C. L. BUTLER.

Pocket-Knife.

No. 220,699. Patented Oct. 21, 1879.

Fig. 1.

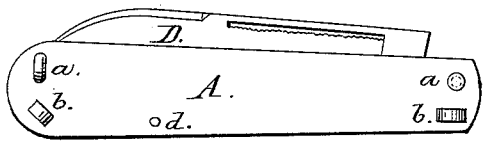


Fig. 2.

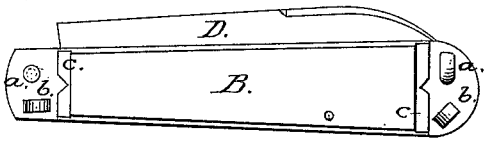
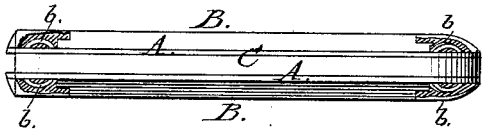


Fig. 3.



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UNITED STATES PATENT OFFICE.

CALVIN L. BUTLER, OF GREENFIELD, MASSACHUSETTS.

IMPROVEMENT IN POCKET-KNIVES.

Specification forming part of Letters Patent No. **220,699**, dated October 21, 1879; application filed June 30, 1879.

To all whom it may concern:

Be it known that I, CALVIN L. BUTLER, of Greenfield, in the county of Franklin and Commonwealth of Massachusetts, have invented a new and useful Improvement in the Manufacture of Pocket-Cutlery, and that the following, with the accompanying drawings, is a true and full specification of the same.

This invention relates to the making of pocket-knives, but especially to the formation of the bolster, and to the mode of uniting it to the outer scale and to the inner scale, called the "lining," and also to uniting the scale and the lining together; and, finally, to securing all the parts of the knife together.

Commonly this has been done by rivets, which always show, and in the fastening of which the scale, when of pearl, shell, ivory, or other brittle material, is often broken, and the scale split at and from the riveted point.

Other devices have also been used, among which is that of running melted metal upon the scale and bolster, but in an imperfect and often expensive manner.

The object of my invention is to provide a pocket-knife with lining-plates struck up to form loops, which, together with the rivets which unite said plates, serve to secure the metal forming the bolster and tips, and, indirectly, the outer scales, as will be hereinafter more fully set forth.

In my drawings, Figure 1 is a side elevation of my knife with the outer scale removed. Fig. 2 is a side elevation of the same with the outer scale in place. Fig. 3 is an elevation of the back with the ends broken away to show the manner of fastening said ends and outer scales.

Similar reference-letters denote like parts in all of the figures.

B is the scale, which may be of wood, pearl, ivory, or any other suitable material. C is the spring. D is the blade.

The lining A is made from thin iron or other metal. At *b* it is punched through from the under side, to throw up a small portion of metal, forming a little arc or loop, attached at each end to, but detached in its middle from, the metal forming the lining and out of which it is punched, so that the molten metal forming the bolster and the end piece of the knife can flow into and under this loop, thus securing the metal of the bolster with the lining.

a a are two rivets, one holding the linings and the spring together. The other, passing through the linings and the shank of the blade, secures it firmly in position. These rivets are not headed down close, as is usual, but are upset or bent closely over at the ends, so that while they hold the parts securely together, as ordinary rivets, they also form a sufficient projection to hold and retain the metal which flows around them in the forming of the bolster and butt-end of the knife.

B is the outer covering, or "scale," as it is called, made of wood, ivory, pearl, shell, or any other suitable material, and is shorter than the lining, extending only to the loop at each end punched up in the lining. Each end of this scale is rabbeted down about half-way, making a small offset of about an eighth of an inch deep and wide, upon which the metal forming the ends flows and secures it to the lining. In the middle of this offset is a small V-shaped notch, which prevents the scale from moving laterally while the metal forming the ends is cooling and shrinking. *d* is the rivet passing through both scales, linings, and the back-spring, holding all the parts firmly together.

The knife is assembled by putting the linings on the spring and blade, with a rivet through each end, one holding the blade. These rivets are then upset, the scale then placed on the lining, and a rivet passed through all. The knife then being placed in a mold, the metal, melted—usually lead, tin, or copper and antimony—is poured on at both ends, and, entering under the loops formed by the punch, and also closing on and around the heads of the rivets, and in and upon the offsets on the ends of the scales, holds each and all the parts of the knife securely.

It will be seen that by this mode of manufacture no rivets are exposed, and the molten metal clings so firmly to the head of the rivets and the loop next to it as to give the greatest possible strength and rigidity to the bolster—a combination between those parts which it is believed does not exist in any other construction of knives.

The metal thus run on the ends in the manner described makes a very stiff and strong knife at a very low cost, which is then finished in the usual manner.

I claim—

1. As an improvement in pocket-cutlery, the lining-plates provided at their ends with loops struck up from the inside of the knife, and adapted to form holds to the bolster and tips, as and for the purpose set forth.

2. In a pocket-knife, the lining-plates A, having loops *b* formed therefrom, and provided with rivets *a a*, which unite said lining, in combination with the rabbeted and notched scales B and metal tips, which form the bolster and ends, as and for the purpose set forth.

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Witnesses:
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