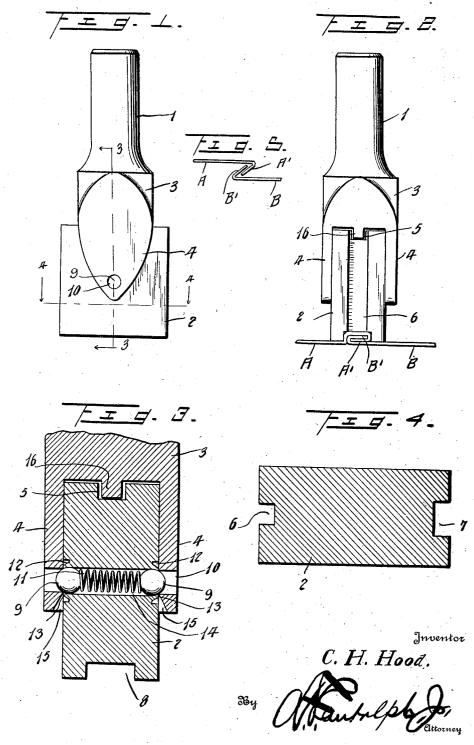
JOINT COMPLETING OR GROOVING TOOL

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UNITED STATES PATENT OFFICE.

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JOINT COMPLETING OR GROOVING TOOL.

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To all whom it may concern:

Be it known that I, Charles H. Hood, a citizen of the United States, residing at Ashland, in the county of Boyd and State of Kentucky, have invented certain new and useful Improvements in Joint Completing or Grooving Tools; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 10 will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to tools for completing or grooving the joints of sheet metal plates, and has for one of its objects to improve and simplify the general construction of tools of this character and to provide one by means of which joints of various widths may be completed or grooved.

With the above and other objects in view, ²⁰ the invention consists of the construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawing, wherein:

Figure 1 is a view in side elevation of a joint completing or grooving tool constructed in accordance with my invention,

tool,

Figure 3 is a detail sectional view taken on the plane indicated by the line 3-3 of

Figure 4 is a detail sectional view taken on the plane indicated by the line 4-4 of

Figure 1, and Figure 5 is a view illustrating the condition of the joint of two metal plates prior

to its completion by the tool.

Referring to the drawing by reference numerals, I designates the handle and 2 the head of the tool. The lower end 3 of the handle 1 is enlarged and projecting downwardly from opposite sides of this end is a pair of relatively spaced lugs 4 to and between which the head 2 is removably se-cured. The head 2 is preferably polygonal in outline and in the edges thereof are formed grooves 5, 6, 7 and 8 of relatively different widths. The head 2 is removably and which partly enter openings 10 in the of the head. lugs. The head 2 is provided with an opening 11 extending transversely therethrough is merely illustrative and does not pretend and located at the transverse center thereof. to give exact proportions. Furthermore, The opposite sides of the head 2 are pro- the said drawing is illustrative of a pre-

vided with circular grooves 12 which surround the opening 11. The inner walls of the grooves 12 are deflected inwardly to provide ball retaining elements 13, these 60 elements being adapted to limit the projection of the balls beyond the opposite sides of the head 2, and the balls are yieldingly held in contact with the retaining elements 13 by means of the spring 14 positioned 65 in the opening 11 between the balls 9. The projecting portions of the balls 9 enter the epenings 10 in the lugs 4. As the balls are yieldingly held in projected position, the head 2 may be removed from the handle 1 or applied thereto by exerting thereon a force sufficient to overcome the tension of the spring 14. To facilitate the application of the head 2 to the handle 1, the lugs 4 are provided in their inner sides with 75 grooves 15 which are located below the openings 10 and in alinement therewith and the bottom walls of which extend upwardly and inwardly. The lower end of the handle 1 is provided with a rib 16 which enters the top groove of the head 2 and contacts with the bottom wall of such groove in order to prevent the head from having any rotary move-Figure 2 is a view in edge elevation of the ment with respect to the handle 1, said rib being also adapted to prevent the head from moving bodily in the direction of the handle.

When it is desired to secure two sheet metal plates together, the adjoining edges thereof are bent in opposite directions to These flanges are then provide flanges. moved into interlocking engagement as shown in Figure 5 of the drawing, in which figure A and B designate the plates and A' and B' the flanges. To finish the joint, the tool is applied to the upper sides of the sheets with the interlocked flanges A' and B' within one of the grooves of the head 2. With the tool in this position, the application of a downward pressure thereto will result in completing the joint as shown in Figure 2 of the drawing. As the grooves 5 of the head 2 are of relatively different widths, the tool may be used to complete joints of different widths. The head 2 may 105 be readily and quickly applied to and resecured to and between the lugs 4 by means moved from the handle 1 in order to posiof balls 9 which are carried by the head tion the groove to be used at the lower side

It should be understood that the drawing

What is claimed is:

1. A joint completing or grooving tool, comprising a handle provided with lugs, a head provided with joint receiving grooves, retractible means carried by the head and 10 engaging the lugs to secure the head to the lugs, and a rib carried by the handle and contacting with the bottom wall of one of the grooves to hold the head against rotation and movement in the direction of the handle.

ferred construction, it being my expectation that various changes and modifications may comprising a handle provided with lugs, said be made without departing from the spirit lugs being provided with openings and in and scope of my invention.

2. A joint completing or grooving tool, 15 comprising a handle provided with lugs, said lugs being provided with openings and in their inner sides with grooves extending outwardly from the openings and having inclined bottom walls, a head provided with 20 joint receiving grooves, spring-pressed elements carried by the head and partly entering the openings, and a rib carried by the handle and engaging the bottom wall of one of the grooves.

In testimony whereof I affix my signa-

CHARLES H. HOOD.