A. J. PALMER.
Washer-Cutter.

No. 210,553. Patented Dec. 3, 1878.

Fig. 2.

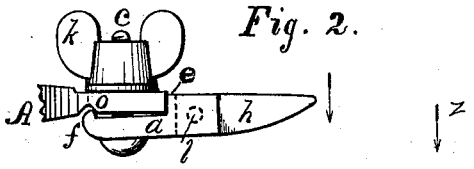
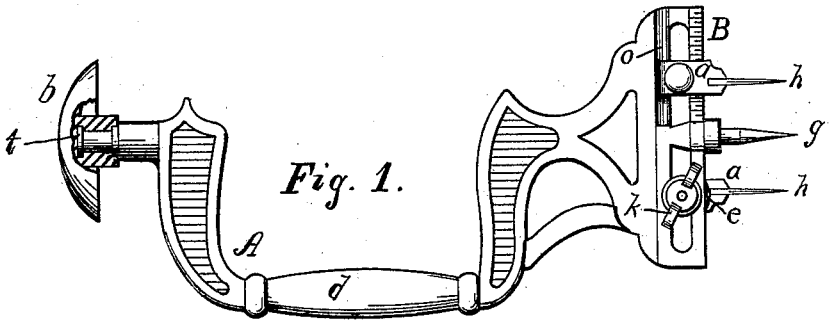


Fig. 1.



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UNITED STATES PATENT OFFICE.

ALFRED J. PALMER, OF CARLTON, NEW YORK.

IMPROVEMENT IN WASHER-CUTTERS.

Specification forming part of Letters Patent No. **210,553**, dated December 3, 1878; application filed November 11, 1878.

To all whom it may concern:

Be it known that I, ALFRED J. PALMER, of Carlton, in the county of Orleans and State of New York, have invented a new and useful Improvement in Washer-Cutters, which improvement is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a view of the complete implement, and Fig. 2 a view of a cutter, seen as indicated by the arrow *z* in Fig. 1.

The object of my invention is to produce a tool complete within itself and at a low price, for cutting washers out of leather, &c.; and it consists of a fixed central point and adjustable cutters attached to a body formed similarly to that of an ordinary bit-stock, by means of which the cutters are revolved and caused to cut out the washers aforesaid.

In the drawing, A is the body of the washer-cutter, designed to be made of cast or malleable iron, cast solid in one piece, and having the usual swivel breast-knob *b* and handle *d*, and provided with a slotted portion, B, at right angle to the axis of the stock or body A.

A steel center point, *g*, is cast in the metal of the stock and in the axis of the same, and the oppositely-placed cutters *h* are adjustable along the slots and held fast to the stock at any position of adjustment by thumb-screws *k*.

The steel cutting-blades *h* are cast in the metal heads *a* by the metal being allowed to run around the shanks of the same and fill the hole *l*, and the heads of the clamping-screws *c* are likewise cast in the heads *a*.

The slotted portion B of the stock is provided with grooves *o* next to and parallel with the slots, said grooves being on opposite sides of the stock, and each extending from the axial line of the same outward in opposite directions.

The metal heads *a* are provided with hooked lips *f*, which, when the heads are clamped to the stock, rest partially within the grooves *o*, as shown in Fig. 2.

The shoulders *e* of the heads *a*, that rest against the edge of the part B, are made concave, as shown in Fig. 1, so as to come to a bearing only at the outer edges, or at points at the greatest distance from each other, and the lips *f* rest upon the inclined sides of the grooves, as shown in Fig. 2, the tendency of which is, when the thumb-screws are tightened, to draw the shoulders *e* hard back against the stock, giving to the cutters a rigid stability.

The cutting-blades are inclined edgewise backward, as shown in Fig. 2, similar to the position in which a blade would be held in the hand when drawn across a substance for the purpose of cutting it. This position of the blades adds to the ease with which the implement is operated.

The stock at B may be graduated into fractions of an inch, that the cutters may be conveniently set to cut washers of any desired diameter within the compass of the tool.

The breast-knob *b* is shown centrally sectioned, showing the form of the inclosed portion of the stock, which is provided with a collar, *t*, to prevent the knob from becoming removed. This part of the stock is first smeared over with a non-heat-conducting substance or separator for the iron, and the breast-knob then cast upon the same, and when cold turns freely upon the stock as with a journal fit.

Washer-cutters as heretofore made are generally mere fixtures or attachments to bit-stocks, and in order to use them it is necessary to incur the expense attending the purchasing of a bit-stock.

My washer-cutter, as here described, is complete within itself and together, there being no necessity of hunting up and putting together parts, as is usually the case in order to compose a complete tool.

I claim as my invention—

1. A washer-cutter having the body A cast in one piece in the form of a bit-stock, provided with a centering-point, *g*, and unremovable breast-knob *b*, and adapted to receive detachable independent cutters *h*, substantially as described.

2. A stock, A, cast in one piece, provided with a rotary unremovable breast-knob, *b*,

and slotted part B, standing at right angles with the axis of the stock and forming part thereof, substantially as described and shown.

3. A washer-cutter stock, A, having a slotted part, B, as described, provided with grooves *o*, made parallel with the slots, one on each side of the part B, and extending from the axial line of the stock outward in opposite directions.

4. The cutter-heads *a*, for holding the blades *h*, provided with concave shoulders *e* and hooked lips *f*, for the purpose set forth.

A. J. PALMER.

Witnesses:
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