

(No Model.)

W. B. NORTH.  
MANUFACTURE OF WAIST BELT LOOPS.

No. 421,752.

Patented Feb. 18, 1890.

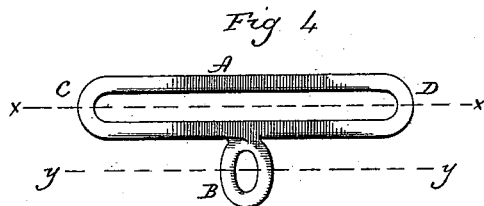


Fig. 2.

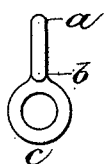


Fig. 5

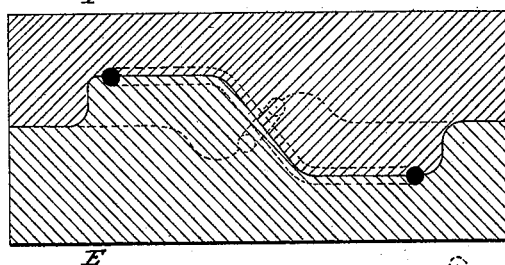


Fig. 6

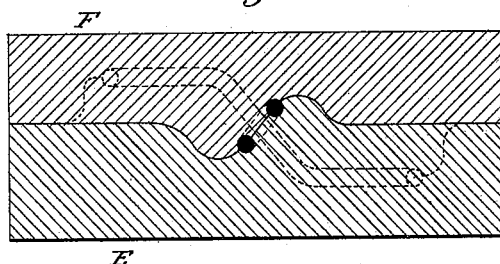


Fig. 3.

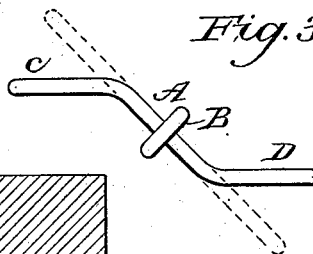
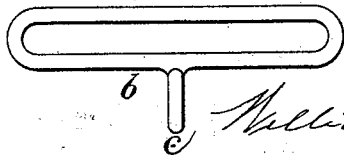


Fig. 1.



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## MANUFACTURE OF WAIST-BELT LOOPS.

SPECIFICATION forming part of Letters Patent No. 421,752, dated February 18, 1890.

Application filed November 26, 1889. Serial No. 331,496. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. NORTH, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in the Manufacture of Waist-Belt Loops; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a face view of the loop complete; Fig. 2, an end view of the same; Fig. 3, a side view of the loop as cast; Fig. 4, a face view of the same; Fig. 5, a longitudinal section through the mold cutting on line *xx* of Fig. 4; Fig. 6, a section parallel with Fig. 5, cutting on line *yy* of Fig. 4.

This invention relates to an improvement in the manufacture of loops for the fastening of waist-belts.

These loops consist of two sides *a b*, (see Fig. 1,) connected at their ends, the length of the sides corresponding to the width of the belt, and to one side, as *b*, an eye *c* is applied, which is in a plane at right angles to the plane of the loop itself, as clearly seen in Figs. 1 and 2.

These loops have heretofore been made from wire bent to form the two sides, and one side bent to form the eye. Such construction is very expensive. In some cases the loop has been made from cast metal by molding it with the eye in a plane at an angle to the plane of the loop, so as to draw the pattern from the sand, and then after casting the eye is twisted into the plane of the loop. In thus twisting the eye many will unavoidably break, so that such method of casting is impracticable. It is not practical to cast the loop and eye in their proper position to each other, because of the extreme length of the loop and the central position of the eye.

The object of my invention is to cast the loop and eye complete, but yet leave the eye in its natural plane with relation to the plane of the loop and so as to avoid the twisting before referred to.

To this end my invention consists in casting the loop with the body, having its two

ends in a horizontal plane, while the central portion is in a plane diagonal thereto, and with the eye on this diagonal portion in a plane at right angles to the said diagonal portion, and then, after casting, bending the end portions of the loop into the plane of the said central portion, as more fully hereinafter described.

In carrying out my invention I construct the pattern in the form of the loop required, and on the central portion *A* the eye *B* is formed in a plane at right angles to the said central portion. The end portions *C D* of the loop are bent, one in one direction and the other in the opposite direction, into planes substantially parallel with each other, but at an angle to the central portion, and so that the two end portions *C D* being horizontal, the central portion will be preferably at an angle of forty-five degrees to those planes, which will leave the eye at right angles to the said central or diagonal portion of the pattern. This pattern is then molded in the sand, as usual for casting other metal articles, and as represented in Figs. 5 and 6. In Fig. 5 the section through the ends of the loop is shown in solid black. In Fig. 6 the section through the eye is shown in solid black. In both cases the loop and eye are represented in broken lines, the division in the mold in solid black lines, and from these it will be seen that the angle of the central portion *A* of the eye *B* permits their being molded so as to readily draw from the sand by a simple vertical movement, the end portions being horizontal in such molding. Then the loop is cast in the usual manner, and after casting the end portions *D* and *C* are bent into the same plane with the central portion *A*, and so as to form a straight loop, as indicated in broken lines, Fig. 3. Thus the only bending required after casting is the slight bend to bring the end portions into the same plane with that portion *A*, and in doing which there is very little, if any, liability to break the loop, and the eye is cast in its normal position with relation to the loop.

I claim—

The herein-described improvement in the manufacture of belt-loops having an eye on

one side in a plane at right angles to the  
plane of the loop, consisting in casting the  
loop proper with its two ends bent into a  
plane at an angle to its central portion to per-  
5 mit proper coring in the mold, and with the  
eye in a plane at right angles to said central  
portion, then, after casting, bending the said

end portions into the same planes with the  
central portion, substantially as described.

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