Le R. S. WHITE.

BLANKS FOR TABLE FORKS.

No. 192,801. Patented July 3, 1877.

Fig. 1.

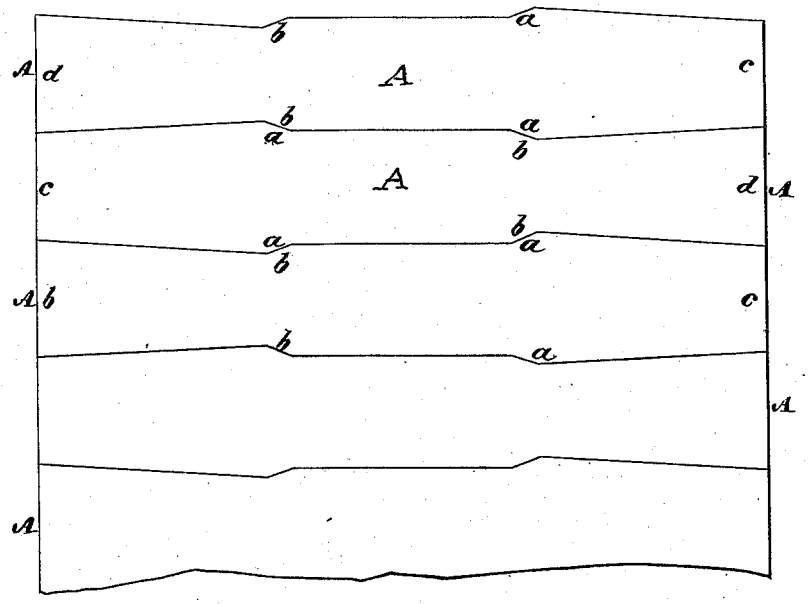


Fig. 2.

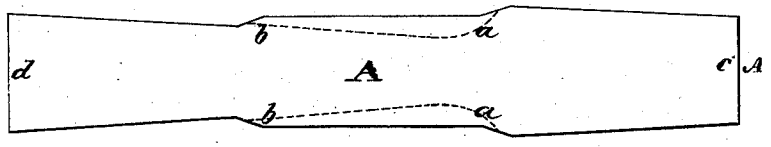


Fig. 2.*

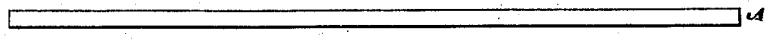


Fig. 3.

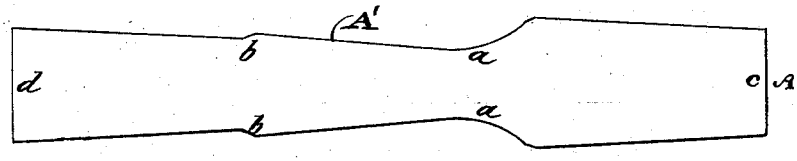


Fig. 3.*

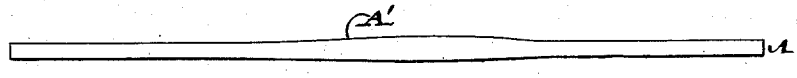
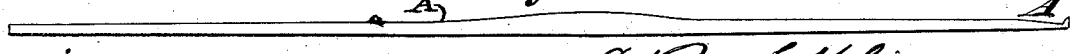


Fig. 4.



Fig. 4.*



Witnesses
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UNITED STATES PATENT OFFICE.

LE ROY S. WHITE, OF WATERBURY, CONNECTICUT, ASSIGNOR TO BROWN & BROTHERS, OF SAME PLACE.

IMPROVEMENT IN BLANKS FOR TABLE-FORKS.

Specification forming part of Letters Patent No. **192,801**, dated July 3, 1877; application filed May 25, 1877.

To all whom it may concern:

Be it known that I, LE ROY S. WHITE, of Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and Improved Blank for the Manufacture of Table-Forks, which improvement is fully set forth in the following specification and accompanying drawings.

This invention relates to the manufacture of table-forks from German silver and other metals or alloys, in which the entire article, including its handle, is made from the same piece of metal.

