E. T. CONLEY.

INDIVIDUAL INTRENCHING OR PROSPECTOR'S TOOL.

APPLICATION FILED APR. 2, 1908.

919,132. **Patented Apr. 20, 1909.**

2 SHEETS—SHEET 1.

Fig. 1.

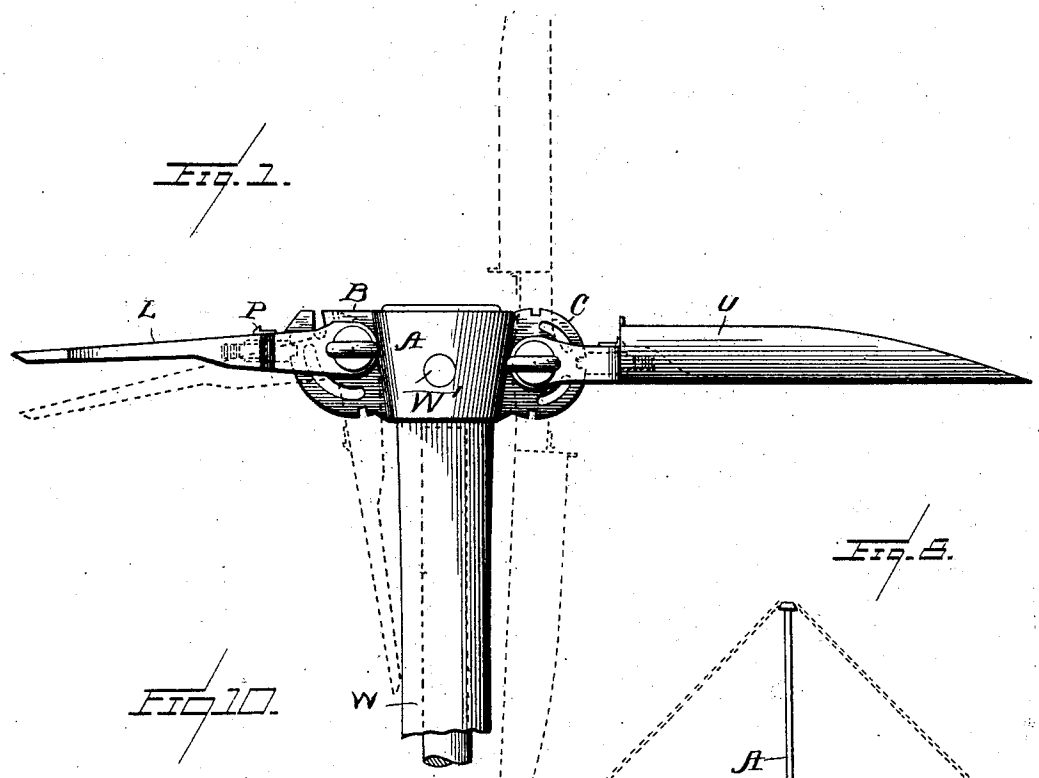


Fig. 3.

