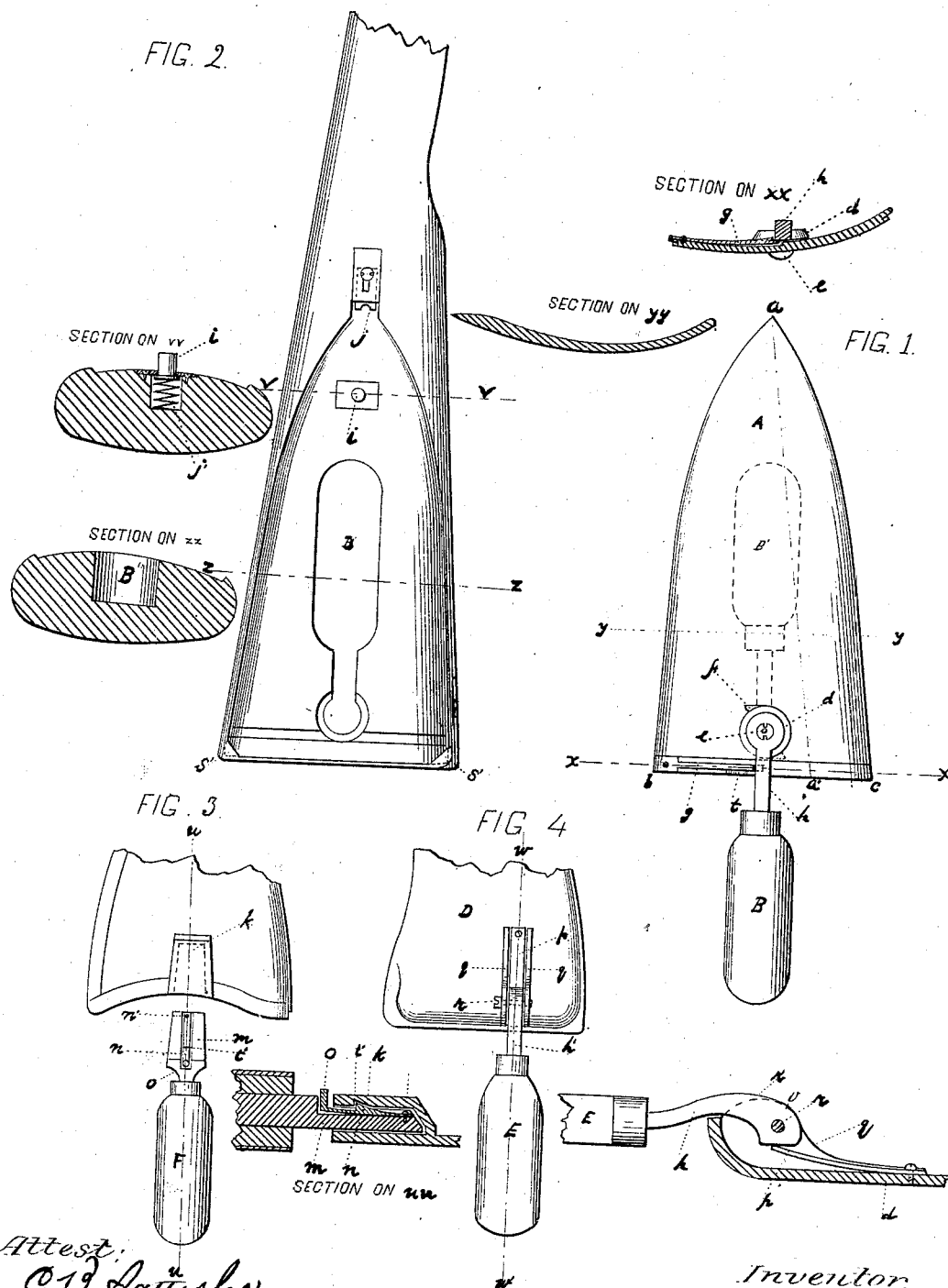


E. L. ZALINSKI.  
Cutting and Intrenching Tool.

No. 220,012.

Patented Sept. 23, 1879.



# UNITED STATES PATENT OFFICE.

EDMUND L. ZALINSKI, OF UNITED STATES ARMY.

## IMPROVEMENT IN CUTTING AND INTRENCHING TOOLS.

Specification forming part of Letters Patent No. **220,012**, dated September 23, 1879; application filed August 1, 1879.

### *To all whom it may concern:*

Be it known that I, EDMUND L. ZALINSKI, of the United States Army, have invented a certain new and useful Cutting and Intrenching Tool, which I designate a "Machete Intrenching-Trowel;" and the invention consists, furthermore, in an improved manner of carrying the said cutting and intrenching tool.

