(No Model.)

J. McDERMOTT.

TANNER'S TOOL.

No. 361,176. Patented Apr. 12, 1887.

Fig. 1.

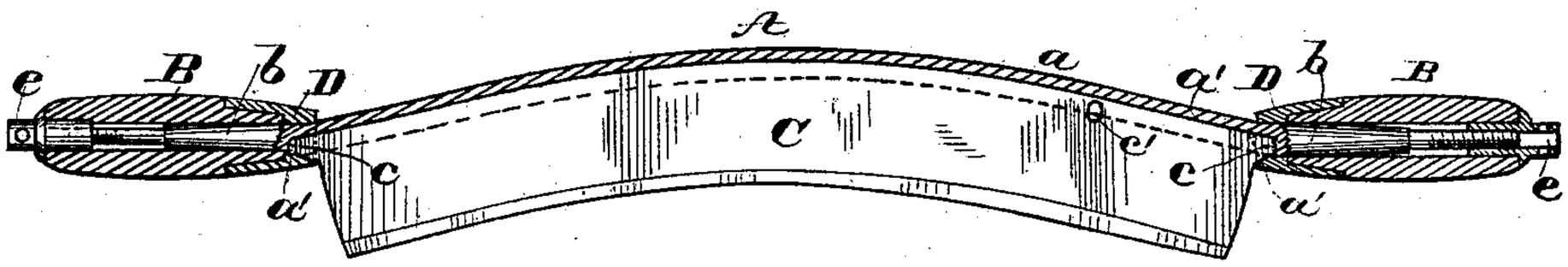


Fig. 2

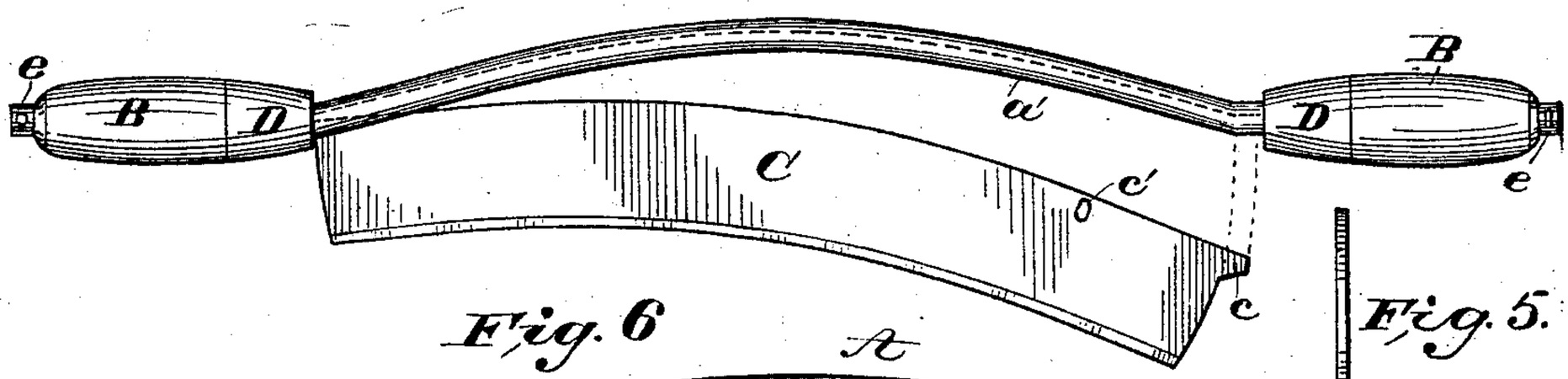


Fig. 6

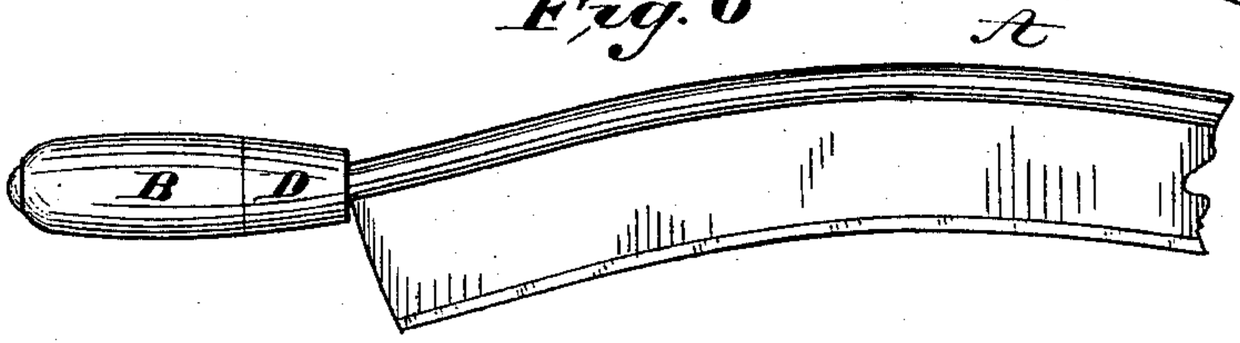


Fig. 5.