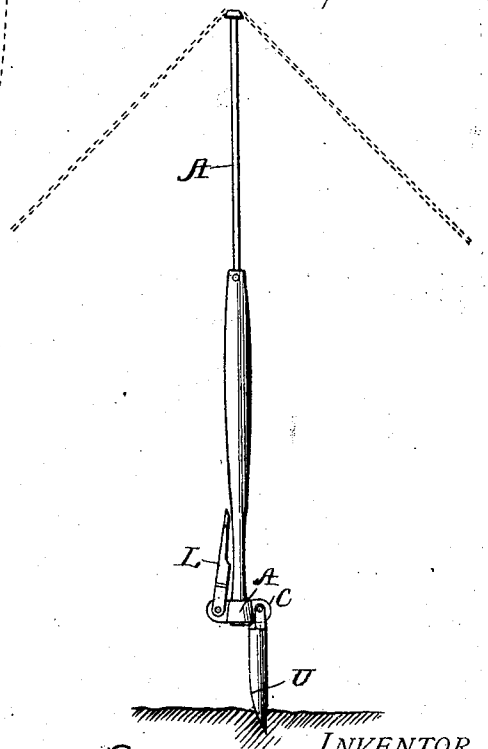
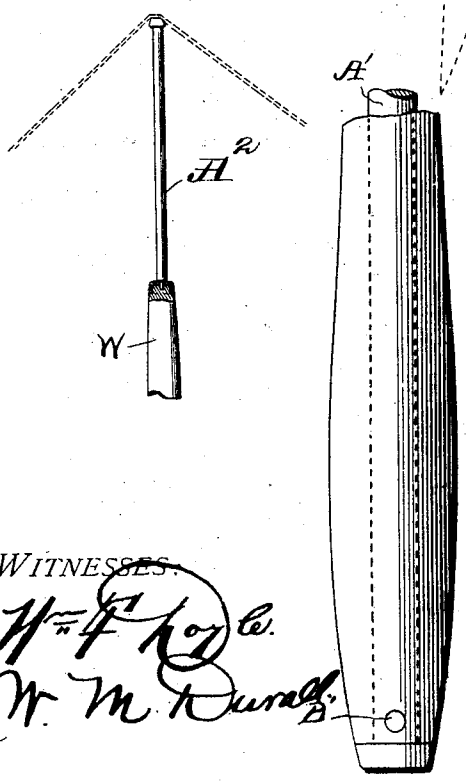


Fig. 10.



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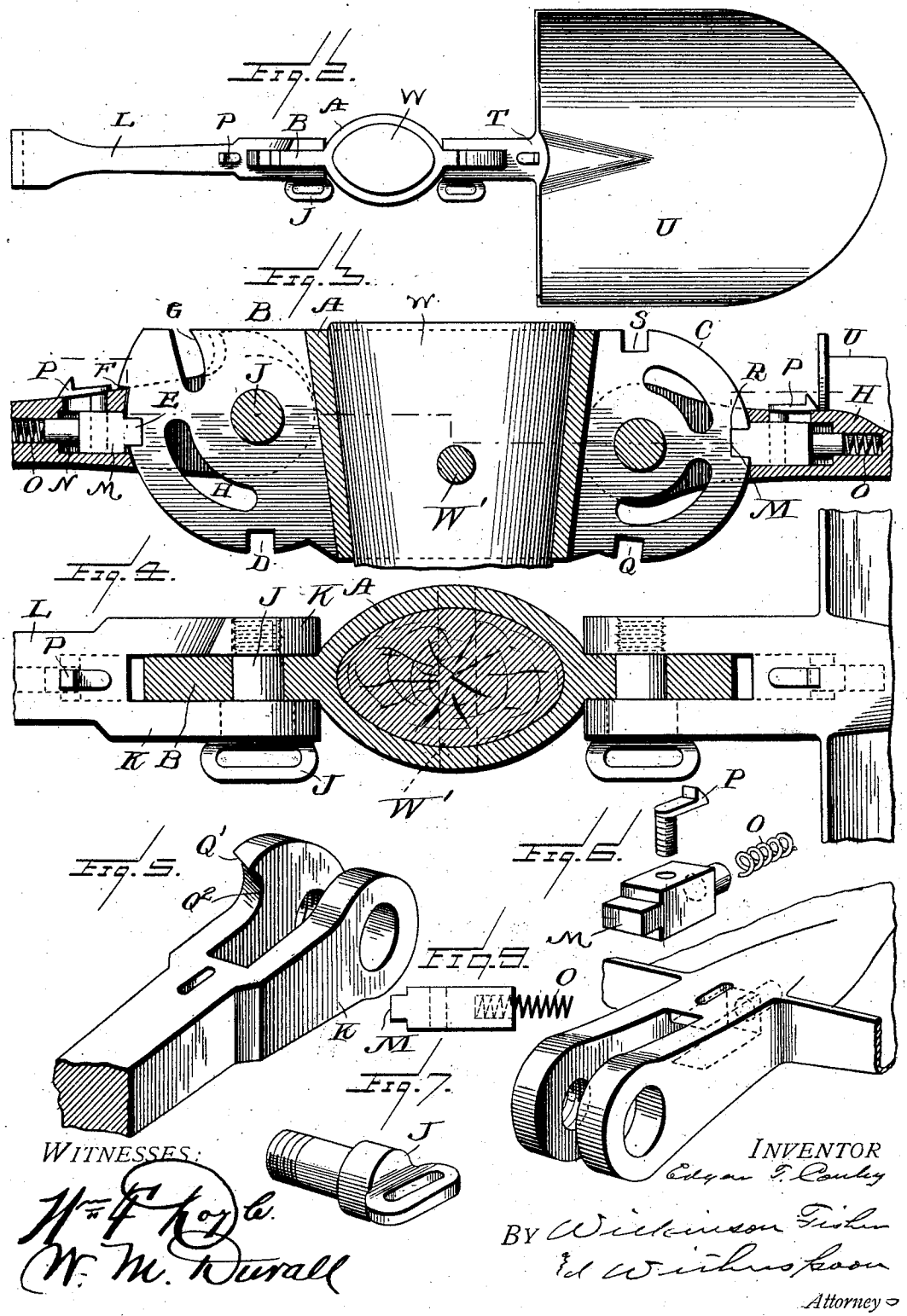
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

