United States Patent [19]

Shandel

[11] **3,824,641**

[45] **July 23, 1974**

[54] **CAMPING TOOL**

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[21] Appl. No.: **276,587**

[52] **U.S. Cl.** ..... **7/14.55,** 7/1 L, 7/15, 403/373

[51] **Int. Cl.** **B25f 1/02,** B25g 3/12

[58] **Field of Search** ..... 7/1 F, 1 L, 14.55, 15; 306/23, 25, 26, 40; 403/373, 376

[56] **References Cited**

UNITED STATES PATENTS

3,245,094	4/1966	Shandel	7/1 L
3,561,023	2/1971	Shandel	7/14.55

FOREIGN PATENTS OR APPLICATIONS

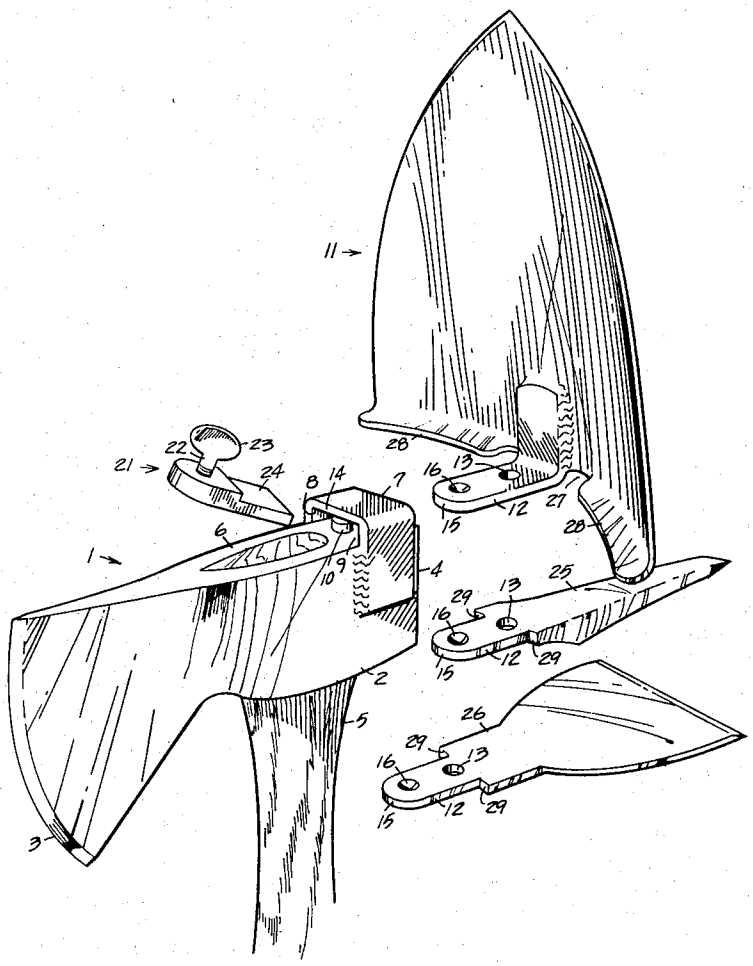
4,956	10/1893	Sweden	306/23

Primary Examiner—Othell M. Simpson
Assistant Examiner—Gary L. Smith
Attorney, Agent, or Firm—George B. White

[57] **ABSTRACT**

An ax with a flat top on its poll; a lug projecting from the top of the poll spaced from but near the heel of the poll; the lug has a substantially flat cavity extending longitudinally of the ax and has a prong extended from the poll inside the cavity. Several attachments for various camping implements have a flat securing flange slideably fitting into the lug cavity and each flange has a hole engageable with the prong in the cavity and an indentation on the portion of the flange projecting beyond said cavity. A securing wedge is insertable into said cavity oppositely to said flange so as to tightly fill the space between the flange and the top of the cavity in the lug and a set screw on said wedge is engageable in said indentation in the flange in the securing position to hold the camping implement securely in position.

7 Claims, 4 Drawing Figures



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FIG. 1.