Heretofore it has been customary in manufacturing such articles to first cut primary blanks from a sheet or plate of uniform thickness, then to take these blanks and "grade" them by rolling them taper from that portion, which is to form the shank of the finished article toward opposite ends, leaving that portion which is to form the shank of the original thickness of the plate, and afterward to cut out from such graded primary blanks secondary blanks, having a profile of the form desired for the finished article, and suitable for stamping and otherwise forming into a fork. This has involved a very great waste of metal in the form of scrap, amounting generally to more than one-half of the whole weight of metal in the primary blanks.

The object of this invention is to reduce this waste, and in carrying it out I adopt the system of condensing the blank by pressure edgewise, which is the subject of Letters Patent No. 178,218, dated May, 1876; and this invention consists in a novel and peculiar form of primary blank, which is to be used in connection with such a system of condensation, such blank being cut from a sheet of metal of a thickness considerably less than that which the shank of the fork is intended to have, and being reduced in width and thickened in the part which is to produce the shank by pressure applied to its edges before being rolled to grade.

In the the accompanying drawings, Figure 1 represents a plate of sheet metal of uniform thickness, having marked upon it a number of the primary blanks which constitute my invention, showing how the said blanks are or may be cut from the plate. Fig. 2 represents a face view of one of said primary blanks after it has been cut from the plate, and Fig. 2* an edge view of the same. Fig. 3 is a face view, showing the blank after it has been condensed by pressure edgewise, or in a lateral direction. Fig. 3* is an edge view corresponding with Fig. 3. Fig. 4 is a face view of the blank after it has been rolled to grade, such blank having represented upon it in dotted lines the profile of the secondary blank, which is to be cut from it. Fig. 4* is an edge view corresponding with Fig. 4.

The profile of the primary blank A is of parallel or approximately parallel form in the part *a a b b*, from which the shank of the fork is to be formed. At *a a* it is widened slightly but somewhat abruptly, and from this widening is tapered gradually toward the end *c*. At *b b* it is contracted slightly but somewhat abruptly, and thence is widened gradually toward the end *d*.

The said profile may be more generally described as having two taper portions and an intermediate parallel or approximately-parallel portion connected with said taper portions by a more or less abrupt narrowing and widening.

The part between *a a* and *c* is to form the blade or pronged portion of the fork, and the part between *b b* and *d* is to form the head of the fork. The width and taper of the said primary blank are so proportioned throughout the length that a number of such blanks may be cut side by side out of a plate or sheet of metal, as shown in Fig. 1, in reverse relation with each other, the adjacent edges of two contiguous blanks forming reversed counterparts of each other, no waste or scrap being formed in the cutting of such blanks.

These blanks, after being cut out, may be annealed, if necessary, before any further shaping operation is performed upon them. As hereinbefore stated, the metal of which they are composed is of less thickness than is desired for the shank. The first shaping operation to which the blank is subjected is that of condensing the part between *a a* and *b b*, which is to form the shank of the fork by pressure edgewise in a press of any suitable

kind, or in dies under a drop, for the purpose of increasing the thickness and diminishing the width of the shank. This condensation also has the effect of hardening and tapering the metal in the shank, as explained in Letter Patent No. 178,218, hereinbefore mentioned. Its effect on the shape is illustrated by the dotted lines on the profile view, Fig. 2, and by the blank A^1, (shown in Figs. 3 and 3*,) the latter view showing the increased thickness.

After the blank has been thus condensed in the shank portion it is subjected to the usual operation of grading—that is to say, of rolling it lengthwise to give it the requisite taper toward the head and point, leaving a portion of the shank of the increased thickness given to it by the pressure edgewise. This stage is illustrated by the blank A^2 in Figs. 4 and 4*. After the blank has been thus rolled to grade the secondary blank, the form of which is shown in dotted outline in Fig. 4 is cut out from it. The space outside this dotted outline represents the whole amount of scrap produced in making the fork, except what is made by cutting off the connection of the points of the prongs.

The secondary blank thus produced may be finished in the usual way; but may be further condensed by pressure edgewise, according to Letters Patent No. 178,218, hereinbefore mentioned.

What I claim as my invention, and desire to secure by Letters Patent, is—

The blank A, having two taper portions, *d b b* and *a a c*, and an intermediate parallel or approximately-parallel portion, *a a b b*, connected with said parallel portions by more or less abrupt widening and narrowing portions, substantially as herein described and shown in Fig. 2 of the drawing.

LE ROY S. WHITE.

Witnesses:

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GEO. H. CLOWES.