EDGAR THOMAS CONLEY, OF THE UNITED STATES ARMY.

INDIVIDUAL INTRENCHING OR PROSPECTOR'S TOOL.

No. 919,132. Specification of Letters Patent. Patented April 20, 1909.

Application filed April 2, 1908. Serial No. 424,809.

To all whom it may concern:

Be it known that I, EDGAR T. CONLEY, a captain Fifteenth Infantry, U. S. Army, and a citizen of the United States, stationed at Mindanao, Philippine Islands, have invented certain new and useful Improvements in Individual Intrenching or Prospectors' 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 individual intrenching or prospectors' tools, and the object of my invention is to produce a combined tool of this nature, which shall provide a pick or mattock, a shovel or spade, a wire cutter, and a tent pole extension, when desired. All of these parts are made sufficiently light to enable the tool to be readily carried by the soldier, and to be folded up into a compact shape when not in use.

My invention further consists in the combination of parts more fully hereinafter described, and particularly pointed out in the claims.

Referring to the accompanying drawings forming a part of this specification; Figure 1 represents my intrenching tool with the pick or mattock, and the shovel or spade, extended for use, with the tent pole extension partly broken away, and the various parts shown by the dotted lines in their folded positions. Fig. 2 is a plan view of the parts in their operative positions. Fig. 3 is a sectional view of the parts in like positions, and Fig. 4 is a sectional view taken at right angles to the plane on which Fig. 3 is taken. Fig. 5 is a detail view showing the wire cutter attached to the jaws of the pick or mattock. Fig. 6 is a detail of the locking dog employed to secure the pick or mattock or the spade in their various positions, and Fig. 7 is a perspective view of the hinging pin employed for such tools. Fig. 8 shows my intrenching tool, but with its handle extended, and employed as a tent pole. Fig. 9 illustrates a modified form of the locking dog M, which may be used in place of the form illustrated in Fig. 3, and Fig. 10, illustrates a slightly modified form of a tent pole.

Like letters refer to like parts in all the views.

