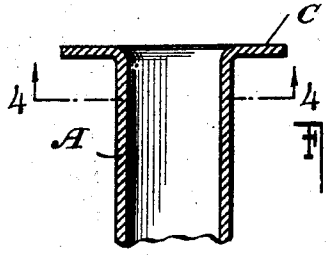


Fig. 5.

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FLANGED TUBE OR THE LIKE AND METHOD OF MAKING SAME.

Application filed September 27, 1924. Serial No. 740,154.

The principal object of this invention is to provide a new and improved construction of a flanged tube, pipe or the like and method for producing the same.

In the accompanying drawings forming a part hereof I have shown by way of example the manner in which the flange is formed upon a pipe or tube, having a rectangular cross section; Fig. 1 being a side elevation of a tube showing the first step of my improved method; Fig. 2 a similar view showing the second step; Fig. 3, is a plan view of the tube shown in Fig. 2; Fig. 4 showing the last step of the method and being a section on the line 4—4 of Fig. 5 looking in the direction of the arrows, and Fig. 5 being a section on the line 5—5 of Fig. 4.

In forming a flange upon a rectangular pipe or tube *a* such as shown in the drawings, I first make a slit or cut B along each of the side edges of the rectangle, and extending inwardly from the end thereof a distance approximately equal to the width of the flange to be provided. The side walls portions C at the end of the tube between the slits B, are then bent over to the desired angle with the axis of the tube as shown in Fig. 2, thus leaving a plurality of re-entrant recesses or spaces between them as clearly shown in Fig. 3. Filling pieces D cut to fit exactly within these spaces are inserted therein and the juxtaposed edges of the portions C and the pieces D are securely welded together, the inner edges of the pieces D which abut the tube being welded directly to the main body portion of the tube. The completed flange after the filling pieces have been inserted and welded in place as shown in Figs. 4 and 5 forms with the main body portion of the tube a substantially integral or one piece structure.

A flange constructed in accordance with the principles herein disclosed will be much stronger than a flange constructed of a separate piece which is riveted, screwed or welded to the body of the tube, as it will be seen that the bent over portions C, which are formed directly from the body of the tube and are integral therewith, will form anchoring means serving to tie the completed flange securely to the tube. Therefore, longitudinal stresses placed upon the tube will not be thrown entirely upon the welded joints of the filling pieces, but will be very largely if not entirely resisted by the bent over portions C. Furthermore, any weakening of the tube caused by the drilling or punching of rivet or bolt holes is avoided.

While I have shown my invention as applied to tube having a rectangular cross-section, it will be obvious that the principles herein disclosed are not limited to a tube of any particular cross sectional configuration, but that they are equally applicable to round or any other shaped tubes. Likewise it will be understood that the completed flange may form any desired angle with the tube, the flange being shown in the drawings at a right angle with the tube merely as illustrative.

I claim:

1. The method of forming a connecting flange upon a tube, pipe or the like to form a flanged pipe of the type wherein the flange serves for the detachable connection of the pipe to a cooperating flange of an adjacent member of a pipe line, and wherein the flanges are also adapted to secure fluid tight packing between them, which consists in cutting a plurality of slots into the end of the tube, extending longitudinally thereof a distance approximately equal to the width of the flange to be formed, bending over the end portions of said tube between said slots to cause said end portions to extend at an angle to the longitudinal axis of said tube, inserting filling pieces into the spaces formed between said bent end portions and welding said filling pieces to said end portions to form a completed connecting flange surrounding said tube and forming therewith a unitary, substantially integral structure capable of resisting severe tension stresses.

2. The method of forming a connecting flange upon a tube, pipe or the like to form a flanged pipe of the type wherein the flange serves for the detachable connection of the pipe to a cooperating flange of an adjacent member of a pipe line, and wherein the flanges are also adapted to secure fluid tight packing between them, which consists in cutting a plurality of slots into the end of the tube, extending longitudinally thereof a distance approximately equal to the width of the flange to be formed, bending over the end portions of said tube between said slots to cause said end portions to extend at an

angle to the longitudinal axis of said tube, inserting filling pieces into the spaces formed between said bent end portions and welding together the juxtaposed edges of said filling pieces, said bent end portions and said tube, to form a completed connecting flange surrounding said tube and forming therewith a unitary, substantially integral structure.

3. A tube, pipe or the like having a main body portion and a connecting flange of the type used for the connection of two pipe sections with packing between them, said flange comprising a relatively large portion thereof integral with said man body portion to anchor said flange securely thereto, and capable of resisting severe tension stresses and a plurality of filling pieces inserted in said relatively large portion and welded thereto and to said main body portion and forming with said relatively large portion a continuous uninterrupted connecting flange surrounding the end of said pipe.

In testimony whereof I have hereunto set my hand.

DR. FRITZ NEUHAUS.