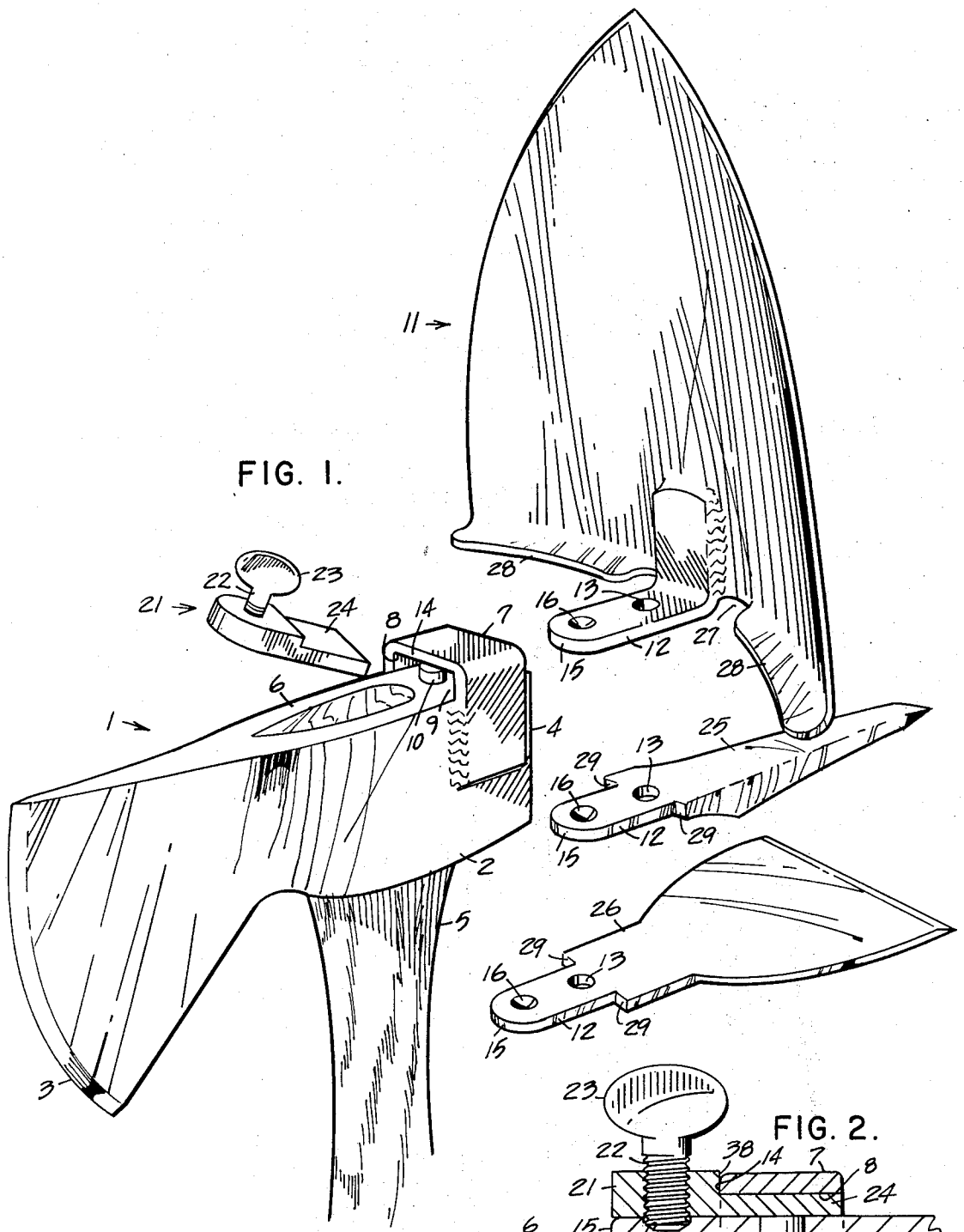
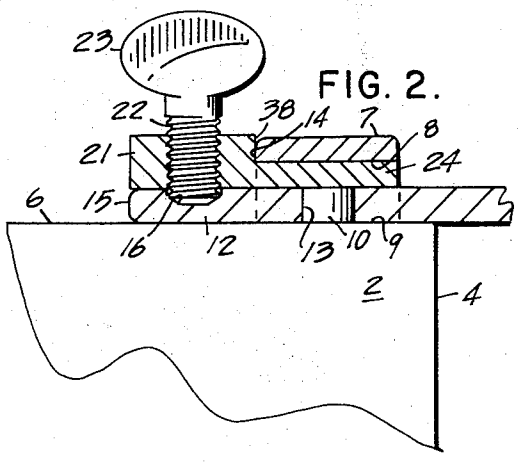


FIG. 2.