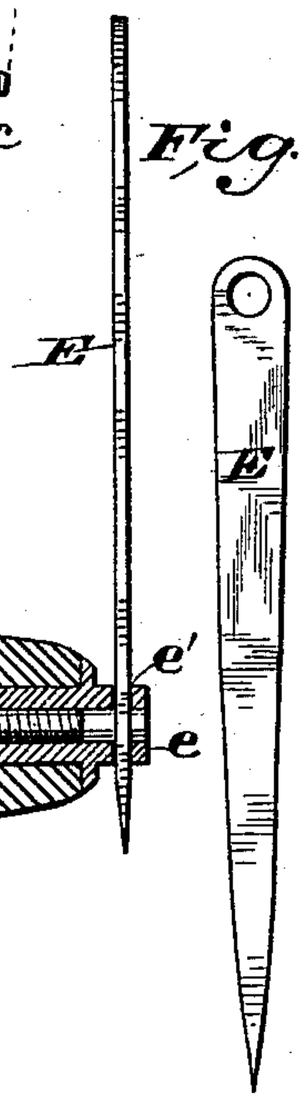


Fig. 4

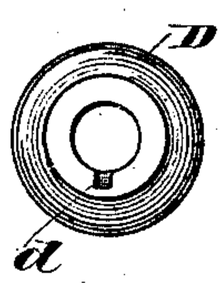


Fig. 3

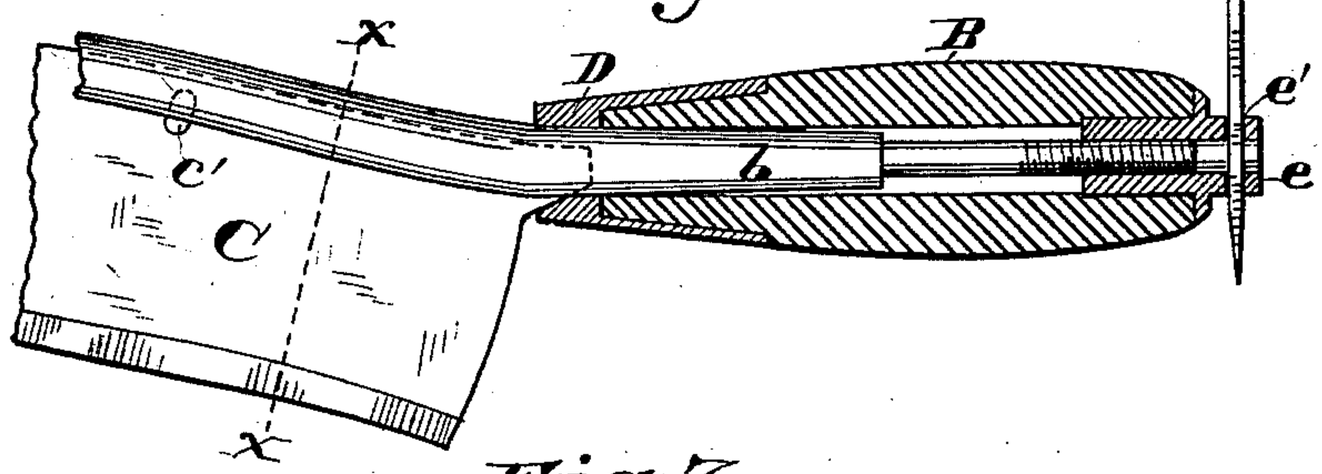
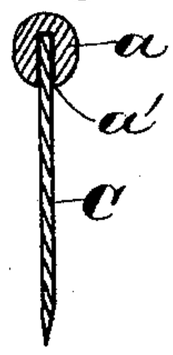


Fig. 7.



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UNITED STATES PATENT OFFICE.

JAMES McDERMOTT, OF MIDDLETOWN, NEW YORK.

TANNER'S TOOL.

SPECIFICATION forming part of Letters Patent No. 361,176, dated April 12, 1887.

Application filed February 3, 1887. Serial No. 226,439. (No model.)

To all whom it may concern:

Be it known that I, JAMES McDERMOTT, a citizen of the United States, residing at Middletown, in the county of Orange and State of New York, have invented certain new and useful Improvements in Tanners' Tools; 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.

My invention relates to tools employed in the manufacture of leather, commonly termed "workers."

In the accompanying drawings I have shown one form in which I have contemplated applying my invention, and have described the same in this specification, and particularly pointed out my invention in the claims.

Figure 1 is a section through the back of the tool and handles above the blade. Fig. 2 is a view of the tool with the blade partly removed. Fig. 3 is an enlarged view of one of the handles. Fig. 4 is an inner end view of one of the ferrules. Fig. 5 is a view of the key or device employed to turn the nut at the end of the handles and to assist in removing the blade. Fig. 6 is an elevation of a worker with rigid back and stationary handles, with a part broken away. Fig. 7 is a cross-section of the blade and back on line *x x*, Fig. 3.

