W. BAKER.

Manufacture of Gun-Bands.

No. 206,762. Patented Aug. 6, 1878.

Fig. 1.

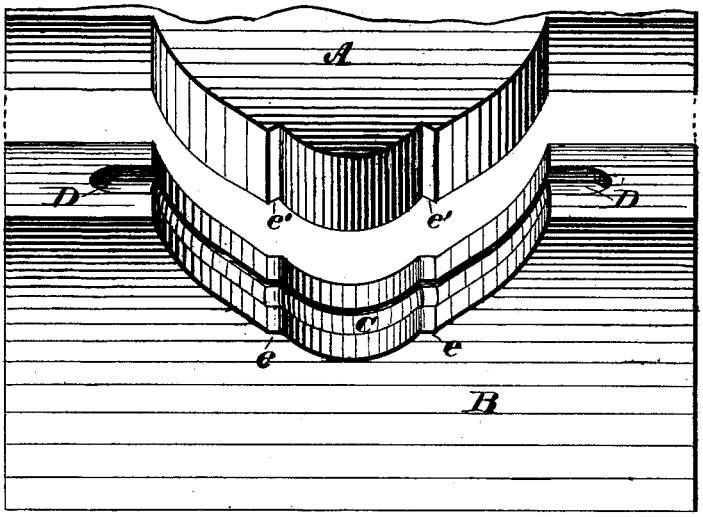


Fig. 2.

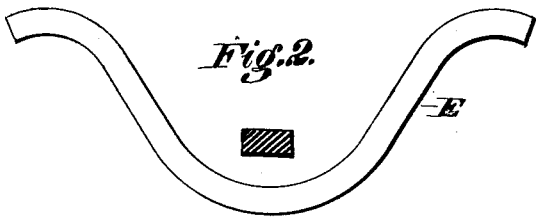


Fig. 3.

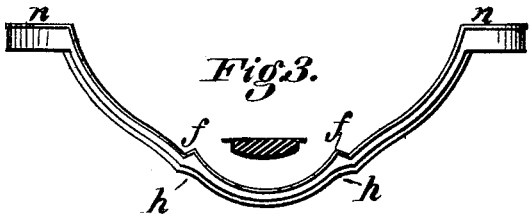


Fig. 4.

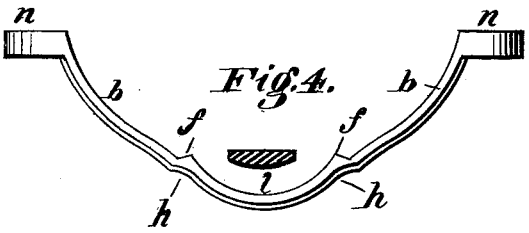
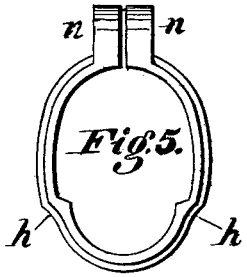


Fig. 5.



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UNITED STATES PATENT OFFICE.

WALTER BAKER, OF ILION, NEW YORK.

IMPROVEMENT IN THE MANUFACTURE OF GUN-BANDS.

Specification forming part of Letters Patent No. **206,762**, dated August 6, 1878; application filed October 20, 1877.

To all whom it may concern:

Be it known that I, WALTER BAKER, of Ilion, in the county of Herkimer and State of New York, have invented certain Improvements in the Manufacture of Gun-Bands, of which the following is a specification:

My invention relates to gun-bands; and the invention consists in an improved method of manufacturing the same, as hereinafter more fully set forth.

Figure 1 is a perspective view of the dies used to form the blank for the band, the two parts of the die being shown inclined in opposite directions, so as to show the face of both parts. Fig. 2 is a side elevation of the blank as cut preparatory to the operation thereon of the dies. Fig. 3 is a side elevation of the same after it has been operated upon by the dies. Fig. 4 is a side view of the same after it has been trimmed and smoothed, and Fig. 5 represents the same bent into shape to complete the band.