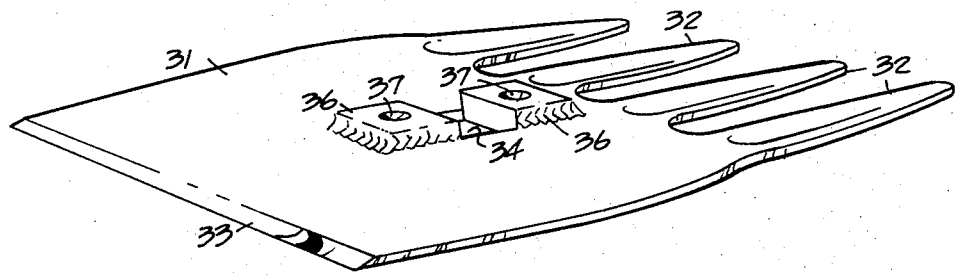
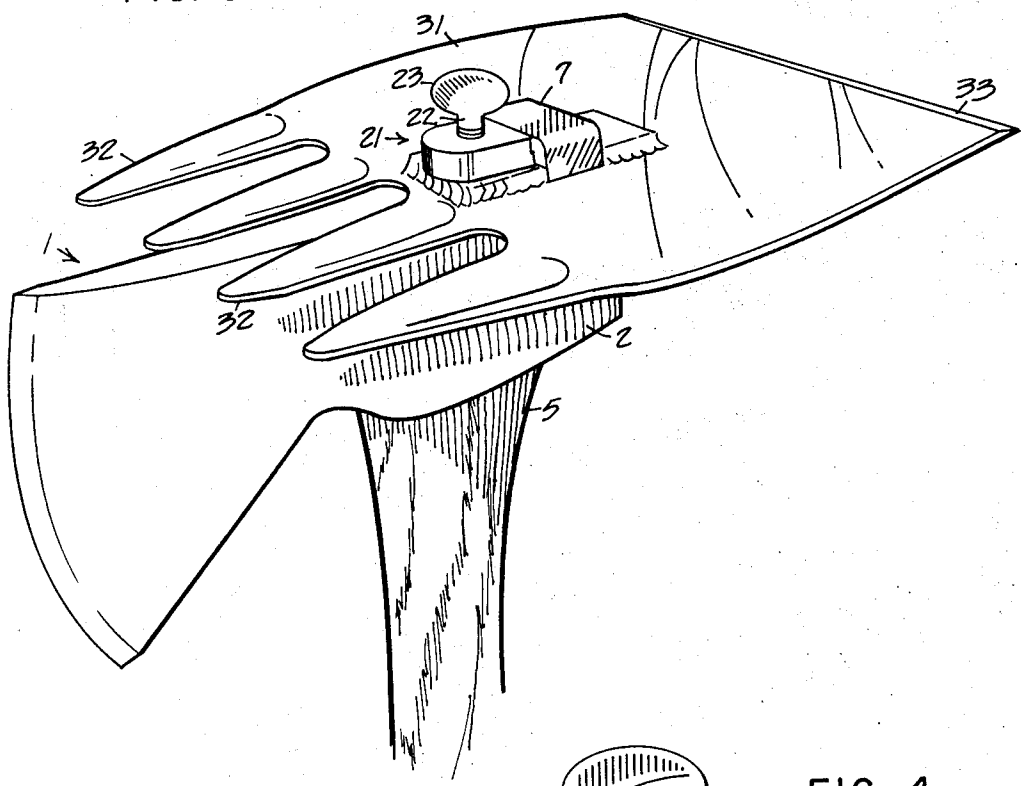

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FIG. 3.