In the drawings, A represents the body of the tool, and B B the handles. The body of the tool is composed of the back *a* and the blade C. The back *a* is of the usual width of such tools, and has its outer or rear portion preferably solid, and provided with a polygonal or rounded smooth surface. The inner or front face is provided with a groove, *a'*, in which the thin blade C is fitted. The ends of this back are provided with extensions *b*, preferably screw-threaded at their outer ends, which pass into and nearly through the handles, and are fitted at their extremities with sleeve-nuts *e*.

The blade C is provided at each end with projections or ears *c*, having inclined or tapering front faces, which at their outer extremities are of about the depth of the groove *a'*. The blade is also provided at some point near its back edge with an aperture or slot, *c'*, which extends toward the front edge of the blade just a sufficient distance for the insertion of the point of the key E, to assist in removing the blade. This aperture may be entirely within the blade, as shown in Fig. 2, or it may be an open slot and extend to the back of the blade.

The handles are hollow to receive the projections *b b* of the back, and are provided with ferrules D D. These ferrules are formed with an inclined groove, *d*, which receives the inclined face of the tapering ear *c* of the blade. When the tool is in operative condition, the inclined surface of the groove *d* engages the tapering face of the ear or projection *c* of the blade, forcing and holding the back of the blade firmly against the back of the groove *a'*. The handles are forced upon the projections *b*, and are held in place by means of the sleeve-nut *e*, which is provided with a slot, *e'*, crosswise of the nut, which receives the key E when used in tightening the handle upon the blade; or the nut may be provided with a polygonal head and the key provided with an opening corresponding thereto; or the nut may be turned by any ordinary wrench.

The construction of the two inclined surfaces of the ear and of the slot make it possible to secure perfect rigidity of the tool by the use of the sleeve or other nut.

The operation of my device is as follows: To remove the blade, insert the key E into the slot *e'* of the sleeve-nut *e*, and unscrew it sufficiently to allow the handle to be pushed from the blade far enough to disengage the ear *c*. Then inserting the point of the key in the aperture or slot *c'*, the blade may be easily pried out of the groove and away from the back, (see Fig. 2,) when it may be removed by hand. If both handles be pushed back, the blade will yield and be easily pried from the back, as above. To replace the blade when only one handle has been disengaged, one of the ears *c* is first inserted in the groove of the back and pressed into the stationary handle until the inclined face of the ear comes in contact with the inclined groove *d* of the ferrule. The back of the blade is then pressed into the groove *a'* in the back of the tool and the removable handle replaced and the sleeve-nut screwed up with the key. The inclined surface of the groove *d* will come into contact with the inclined face of the ear and force the other ear against the corresponding groove in the other ferrule, when the combined action of the inclined surfaces will, as more pressure is exerted by the

nut, force the back of the blade against the back of the groove *a'*, and hold it rigidly in position. If both handles have been pushed back, the action will be the same as the one just described, the only difference being that both handles may be tightened at the same time, or one may be screwed up and then the other.

In Fig. 6 I have shown a different form of worker, in which the blade is rigidly secured to the back and the handles riveted or otherwise rigidly secured thereto. This construction secures the same advantages as regards lightness and strength which the other forms possess, without the removable blades.

It will be readily seen that one back and its handles may be used for a number of different blades, so that as soon as the one in the back becomes dulled it can be removed and a sharp blade inserted with little loss of time; so, also, blades for different purposes—for instance, the same back may be used for an "unhairing-blade" and for a "flesher," as well as the blades termed the "hide-breaker," the "buckskin-breaker," the "buckskin-worker," and the "kid-glove worker." In fact, the blades of all the tools denominated "workers" may be adapted to the same back and used interchangeably.

There are advantages in constructing the tools denominated "workers" with a back and a thin blade when the two are rigidly and immovably united. In such cases the blade is more easily kept sharp than the ordinary thick blade and still preserves the required strength and rigidity, while the tool as a whole is lighter than the old form of worker.

In making the form in which the blades are detachable I do not limit myself to making both handles removable, as good results can be secured by having a single handle detachable.

Instead of the nuts, wedging cotters passing through the handle and the extensions of the back might be used, and in other ways I do not limit myself to the exact construction shown, as many changes may be made in the same without departing from the spirit of my invention.

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

1. In a leather-worker substantially such as described, the combination of a thin blade and a rigid back rigidly secured to the rear edge of the blade and projecting from each side of the same, the said back having an uninterrupted rear surface.

2. In a leather-worker substantially such as described, the combination of a rigid back having a solid rear portion with an uninterrupted rear surface, and provided with a groove in the front of the same, of a thin blade having its rear edge fitting said groove and rigidly but detachably connected to said back.

3. The combination, with a solid rigid back provided at the front with a groove and handle projections at each end, of a thin blade fitting said groove and provided with ears at each end, and handles engaging said ears, one or more of said handles being removable, and having a nut at its outer end to secure the same, substantially as described.

4. The combination, with the solid rigid back provided with a groove in the front of the same, of a thin blade fitting said groove, and provided with inclined ears at each end, handles engaging said ears, and nuts at the outer ends of said handles for securing the same, substantially as described.

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

JAMES McDERMOTT.

Witnesses:
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D. E. CHESEBROUGH.