A represents an elliptical eye of metal provided with two flanges B and C. The flange B is substantially quadrantal in shape, and the flange C a little bit more than a semicircle in extent. The flange B is provided with two rectangular notches D and E, and a shoulder F. It is also provided with a hole through which the thumb screw J passes, and from the center of which the quadrant is struck. The curved notch G in said flange forms a portion of the wire cutter, as will be more fully hereinafter disclosed, and the curved interior groove H is merely made for the purpose of lightening the metal, but, of course, it may be used in connection with the pick or mattock for various other purposes, which would readily occur to the soldier. The thumb screw J passes through the said flange B, as above stated, and also through the two jaws K occupying each side of said flange, and integrally connected with the pick or mattock L. The construction described is such that the pick or mattock may readily swing about the thumb screw J as a center, and the same is held in its folded or operative position by the locking lug M, as shown. This locking lug M is provided with an extension N fitting in a hole in the main stem of the pick or mattock and controlled by a spring O, as best shown in Figs. 3 and 6. The locking lug M is further controlled by the thumb catch P provided with a screw threaded shank fitting in a hole in the said lug M. The semi-circular flange G is likewise provided with two notches Q and R serving the same function as the notches D and E in the flange B, and is also provided with a third notch S for a purpose to be described later. Passing through the center of this flange C is a thumb screw in all respects the same as the thumb screw J, and occupying each side of said flange are two jaws through which said latter thumb screw also passes, and which are attached to the extension piece T. To this extension piece T may be attached by rivets, or by any suitable means, as by welding, the shovel or spade U. This extension piece T is also provided at the point where its jaws are attached, with a locking lug, a spring, and a thumb catch in all respects the same as the lug M and catch P, above described. This shovel or spade U is likewise adapted to swing about its thumb screw as a center, and its locking lug is likewise adapted to catch in the notches R and Q, to hold the said shovel in either its folded or picking

positions. The notch S on the flange G is for the purpose of receiving the locking lug of the shovel, and holding it in its digging position, in prolongation of the handle of the tool.

Fitting into the elliptical eye A, is a suitable handle W, through which and the eye A, preferably passes the rivet W'. This handle W may or may not be provided with a telescoping extension piece A', as best shown in Figs. 1 and 8. When it is provided with said extension piece A', the same is held in its telescoped position inside said handle A by any suitable fastening B', as, for example, a screw. When the handle W is not provided with the extension piece A', I prefer to provide the soldier with a section A^2 of a tent pole, and to secure the same to the handle W, when in use by any suitable means, for example, a dowel attached to said handle, as shown in Fig. 10. In such case, the complete tent pole consists of the shovel extended in prolongation of the helve, as shown in Fig. 8, and the section A^2 carried by the soldier.

The flange C is provided with two semicircular recesses, as shown, which are for the purpose of decreasing the amount of metal employed and which may, like the recess H, be employed for any purpose found useful by the soldier.

The operation of my device is as follows. When the individual intrenching tool is to be carried on the march, its parts L and U are folded down against the sides of the handle W, as shown in dotted lines in Fig. 1, and the extension piece A' is secured in its telescoped position. In this position the locking lugs on the mattock and spade engage their respective notches D and Q upon their respective flanges B and C, and firmly hold the parts in their folded position. When the mattock is to be used, however, the thumb catch P is employed to disengage the locking lug M from its notch D, and the mattock is swung outwardly until it catches against the shoulder F, best shown in Fig. 3, when the said locking lug M engages the notch E and firmly locks the mattock in place. One of the jaws K is provided with a wire cutter Q', having a cutting edge Q^2. When the wire cutter Q' is to be used, the wire is inserted within the notch G, the thumb catch P is retracted, and the pick or mattock swung upon the thumb screw J until the sharp edge Q^2 of the wire cutter jams the wire against the outer edge of the said notch G, and cuts the same. This edge Q^2 of the wire cutter is readily formed by inclining the metal on the outer edge of one of the jaws K, as best shown in Fig. 5. When it is desired to use the spade or shovel somewhat like a pick, the same is likewise swung upon its thumb screw until its locking lug engages the notch R in the flange C. When it is desired to use said shovel as a spade or shovel, the same is swung farther on its center until its locking lug engages the notch S, when the said shovel extends in prolongation of the handle W and may be used like any other spade or shovel. Also, by taking the shovel off, inverting the same and again securing it in place, it may be used as a hoe, or for pulling or dragging sand or dirt short distances. When it is desired to use my intrenching tool as a tent pole, I extend the shovel in prolongation of the handle, as just described, rest the same firmly on the ground, as best shown in Fig. 8 or I may merely rest the shovel on the ground, as desired; having unscrewed the fastening B', and extended the extension A', I now secure said extension in its extended position, by setting up on the fastening B', and the whole will appear as shown in Fig. 8, as above stated.

