Aug. 20, 1929. L. H. JOHNSON 1,725,277

METAL JOINT

Filed March 10, 1928

Fig. 1.

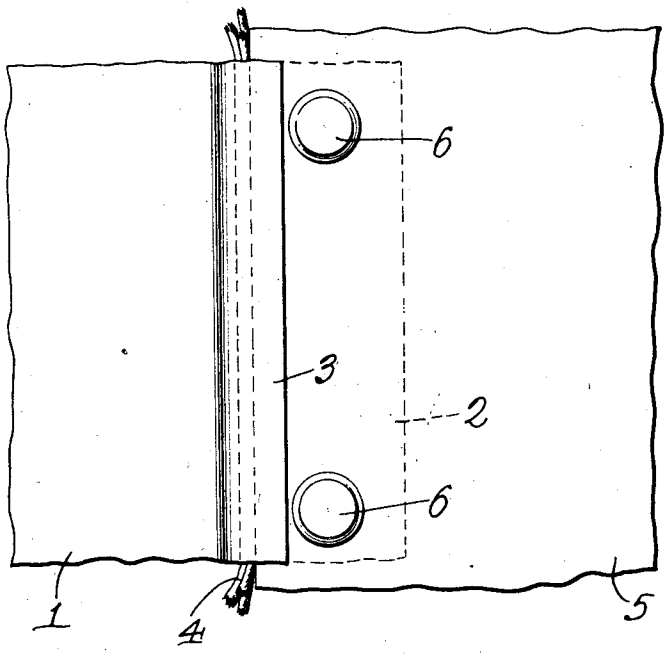


Fig. 2.

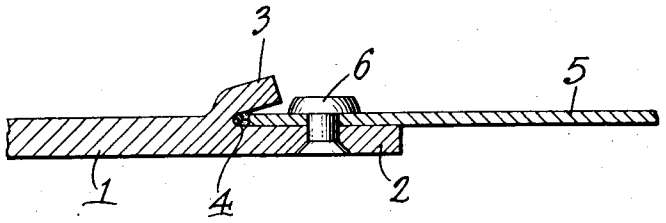
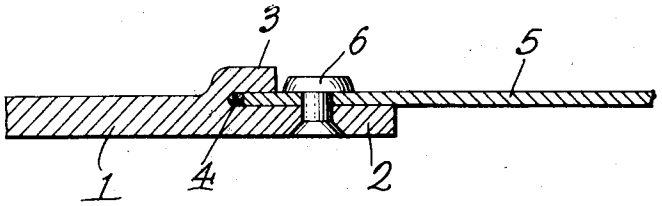


Fig. 3.



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Patented Aug. 20, 1929. 1,725,277

UNITED STATES PATENT OFFICE.

LEON H. JOHNSON, OF LAKEWOOD, NEW YORK.

METAL JOINT.

Application filed March 10, 1928. Serial No. 260,700.

This invention relates to a sealed, water or gas tight metal joint for use primarily with thin sheets of metal although it can be employed with metal sheets of different thicknesses. It is an object of the invention to provide a sealed, water or gas tight joint which can be readily manufactured and form a sealed connection between the parts, thereby rendering the joint particularly useful in the manufacture of boats, pontoons, containers, etc.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in certain novel details of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims, it being understood that various changes may be made in the construction and arrangement of the parts within departing from the spirit of the invention as claimed.

In the accompanying drawing the preferred form of the invention has been shown.

In said drawing,

Figure 1 is a plan view of the joint constituting the present invention.

Figure 2 is a section therethrough showing the relative positions of the parts prior to the sealing of the joint.

Figure 3 is a section through the completed joint.

Referring to the figures by characters of reference, 1 designates a relatively thick plate having an attaching flange along an edge thereof, as shown at 2. A sealing lip 3 is made integral with the plate and cooperates with the flange 2 to form a crotch for the reception of caulking or sealing material indicated at 4. The plate 5 is adapted to be positioned on the flange 2 and while it is thrust against the caulking material, rivet holes are drilled through the lapping portions of the flange and plate. Rivets 6 are then inserted and upset so as to secure the plate to the flange. Following this operation the lip 3 is forced against the adjacent portion of the plate 5, thereby compressing the caulking material, in the space provided and holding the edge portion of the sheet 5 against flange of sheet 1, and producing a sealed, water or gas tight joint which renders the structure particularly advantageous in the manufacture of boat hulls, liquid and gas containers, portable vaults, etc.

Where two plates 5 are to be connected, the plate 1 will be provided with joints, such as described, on opposed edges, and said plate will be interposed between and connected to the plates 5.

I am aware that metal joints have heretofore been made wherein a plate has been inserted between parallel flanges extending from a second plate, thereby forming a double lap. Rivets have then been extended through the lap. In practice, however, the act of riveting the parts has caused one or more of the thicknesses to bulge and it has not been possible to get a sealed joint even though caulking material has been used. By providing a single lap the danger of bulging the material at the joint is practically eliminated and even though a bulge should be produced, the pressure of the sealing lip upon the edge of the plate 5 and the compression of the caulking material will result in a complete seal.

What is claimed is:

1. A metal joint including a plate, a flange extending therefrom, a lip integral with the plate and cooperating with the flange to form a crotch, a sealing material in the crotch, and a second plate secured to and lapping the flange, said plate thrusting against the sealing material and gripped by the lip.

2. A metal joint including a plate, a flange extending therefrom, a lip integral with the plate and cooperating with the flange to form a crotch, a sealing material in the crotch, and a second plate secured to and lapping the flange, said lip constituting means for gripping the last named plate and for compressing the sealing material against the edge thereof.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

LEON H. JOHNSON.