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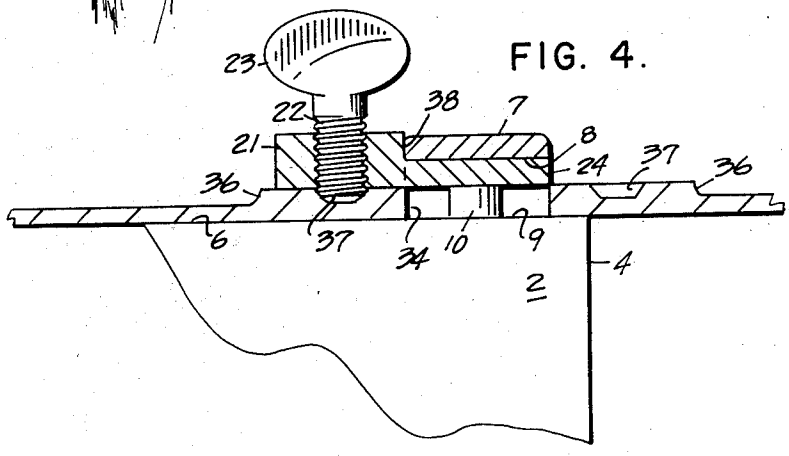

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FIG. 4.

CAMPING TOOL

BACKGROUND OF THE INVENTION

This invention is an improvement over the type of ax with replaceable tools shown in U.S. letters Pat. No. 3,561,023, granted on Feb. 9, 1971 to F. Shandel, and also a previous U.S. Pat. No. 3,245,094 granted on Apr. 12, 1966 to said F. Shandel, and the various attachment means and combinations shown in some of the references cited in said patents. The novel features of the herein improvements are to provide a more solid lug than in the first mentioned patent, yet utilize more secure and firm holding of the implements in position than the wedging method utilized in the last mentioned U.S. patent. The improvements herein result in a lighter structure than the U.S. Pat. No. 3,245,094, yet considerably stronger than that shown in U.S. Pat. No. 3,561,023, and the present improvements provide a stronger and firmer and more positive attachment of the respective implements to the poll of the ax with greater facility of attachment and removal of the respective camping implements.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a developed view showing the poll of the ax with the parts and the various attachments dismantled.

FIG. 2 is a sectional view of the assembled attachments of the three implements shown in FIG. 1.

FIG. 3 is a view showing an attachment with the rake end inoperative and the hoe end exposed assembled on the top of the poll and separately shows the same implement in reversed position exposing the rake.

FIG. 4 is a sectional view of the rake-hoe implement assembled.

DETAILED DESCRIPTION

The ax head 1 has a poll 2 and a sharp cutting end 3. The poll 2 has a flat end 4 adapted to be used for hammering. A handle 5 is suitably secured in the poll 2.

The top 6 of the poll is preferably flat and a substantially heavy lug 7 extends integrally from the top 6 of the poll 2. The lug 7 is spaced from the heel 4 to provide a comparatively limited bearing area for the respective camping implements to be hereinafter described. The lug 7 has a longitudinal cavity 8 therethrough parallel and longitudinal with respect to the top of the ax at the poll. From the bottom 9 of the cavity 8, and spaced from the ends of the cavity 8 projects upwardly a prong 10 of substantial strength. The top of the prong 10 is spaced from the top of the cavity 8.

The various types of camping implements are described in FIG. 1 and 3. For instance, in FIG. 1 is shown a spade 11 which has at right angles to the plane thereof a flat flange 12. The bottom 9 of the cavity 8 is the top 6 of the poll 2. The spacing between the top of the prong 10 and the top of the cavity 8 is slightly larger than the thickness of the securing flange 12 on the implement so that the flange can be inserted into the cavity 8 above the prong 10 until a hole 13 in the securing flange 12 is in registry with the prong 10. The flange 12 is about the same width as the width of the cavity 8 so as to be guided by the side walls of the cavity 8 into position for registering the hole 13 with the prong 10 thereby assuring the dropping to the flange over the prong 10 easily. The flange 12 is longer than the distance between the heel 4 and the end 14 of the lug farthest from the heel 4 so that the free end 15 of the flange 12 projects beyond the end 14 of the lug 7. In the projecting free end 15 of the flange 12 is an indentation or pocket 16.