Heretofore gun-bands have been made by taking a blank cut from a bar of metal equal in width to the diameter of the completed band, and swaging it flatwise between dies, by which operation the rough form of the band was struck up edgewise in two recessed or grooved dies, there being a solid web left extending centrally from side to side across the band, and also a corresponding web or fin projecting centrally from its outer edge all around. The central web had then to be punched out, and the outer web or fin trimmed off, thus leaving the band solid and in a rough state, after which it had to be placed on a mandrel and operated upon in a drop-press to shape and finish the inside, and after that it was smoothed by a milling or shaping machine, or ground and polished, and then the lug had to be sawed through in order to allow it to be drawn together by the screw used for that purpose.

The object of my invention is to simplify and cheapen the production of these bands; and to accomplish these results I proceed as follows: In the first place I take a small rod of iron corresponding in width and thickness to the completed band, with allowance of stock sufficient for the working of the same, and cut therefrom a piece long enough to form the band by bending it into the required form, this piece constituting the blank from which the band is to be made. The ends of this blank E are made circular or rounded off, which may be readily done in the machine which cuts them from the rod; or it may be done subsequently in a machine which may be arranged to shape the ends, and at the same operation bend the blank into the form shown in Fig. 2, thus preparing it for the dies.

The dies I construct as shown in Fig. 1, the lower die, B, being curved on its face, as shown, and having two curved shoulders, *e e*, extending across the same. In the face of this lower or female die I form a longitudinal recess, C, which extends the whole length of its curved portions, and terminates upon the flat face at each side of the curved portions, as shown at D. The upper or male die, A, is made with its face curved to correspond with and form the counterpart of the die B, except that the shoulders *e' e'* are angular instead of curved, as clearly shown in the upper part of Fig. 1, the face of A being, however, left smooth or flat transversely, as shown in Fig. 1. These dies being mounted in a drop-press in the usual manner, I then heat the blank E, and, placing it in the recess C of the die B, let the die A descend upon it with force, which drives the metal of the blank E into the recess C, thereby forging it into the form shown in Fig. 3. This operation forces the surplus metal out at the sides, thereby leaving a very small fin along the two edges, as shown in cross-section in Fig. 3, which is subsequently removed, leaving the blank in the form shown in Fig. 4.

It will thus be seen that the band is forged from a small rod, and the pressure of the dies is brought to bear upon the two broader faces, which are thus left of the exact form required, without any fin or unfinished projections to be subsequently removed. When the pressure is applied the blank lies in a straight line, looking from above, and the die in which it lies being curved or hollowed out, as shown, the result is, that the metal is so forced into the die B, and acted upon by it and the die A, that the angular shoulders *f f* and the curved shoulders *h h*, together with the two lugs *n n*, are all formed complete at the one operation,

instead of reforging on a mandrel and afterward cutting away the metal to form them, as was necessary when these bands were forged upon the old plan, as hereinbefore set forth.

In the present plan of forging the bands, the only metal necessary to be removed from the blank after it has been forged is the very small fin left on its edges, as shown in Fig. 3, thus saving largely both in stock and labor.

The band is then tumbled in a tumbling-barrel to take off the scale and brighten it, after which the fin is trimmed off. The band is then placed in the same dies and struck up cold, after which it is only necessary to bend it so as to bring the lugs *n* together, as shown in Fig. 5, drill the hole through the lugs for the screw ordinarily used, and polish it, when it is complete.

By this method of construction there is a large saving of stock, and also of time and labor, thereby correspondingly expediting and cheapening the production of the bands.

Having thus fully described my invention, what I claim is—

1. As an improvement in the art of making gun-bands, the herein-described method of forming the same, with the shoulders *f* and the lugs *n*, from a narrow rod or bar of metal by means of dies, substantially as set forth.

2. The dies A and B, having their faces curved, as shown, and provided with the recess C and the shoulders *e*, for forming gun-bands, as set forth.

WALTER BAKER.

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