G. AND W. AIRD.

CLAMPING DEVICE.

APPLICATION FILED MAY 21, 1920.

1,387,226. **Patented Aug. 9, 1921.**

FIG. 1

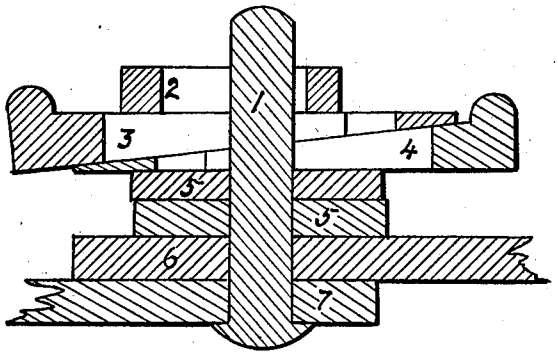


FIG. 5.

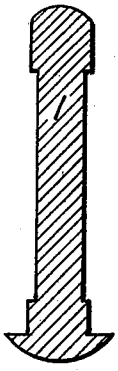
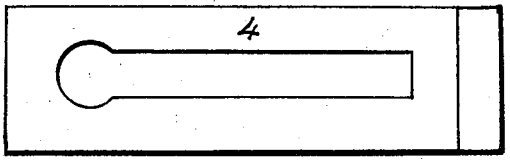


FIG. 2.



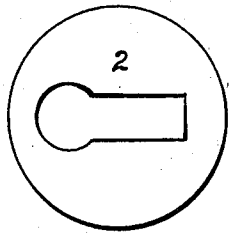
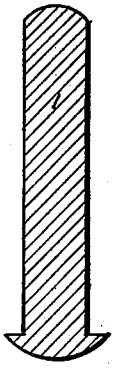


FIG. 3.

FIG. 4.



WITNESSES:

B. Dell Tunell

C. E. Drome

INVENTORS

George Aird

Wilfred Aird

BY

Lam Beaudry

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE AIRD, OF NORTH BAY, ONTARIO, CANADA, AND WILFRED AIRD, OF SAN FRANCISCO, CALIFORNIA.

CLAMPING DEVICE.

1,387,226. Specification of Letters Patent. **Patented Aug. 9, 1921.**

Application filed May 21, 1920. Serial No. 383,330.

To all whom it may concern:

Be it known that we, GEORGE AIRD, of No. 292 Second avenue, in the city of North Bay, in the Province of Ontario, Canada, and WILFRED AIRD, of No. 1941 Mission street, in the city of San Francisco, in the State of California, U. S. A., both subjects of the King of Great Britain and Ireland, have invented new and useful Improvements in Clamping Devices, of which the following is a specification.

In the drawing accompanying the present specification.

Figure 1 is a section of the invention applied to boiler plates.

Fig. 2 is a plan of the wedges.

Fig. 3 is a plan of the locking washer.

Fig. 4 is a section of the bolt showing its broad width.

Fig. 5 is a section of the bolt showing its thin width.

1 is the bolt.

2 is the clamping washer.

3 and 4 are the wedges.

5 5 are ordinary washers if necessary to fill up the vacant space along the shank of the bolt.

6 and 7 are boiler plates.

A. A round belt having about one quarter of one of its diameters taken off on its two opposite ends for about three quarters of the length of the shank so as to leave at its end a T head the same size as the shank.

B. A wedge like locking washer having a round hole near its thin end sufficiently wide to play over the head of the bolt and a slot sufficiently wide to play on the thin part of the bolt shank and extending from the said round hole toward the thick end.

C. One or more wedges having, near their thin end a round hole sufficiently large to pass over the T head of the bolt and a slot sufficiently wide to play over the thin part of the bolt shank and extending along their axis from the said round hole toward their thick ends.

If two wedges are used, the locking washer may be of an even thickness all through.

To use the invention: The plates already punched, having been adjusted one over another, the bolt 1 is inserted in the hole of the two plates, a sufficient number of ordinary washers to fill the vacant space along the bolt are slipped over the T head, the wedges 3 and 4 are placed over the head of the bolt in opposite directions, the locking washer is placed on top of the wedges and slipped home along the thin part of the shank, when two or three blows of the hammer on the wedges finish the operation, which has lasted two or three minutes and the plates are ready to receive the rivets.

When the rivets have been duly hammered on each side of this clamping device, a tap of the hammer on the thin edge of the wedges will release their pressure and the clamp can be used farther on to continue the riveting.

We claim as our joint invention;

A clamping device which consists of a bolt, to pass through the plates to be riveted together, the shank thereof flattened on opposite sides to form a T head at its smaller end; a locking washer to resist the pressure of the wedges against the head of the bolt, said washer having near one of its edges a hole to pass over the T head of the bolt and a slot to fit the flattened part of the shank extending from the said hole toward the opposite edge and wedges to press together the plates to be riveted against the head of the bolt; said wedges having a hole near their thin end to pass over the head of the bolt and a slot to fit the flattened part of the shank, extending along their axis from the said hole toward the thick end thereof in the manner and for the purpose herein above described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

GEORGE AIRD. [L. S.]
WILFRED AIRD. [L. S.]

Witnesses:
B. D. MCCONNELL, [L. S.]
C. E. DROME. [L. S.]