(No Model.)

W. H. WALKER.

DIE FOR ATTACHING TERRETS TO HAMES.

No. 381,447. Patented Apr. 17, 1888.

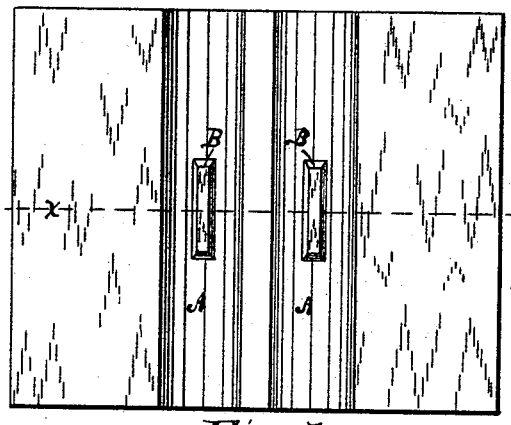

Fig. 1.

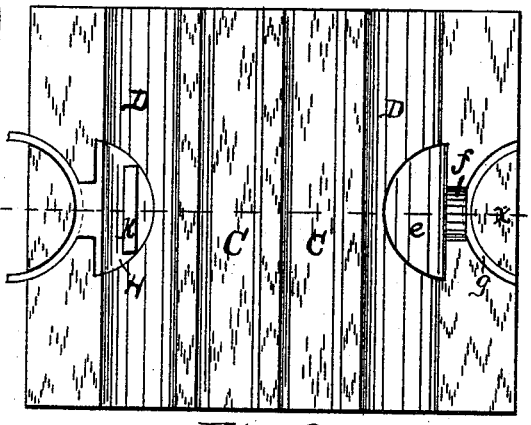

Fig. 2.

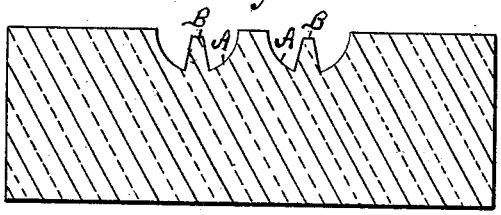

Fig. 3.

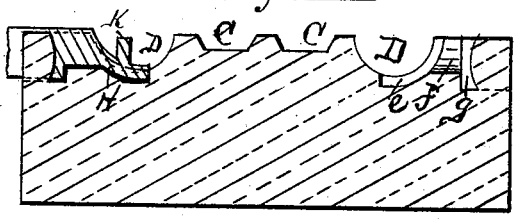

Fig. 4.

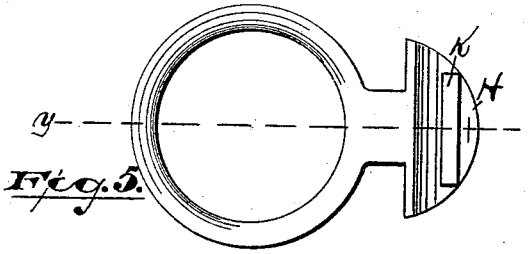

Fig. 5.

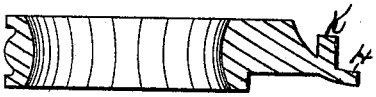

Fig. 6.

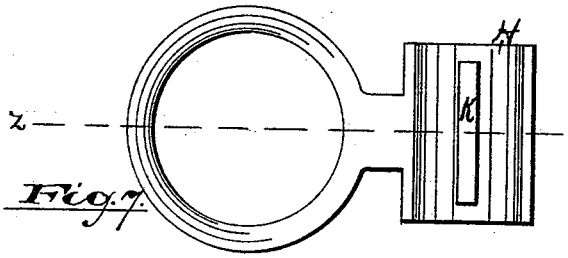

Fig. 7.

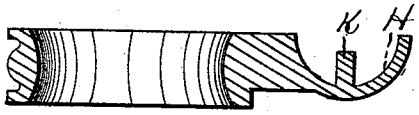

Fig. 8.

