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PROCESS OF FIXING THE TANGS OF TABLE CUTLERY, TOOLS, AND THE LIKE IN THEIR HANDLES.

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1,030,321.

Patented June 25, 1912.

Fig. 1.

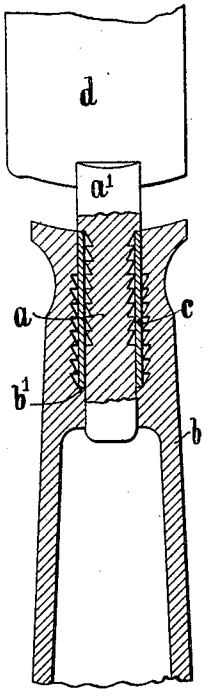
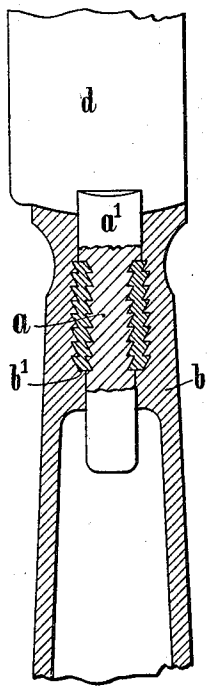


Fig. 2.



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ARTHUR MÜLLER AND ERNST MÜLLER, OF BERLIN, GERMANY.

PROCESS OF FIXING THE TANGS OF TABLE-CUTLERY, TOOLS, AND THE LIKE IN THEIR HANDLES.

1,030,321. Specification of Letters Patent. Patented June 25, 1912.

Application filed September 26, 1911. Serial No. 651,365.

To all whom it may concern:

Be it known that we, ARTHUR MÜLLER and ERNST MÜLLER, subjects of the German Emperor, and both residing at Berlin, Germany, have invented a certain new and useful Improved Process of Fixing the Tangs of Table-Cutlery, Tools, and the Like in Their Handles, of which the following is a specification.

The subject-matter of this invention is an improved process of fixing the tangs of table cutlery, tools and the like, in their handles.

The method hitherto employed of fixing the tangs of such articles in their handles by cementing, soldering, or casting with lead has various drawbacks. For example, it is a difficult matter to fix the tang in position with accuracy, and after a period of use the tang becomes more or less loose in its handle.

A primary object of our invention is to obviate these defects.

To this end, the process according to our invention substantially consists in forcing a liner into a cavity in the handle containing the tang.

The liner, which may be composed of any suitable material, *e. g.* soft metal, asbestos or the like, may be placed in any suitable manner into the space between the tang and the wall of the cavity. We prefer to force the liner into the cavity so that it enters into notches provided both in the tang and in the walls of the cavity. The material of the liner then completely fills the space between the tang and the wall of the cavity and is forced into the notches thereby forming a key, so that an extremely firm connection is obtained between these two parts, which renders it impossible for the tang to come out of its handle when once fixed therein.

In order that our invention may be clearly understood we will now describe the same with reference to the accompanying drawing, wherein:—

Figure 1 is a sectional view of the tang of a knife, the handle and the liner before the liner has been forced into its final position, and Fig. 2 is a similar view of the same parts after the liner has been forced into its final position.

In the drawing *a* designates the tang of the knife, *b* the handle, *c* the soft metal liner and *d* the blade of the knife.

As shown in Fig. 1, the soft metal liner *c* which is to be located in the cavity of the handle between the tang *a* and the walls of the said cavity, is longer than the notched portion of the said cavity, and its dimensions are such that when it has been forced into the handle it will completely and tightly fill the whole of the cavity in the handle as shown in Fig. 2.

The bolster *a'*, which is thicker than the tang *a*, acts as a plunger in the forcing operation.

The tang and the walls of the cavity in the handle are notched the entire length of the portion of the cavity which it is intended that the soft metal liner *c* shall fill in its final position.

The metal liner *c* is preferably a slit tube of soft metal about 1 millimeter thick.

In carrying out the fixing operation, the liner *c* may be first inserted into the cavity in the handle *b*, so that its inner end abuts against the inner end of the cavity, and then the tang *a* is introduced into the liner with its bolster *a'* resting upon the outer end of the liner. The liner may however, be placed upon the middle or notched part of the tang, and be introduced together with the latter into the cavity in the handle. The smooth lower part of the tang is designed to fit exactly in the contracted portion of the handle as shown in the drawings, so that when the tang is forced into the handle the metal of the liner *c* cannot pass beyond the shoulder *b'*. In both instances, the liner is pressed into the notches in the tang and in the handle by the bolster *a'* being introduced a sufficient distance into the outer end of the bore in the handle so that the end of the tang is guided exactly in the inner contracted portion of the handle and prevents the liner penetrating between the end of the tang and the handle.

We claim:—

1. The hereindescribed process of fixing the tangs of table-cutlery, tools and the like in their handles, which consists in first assembling the handle, the shouldered tang, and a liner thereon in a cavity in the handle, and then applying to the liner force of such a nature that the liner will be upset and expanded into binding contact with the tang and with the wall of the cavity, thereby forming a key.

2. The hereindescribed process of fixing the tangs of table-cutlery, tools and the like in their handles, which consists in first as-

sembling the handle, the shouldered tang and a liner thereon in a cavity having a shoulder, and then applying to the liner force of such a nature that the liner will be upset between the shouldered tang and the shoulder in the cavity and thus expanded into binding contact with the tang and with the wall of the cavity, thereby forming a key.

3. The hereindescribed process of fixing the tangs of table cutlery, tools and the like in their handles, which consists in first assembling the handle, the shouldered tang, partly notched, and a liner thereon in a cavity, having a shoulder and a notched wall, in the handle and then applying to the liner force of such a nature that the liner will be upset between the shoulder of the tang and the shoulder in the cavity and thus expanded into binding contact with the notches in the tang and in the cavity, thereby forming a key.

4. The hereindescribed process of fixing the tangs of table cutlery, tools and the like in their handles, which consists in first assembling the handle, the shouldered tang, having a reduced notched portion, and a soft metal liner thereon in a cavity having a shoulder in the handle, and then applying to the liner force of such a nature that the liner will be upset between the shoulder of the tang and the shoulder in the cavity and thus expanded into binding contact with the notches in the tang and with the wall of the cavity, thereby forming a key.

5. The hereindescribed process of fixing the tangs of table cutlery, tools and the like in their handles, which consists in first assembling the handle, the shouldered tang, having a reduced notched portion, and a soft metal liner thereon in a cavity, having a shoulder and a notched wall, in the handle, and then applying to the liner force of such a nature that the liner will be upset between the shoulder of the tang and the shoulder in the cavity and thus expanded into binding contact with the notches in the tang and in the wall of the cavity, thereby forming a key.

In testimony whereof, we affix our signatures in the presence of two witnesses.

ARTHUR MÜLLER.
ERNST MÜLLER.

Witnesses:
WOLDEMAR HAUPT,
HENRY HASPER.