The object of my invention is to provide the soldier with a cutting and intrenching tool, which shall be carried, when not in use, on the butt-stock of a rifle or carbine, but which may be readily detached when required for use. Thus no scabbard for the tool need be carried by the soldier. It has a handle of its own, and can only be used for cutting or digging when detached from the rifle or carbine. The latter cannot, therefore, be injured by the use of the tool on the butt or muzzle while digging or cutting.

The following is a description of the same, reference being made to the accompanying drawings.

Figure 1 represents the trowel and two sections. In general shape the blade A should conform to the outer surface of the butt-stock of the rifle or carbine, being, preferably, as flat as possible. The edge *a b* may be curved convexly, as in the drawings, straight, or curved concavely. This edge should be sharp, so that the tool may be used for cutting wood, &c. In cases where the blade is to be flat, both edges may be sharpened. The blade should be of steel, and of such thickness as to insure sufficient strength for the uses to which it is to be applied. A section is shown on the line *y y*, which indicates a favorable curvature and disposition of metal in the blade.

B, Fig. 1, represents one form of the handle which I consider best to use. It is pivoted at *e*, *h* being the metallic shank of the handle; *d*, the end of the shank through which the pivot *e* passes. This pivot passes through *h* and the blade A, and is shown thus in section on *x x*. *f* is a projection on *d*, which serves as a stop when the handle is revolved around its pivot preparatory to putting the trowel on the stock in its carrying position. *g* is a flat spring with a shoulder, which, when the handle is revolved for use, presses against the shank *h*, and holds

it in position, preventing it from being closed. To close the handle the spring is pressed near the handle into the depression *t* until its shoulder is below the lower surface of the shank, when the latter may be passed over the spring.

The position of the handle when revolved to its carrying or packed place is indicated by the dotted line on A, marked B'.

Fig. 3 represents another form of handle which may be used. *k* is a flat socket (shown in section on the line *u u*) with the handle inserted. F is the handle, having a flat surface and shouldered shank, *m*, which corresponds in shape to the socket *k*. In a suitable channel on *m* a flat spring, *n*, toothed on its upper surface at *t'*, and having a push, *o*, is fastened at one end. The lower surface of *k* has a suitable groove corresponding to the tooth on *n*. *m* is pushed into *k* until it is fully in, when the spring *n* rises, forcing the tooth *t'* into the corresponding groove in *k*, thus holding the handle to the blade.

To disengage the handle press upon *o* until *t'* clears the groove, when the handle may be withdrawn.

Fig. 4 represents another form of handle. E is a handle, pivoted at *r*, the pivot-screw *r* being supported by two side pieces, *q q*. The extremity of the shank *h* is flat and pressed against by the flat spring *p*, which, when the handle is open for use, tends to retain it in that position. When the handle is closed the spring *p* presses against the shank *h* at *r*, thus slightly pushing the handle outward, and aiding in the disengagement of the trowel from the butt-stock when required for use. A section of this form is shown through *w w*.

Fig. 2 represents the butt-stock with a portion of its surface countersunk to correspond to the shape and thickness of the blade and the projection of the handle B or E. Sections on *v v* and *z z* are shown. B'' in the section on *z z* is the countersink for the handle outlined by B. S' S' are two slight metallic projections, behind which the corners *b* and *c* of the trowel are placed when it is to be carried on the stock. The point *a* is then held by the slide *j*. When my tool is applied to the stock of a rifle or carbine the handle is entirely cov-

ered by the blade, so as to protect the handle, and also give a finished appearance to the piece.

Other methods of attaching the trowel to the stock may be used.

The forms of handle in Figs. 1 or 4 are best adapted for use in the ordinary rifle or carbine; but in case a magazine-arm should be used in which the magazine passes through the butt, as in the Spencer or Hotchkiss, the countersink for the handle cannot then be made, unless the handle is placed near one side rather than at the middle.

In case it is considered best to retain the handle in the middle of the base of the trowel, then either the handle of Fig. 3 may be used, it being detachable and carried in the cartridge-box or other convenient place, or else the trowel-blade may be made more concave and the handle of No. 4 used.

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

1. A combined knife and intrenching-tool, consisting, essentially, of a trowel-shaped blade sharpened at one or both edges and a handle pivoted to the blade, substantially as

described, so as to turn against or near the blade when not in use.

2. The intrenching-tool described, having a trowel-shaped blade sharpened at one or both edges, in combination with a handle pivoted to the blade by a pivot extending outward from one of the flat sides of the blade, so as to swing round under the blade when not in use.

3. The combination of the blade constructed substantially as described, the handle pivoted thereto, and the spring for retaining the handle in position, all substantially as described and set forth.

4. The combination of an intrenching-tool having a handle so attached as to be turned under the blade with a gun-stock mortised or recessed to receive the handle at a place which comes under the blade when it is applied to the stock, as described, and suitable retaining devices, all substantially as shown and set forth.

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Witnesses:

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