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM H. WALKER, OF MILFORD, CONNECTICUT.

DIE FOR ATTACHING TERRETS TO HAMES.

SPECIFICATION forming part of Letters Patent No. 381,447, dated April 17, 1888.

Application filed July 1, 1887. Serial No. 243,079. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WALKER, a citizen of the United States, residing at Milford, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Dies for Attaching Terrets to Hames and Dies Therefor; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In said drawings, Figures 1 and 2 represent, respectively, a plan view of a top and bottom die for securing the terrets to the hame-body and embodying my improvements. Figs. 3 and 4 are sectional views taken through line X of Figs. 1 and 2. Figs. 5 and 7 are plans, respectively, of a terret embodying my improvements, and Figs. 6 and 8 are sections taken through lines Y and Z of Figs. 5 and 7.

Similar letters of reference indicate like parts in each of the several figures where they occur.

The object of this invention is to facilitate the operation of securing the terrets to the hame-body and to reduce the cost of the same, and also to impart increased strength and durability as compared with that of ordinary methods of securing the parts referred to together.

Referring to said drawings, A A, Figs. 1 and 3, represent cavities in the top die corresponding in cross-sections with the rounded side of the hame-body, and B central projections extending upward and flush, or nearly so, with the face of the die.

C C, Figs. 2 and 4, represent slight cavities extending across the face of the bottom die, and D D, the same figures, represent cavities extending across the face of said die, corresponding in shape in cross-sections to the rounded side of the hame-body.

e, *f*, and *g*, same figures, represent cavities or recesses corresponding in shape with and adapted to receive the terret rings and shanks, the purposes of which will be hereinafter explained.

The terret-rings, as represented in Figs. 5, 6, 7, and 8, are provided with a shank, a portion of which, H, is elongated and curved on the inside to correspond with the convex portions of the hame-body, and provided also with a tenon, K, as plainly indicated in said Figs. 5, 6, 7, and 8.

The operation of preparing the hame-body to receive the terrets and of securing the latter thereto is as follows, to wit: The portion of the hame-bodies to which the terrets are to be secured is first heated to a red heat and laid in the recesses or cavities C C, Fig. 2, flat side down. The upper die is then brought down thereupon and apertures or cavities are punched therein by means of the projections B B in the top die. Said top die is then raised or removed, and the terret-rings are inserted in the cavities *e*, *f*, and *g*, as indicated in Figs. 2 and 4, and the hame-bodies referred to are laid in the cavities D D, convex side down, when the top die is again brought down thereupon, which operation forces the tenons K into the cavities formed in the hame-body and firmly clinches the same therein, as will be understood upon reference to Figs. 1, 2, 3, and 4. Provision is also made whereby the elongated portion of the shank of the terret may be at the same time slightly embedded in the hame-body, thereby making the union of the parts still more secure. To this end the cavities or recesses *e* should be somewhat less in depth than the thickness of the elongated portion H of the shank, so that said portions will project slightly above the surface of the cavity in which the hame-body lies, which will be understood upon reference to Fig. 4, at the left of said figure. By thus securing the terrets to the hame-body the ordinary and expensive methods of riveting or brazing by hand are avoided.

I deem it preferable to perform the operation while the hame-body is heated, because when the metal closes the shrinkage or contraction tends to hold the parts more securely and firmly together.

The method herein described I desire to make the subject of a separate application for patent.

Having thus described the invention, what I claim as new is—

Dies for preparing hame-bodies for the reception of terrets and for securing the latter thereto, consisting of an upper die provided

with cavities A A and projections B B, and a lower die having cavities C C and D D, and also with cavities, as *e*, *f*, and *g*, conforming to the shape of and adapted to receive the teret rings and shanks, all adapted to operate substantially as herein described, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of June, 1887.

WILLIAM H. WALKER.

Witnesses:

OLIVER DRAKE,

OSCAR A. MICHEL.