It will thus be seen that I have produced an exceedingly simple and convenient intrenching tool, which may be cheaply manufactured and is capable of a large variety of uses in warfare.

I may construct the parts out of any suitable material, and may give them such proportions and weights, as may be found most desirable in practice. In fact, for some purposes, I may altogether omit the wire cutter and tent pole features, and make the other tools heavier and larger.

I do not wish to be understood as limiting myself to the precise details of construction and operation above set forth, for it is apparent that the same may be varied by those skilled in the art without departing from the spirit of my invention. For it is evident that the metal of the parts may be differently distributed to attain the maximum strength with the minimum weight, and the fastening of the parts may be considerably modified by those skilled in the art.

Having now described my invention, what I claim is:—

1. In an intrenching tool, the combination of an eye A, a flange B rigid therewith and provided with notches, a pick-like instrument secured to said flange and provided with a locking lug adapted to engage said notches one at a time, a handle secured in said eye, a second flange C rigid with said eye, and a spade-like instrument secured to said flange C, substantially as described.

2. In an intrenching tool, the combination of an eye, a handle secured therein, two flanges B and C integral therewith, said flange B, provided with two notches and a shoulder, and said flange C provided with three notches, a suitable tool pivoted to each of said flanges B and C, and a locking lug on each of said tools adapted to engage successively the notches in their corresponding flanges, substantially as described.

3. In an intrenching tool, the combina-

tion of an eye, a flange B integral therewith provided with the notches D, E, and G, and the shoulder F, and a pick-like instrument pivoted to said flange having the jaws K, the wire cutting edge Q^2 on one of said jaws adapted to coöperate with said notch G to form a wire cutter, and also having the locking lug M, substantially as described.

4. In an intrenching tool, the combination of an eye, a handle therein, a flange B integral therewith and provided with the notches D, E and G, and the shoulder F, and a pick-like instrument pivoted to said flange having the jaws K, the wire cutting edge Q^2 on one of the same, and the locking lug M provided with the extension N and the thumb catch P, substantially as described.

5. In an intrenching tool, the combination of the eye A, a spade supported therefrom, a flange B rigid therewith, a pick-like tool pivoted to said flange, a locking lug carried by said tool engaging said flange, a handle in said eye, and an extension adapted to telescope in said handle, substantially as described.

6. In an intrenching tool, the combination of the eye A, a flange B rigid therewith, a pick-like tool pivoted to said flange, a locking lug carried by said tool engaging said flange, a flange C also integral with said eye, a spade-like tool pivoted to said flange C, a locking lug carried by said spade-like tool engaging said flange C, a handle in said eye, and an extension adapted to telescope in said handle, substantially as described.

7. In an intrenching tool, the combination of an eye A, a pair of flanges B and C rigid therewith and each provided with notches, a pair of tools pivoted to said flanges, a spring pressed locking lug carried by each of said tools and adapted to engage said notches, and said flange B also provided with a curved notch G, and the tool pivoted thereto provided with a jaw having a cutting edge Q^2 adapted to coöperate with said notch G to form a wire cutter, a handle in said eye A, and a telescoping extension A′ in said handle, substantially as described.

8. In an individual intrenching tool, the combination of an elliptical eye A, a flange B integral therewith and having the notches D, E and G, and the shoulder F, a tool L provided with the jaws K, pivoted to said flange, one of said jaws provided with the inclined cutting edge Q^2 adapted to form with said notch G, a wire cutter, a locking lug M having an extension N, a thumb catch P, and a spring O carried by said tool, a flange C, also, integral with said eye A, and having the notches Q, R and S, a tool pivoted to said flange C and provided with a locking lug having an extension and a thumb catch, a handle W in said eye, an extension A′ adapted to telescope in said handle, and fastening means adapted to hold said extension in its open and closed positions, substantially as described.

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

EDGAR THOMAS CONLEY.

Witnesses:
FREDERICK WOLLMAN,
CHARLES R. DODD.