A securing wedge 21 is of a width and thickness to fill the cavity 8 of the lug 7 above the flange 12. A set screw 22 with a suitable wing 23 is threaded through the wedge 21. The distance from the inserted end 24 of the wedge 21 and the set screw 22 is the same as the distance between the hole 13 and the pocket 16 of the flange 12 so that when the wedge 21 is inserted above the flange 12 into the cavity 8 the set screw 22 is in registry with the pocket 16 and can be tightened thereinto.

A similar flange 12 is on the end of a pick 25 as shown under the spade 11.

The same flange 12 is also on the end of a hoe 26 shown also in FIG. 1 below the pick 25.

All of these implements have a shoulder to abut against the lug 7 when the hole 13 is aligned with the prong 10, thereby facilitating the assembling of the units. On the spade 11 the shoulders 27 are formed by recesses in the flange 28 of the spade 11.

On the pick 24 and on the hoe 26 the shoulders 29 are formed at the base of the opposite edges of the flange 12.

The rake-hoe implement 31 is reversible. This implement is formed of a flat plate with the prongs 32 of the rake projecting from one end of the plate. The other wedge 33 of the plate is formed into a wide hoe. In the plate is a hole 34 substantially corresponding to the under periphery of the lug 7 so that it can be slid over the lug. On the opposite ends of the hole 34 are bosses 36. Each boss has an indentation 37 in its stock. The wedge 21 is increased in thickness at its outer portion so as to form an abutment shoulder 38. Each indentation 37 in the respective bosses 36 is spaced from the end of the hole 34 the same distance as the distance from the shoulder 38 of the wedge to the set screw 22 thereby to quickly register the screw 22 with the indentations 37.

As shown in FIG. 2, the shoulder 38 on the wedge 21 registers the screw 22 with the indentation 16 in the implements shown in FIG. 1. The wedge 24 itself extends the entire width of the lug 7.

I claim:

1. In a camping implement,
an ax having a poll, with a handle secured therein,
a heel on said poll,
a flat top on the poll adjacent said heel,
a lug of substantially U-shaped cross-section formed integrally transversely across said flat top,
an integral pin extended from said flat top within the cavity of said lug,
the top of said pin being spaced from the top wall of the cavity in the U-shaped lug,
interchangeable camping implements,
a flat portion of each implement being engageable with said pin and with said flat top,
the thickness of said flat portion being less than the height of the cavity in said U-shaped lug,
a wedge fitting into the space in the cavity of said U-shaped lug above the top of said pin,
said flat portion of each implement having a pocket in its upper surface spaced from said pin,

and a detachable securing element on said wedge engaged with said pocket so as to tighten said wedge in said cavity holding said implement in place,
said flat portion being a flange extended from each implement,
said flange having a hole therethrough fitting over said pin,
a shoulder on each implement engaging the end of said lug nearest to said heel,
the distance between said hole and said shoulder being equal to the distance between said heel-end of said lug and said pin,
an abutment shoulder on said wedge spaced from the ends of the wedge abutting the adjacent end of said lug,
the distance between said abutment shoulder and said securing means being equal to the distance from the end of the lug adjacent said wedge and said pocket thereby to position the wedge registering with said pocket.

2. The camping implement specified in claim **1**, and

the thickness of said flat portion being about equal to the height of said pin, and
the thickness of said wedge being about equal to the distance between said pin and the top wall in said lug cavity.

3. The camping implement specified in claim **1**, and

one of said interchangeable implements being a spade,
said flange extending from the wider edge of said spade and substantially at right angles to the plane of said spade,
and said shoulder being formed at about the intersection of said flange and said base edge.

4. The camping implement specified in claim **3**, and

other interchangeable implements being a pick and a hoe, each having a base end, and
said flange respectively extending longitudinally from said base end.

5. The camping implement specified in claim **1**, and

the end of said lug nearest said heel being spaced from said heel inwardly of said flat top thereby to form a bearing surface.

6. The camping implement specified in claim **5**, and

said flat portion being a flat plate having an aperture therethrough fitting over the exterior of said lug.

7. The camping implement specified in claim **6**, and

one end of said flat plate forming a hoe edge,
the other end of said flat plate forming a rake,
a pocket being formed equally spaced from each end of said aperture,
said securing means being engageable selectively with either of said pockets.

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