(No Model.)

J. LEITER.

ATTACHING HANDLES TO CUTLERY.

No. 343,665 Patented June 15, 1886.

Fig. 1.

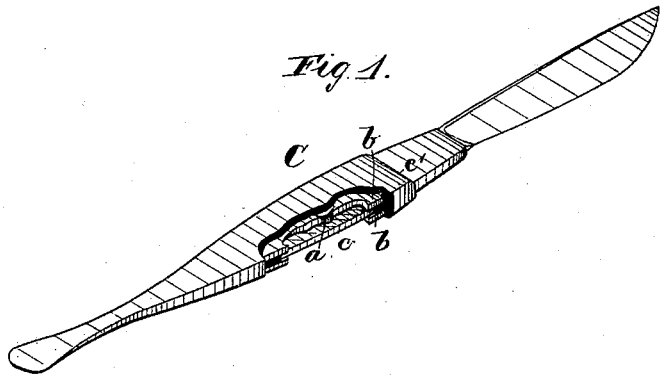
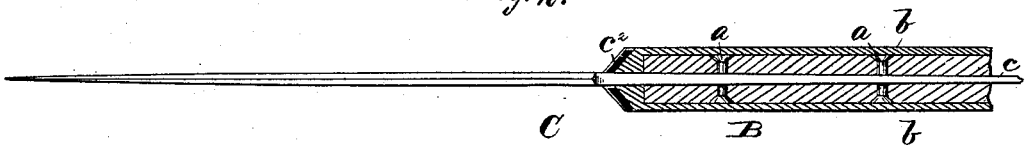


Fig. 2.



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JOSEF LEITER, OF VIENNA, AUSTRIA-HUNGARY.

ATTACHING HANDLES TO CUTLERY.

SPECIFICATION forming part of Letters Patent No. 343,665, dated June 15, 1886.

Application filed June 4, 1885. Serial No. 167,610. (No model.) Patented in England May 18, 1885, No. 6,085; in Germany November 28, 1885, No. 35,832, and in Austria-Hungary March 6, 1886, No. 30,041 and No. 1,799.

To all whom it may concern:

Be it known that I, JOSEF LEITER, a subject of the Emperor of Austria-Hungary, residing at Vienna, in the Province of Lower Austria, in the Empire of Austria-Hungary, have invented new and useful Improvements in the Art of Manufacturing Cutlery-Tools, (for which I have obtained Letters Patent in the following countries: Austria-Hungary, No. 30,041 and No. 1,799, dated March 6, 1886; in Germany, No. 35,832, dated November 28, 1885, and in England, No. 6,085, dated May 18, 1885;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in the manufacture of articles, especially such articles in which wood or wood and metal are employed, and which are exposed to atmospheric or other deleterious influences.

Owing to the low specific gravity of well-seasoned wood, as well as to its cheapness, this material has always found preference in the manufacture of articles where lightness and special forms are desirable, and especially in the manufacture of cutlery, surgical instruments, and tools.

Owing to the great porosity of wood and its capacity for absorbing moisture, it has been almost entirely discarded in the manufacture of cutlery, and especially surgical instruments, notwithstanding its lightness and other advantages, for the reason that the wood is liable to absorb such matter as will render the handling of such instruments more or less dangerous.

Another disadvantage in the use of wood as handles for cutlery, tools, and other articles exposed to moisture, lies in the fact that such handles are liable to split, and various means have heretofore been employed to avoid this.

The object of this invention is to avoid these difficulties and provide a means whereby wood may be employed for the purposes described, and for other purposes, and absolutely protected against the effects of atmospheric or other deleterious influences, by enveloping or enclosing the same in an impermeable envelope, such as celluloid or rubber.

In the accompanying drawings, Figure 1 shows a surgical knife, part of the handle being broken away, constructed according to my invention. Fig. 2 is a sectional elevation of so much of an ordinary knife as will illustrate my invention.

In carrying out my invention I proceed as follows: To the tang *c* of the knife C are secured the two wooden plates *b b* of the handle B by means of rivets *a*, or any other suitable means.

