(No Model.)

# W. W. LEE.

## BLANK FOR WELDED HOLLOW HANDLES.

No. 412,278. Patented Oct. 8, 1889.

Fig. 1.

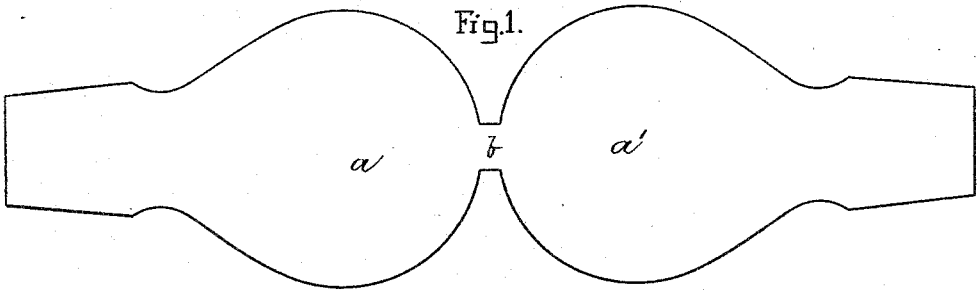



Fig. 2.

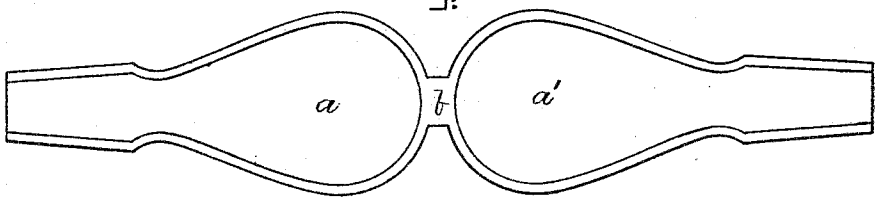



Fig. 3.

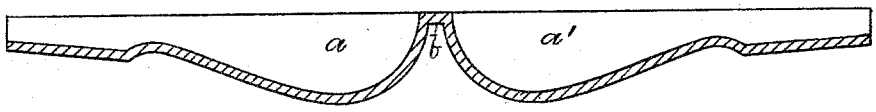



Fig. 4.

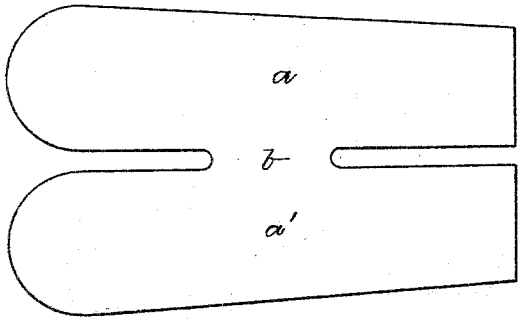



Fig. 5.

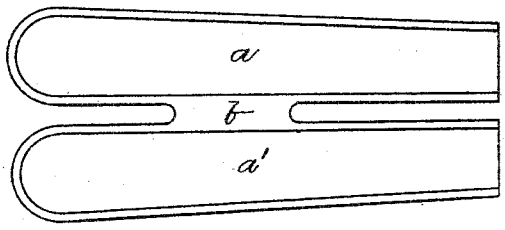



Fig. 6.

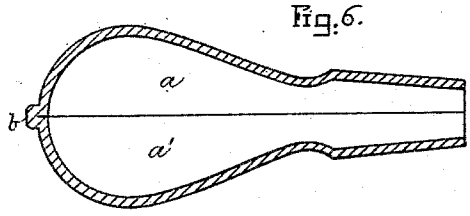
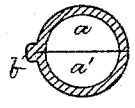



Fig. 7.




Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM WILSON LEE, OF NORTHAMPTON, MASSACHUSETTS.

## BLANK FOR WELDED HOLLOW HANDLES.

SPECIFICATION forming part of Letters Patent No. 412,278, dated October 8, 1889.

Application filed February 23, 1889. Serial No. 300,828. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM WILSON LEE, of Northampton, in the county of Hampshire and State of Massachusetts, have invented an Improved Blank for Welded Hollow Handles, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of one form of my blank when flat. Fig. 2 is Fig. 1 struck up. Fig. 3 is a lengthwise section of Fig. 2; Fig. 4, a modified form of blank when flat, and Fig. 5 is Fig. 4 struck up. Figs. 6 and 7 are sectional details described below.

In making hollow-handle implements, while it has long been desirable to use two shells instead of a tube, certain practical difficulties have prevented the large use of two shells in the practical manufacture of such implements when the hollow handles were formed by welding, and my invention is a blank for hollow handles, consisting of two shells, each made from flat metal and struck up into shape, but which are joined by a strip of metal integral with each shell.

In making my improved blanks, the flat blank of the desired shape, as in Figs. 1 and 4, is made from sheet metal, the two parts *a a'* being joined by strip *b*. The parts *a a'* are then struck up either hot or cold; but with proper metal this can readily be done cold, forming shells *a a'*, as in Figs. 2 and 5, these shells being joined by the strip *b*. This strip *b* is of such dimensions that it can be bent, as shown in Figs. 6 and 7, Fig. 6 showing a section through a blank of the pattern shown in Figs. 1, 2, and 3 after the shells *a a'* are brought edge to edge by bending the strip *b* which unites them, and Fig. 7 being a cross-section of the blank of the pattern shown in Figs. 4 and 5 after the shells of that blank are brought edge to edge by bending the strip *b*.

I am aware of Patent No. 338,521, to H. C. Hart, dated March 23, 1886, and disclaim all that is shown in it, for while Hart's blank is like mine in so far as both consist of two shells, yet it lacks the strip *b*, which is the distinguishing feature of my invention, and which must be of sufficient width, measured from the inner edge of one shell to the inner edge of the adjoining shell, to be practically unaffected by the dies by which the two shells are struck up. The method described in Hart's patent is in fact not at all applicable to blanks for forming welded hollow handles, while my blank is admirably suited for that purpose, the welding-dies not only forcing the edges of the shells in close contact and welding them, but also giving shape to the outer surface of both shells and reducing the strip *b* to a fin, which is removed in the finishing process, as will be clear without further description.

What I claim is—

The blank described, composed of the two shells *a a'*, united by the strip *b*, integral with both shells, substantially as described.

WILLIAM WILSON LEE.

Witnesses:
C. H. PIERCE,
WM. COCHRAN.