As more plainly shown in Fig. 2, it will be seen that the wooden handle does not extend over the full length of the tang *c*, but only to a point some distance from the blade or the shoulder or bolster or ferrule on the end of said blade, thus leaving a space between the blade and wooden handle on the tang. The wooden handle is then incased or enveloped in a sheathing of celluloid or rubber, and when the latter is employed I cut from a sheet of rubber prepared for vulcanizing a suitable piece, which is wrapped around the handle and subjected to sufficient pressure to cause it to adhere thereto firmly and leave no seam or joint, and also to fill the space on the tang *c* between the inner end of the wooden handle and the inner end of the blade. In this manner I completely envelop the wooded handle with the rubber or celluloid, and as these adhere equally well to metal and wood a bolster or shoulder of the impervious material is formed on the tang above the wooden handle, at the point of junction of said tang and blade, forming a perfectly water-proof joint between the tang and wooden handle. This is not the case in knives or tools of usual construction, where the wooden handle extends clear up to a bolster or shoulder formed at the point of junction of the blade and tang, as moisture is liable to penetrate the joint to the wooden handle. The article so prepared is then vulcanized or hardened, and finished in the usual manner. When celluloid is employed, the latter is applied to the handle by pressure, and then finished as usual. It is obvious that by inclosing the wooden handle as described no moisture can reach the same, while the rivets are also absolutely protected.

To prevent exposure of the wood and rivets by wear, which is the case when attempts have

been made to simply water-proof the wooden handle by a suitable waterproofing solution or a varnish, I form the protective envelope of a suitable thickness—say about one-eighth of an inch thick, or more or less, according to the nature of the article.

As shown in Fig. 1, the envelope forms a tight joint at the beveled portion c', that is formed between the wooden handle on the tang and the blade of the knife, thereby preventing the passage of any moisture, either to the handle or to the tang at that point.

In table and other cutlery, as well as in tools, to prevent access of moisture to the interior of the handle and the tang a bolster or shoulder is formed between the blade or tool and the tang thereof, which materially increases the cost of such articles. This bolster or shoulder, by means of the construction described, may be dispensed with, as the protective material itself forms a shoulder at the point of junction between the tang and blade and also a tight joint. In order, however, to give the knive a better finish, and also to provide a suitable seat for the protective material, I slip a metallic cone, c^2, Fig. 2, over the blade, that fits onto the correspondingly-shaped end of the protective envelope for the handle B, and embed said cone into said envelope.

In cutlery or tools where a handle of wood is employed and a rubber or celluloid coating for the said handle, the end of the latter and the protective agent therefor constitute the seat for a ferrule, when such is used instead of the usual bolster or shoulder formed at the point of junction of the tang and blade—that is to say, the ferrule is directly seated on the end of the wooden handle and upon its protective coating.

It is obvious that a tight joint is very difficult to obtain between the ferrule and its seat, and moisture is liable to penetrate to the tang and its wooden handle. When, however, said ferrule is seated directly on a boss or enlargement formed by the protective agent above the wooden handle of the article, and where said ferrule is firmly embedded in the agent while in a plastic condition, on hardening or on vulcanizing the protective agent a tight joint is formed between it and the ferrule.

I do not desire herein to claim, broadly, the coating of wooden handles of tools or cutlery with a protective agent, such as rubber or celluloid, as I am aware that this is not broadly new, nor do I desire to claim herein an impervious handle for knives or cutlery; but,

Having thus particularly described and ascertained the nature of my said invention, what I claim is—

1. In cutlery, tools, or other instruments, the combination, with the tang or shank, of a wooden handle shorter than said tang or shank secured thereto to leave a space between the handle and the body of the article and an impermeable protective envelope, such as described, enveloping the handle as well as the tang, between said handle and the body of the article to form a bolster at that point, substantially as and for the purpose specified.

2. In tools and cutlery, the combination, with the tang, a wooden handle extending only partially over said tang, and a protective impermeable envelope inclosing the tang and handle and filling the space not occupied by said handle in rear of the blade or tool, of a ferrule applied to said tang and seated on the protective agent at the point of junction of the tang and blade, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEF LEITER.

Witnesses:
JAMES RILEY WEAVER,
HENRY DAVIDS.