United States Patent [19]

Sinclair

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[54] **SHARPENING DEVICE**

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[52] **U.S. Cl.** **76/88,** 51/214

[51] **Int. Cl.** **B21k 5/06**

[58] **Field of Search** ..... 76/82, 82.1, 82.2, 83, 76/86, 88; 51/214, 221 BS, 285

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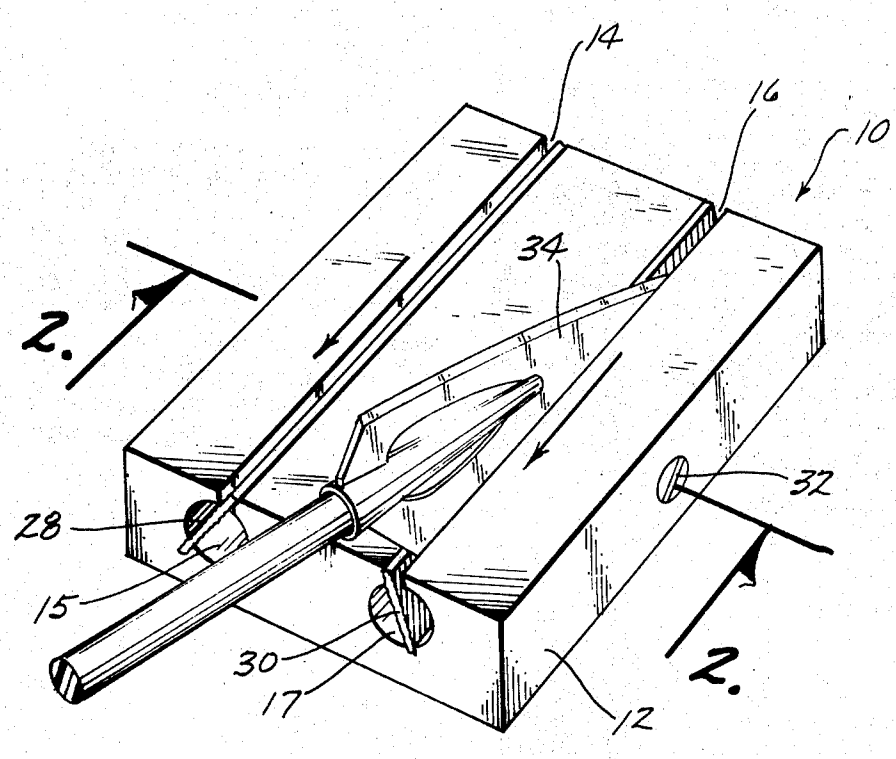
[57] **ABSTRACT**

A sharpening device for sharpening arrowheads, knives and the like comprising a support block having a pair of spaced apart elongated grooves extending downwardly into the upper end thereof. Each of the grooves communicates with an elongated bore formed in the block. A sharpening means such as a file or the like is positioned in each of the bores and is disposed at an angle with respect to the upper end of the support block. The sharpening means are adapted to sharpen the arrowhead or the like upon the arrowhead being inserted downwardly into the groove and moved along the sharpening means. The grooves define a guide means to properly position the arrowhead in the proper attitude with respect to the sharpening means. A modified form of the sharpening device is disclosed and comprises a triangular shaped sharpening means positioned in a channel formed in the upper end of the support block.

4 Claims, 4 Drawing Figures



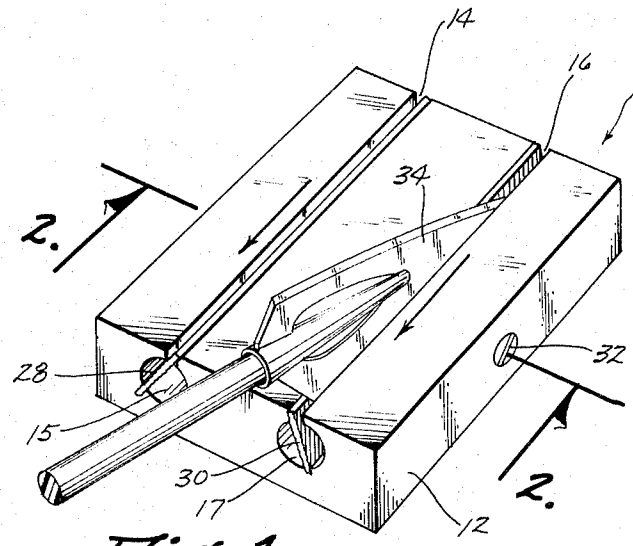


Fig. 1

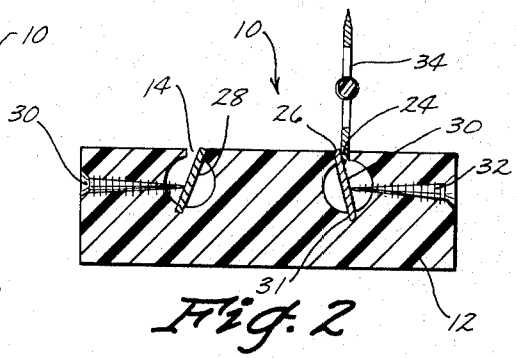


Fig. 2

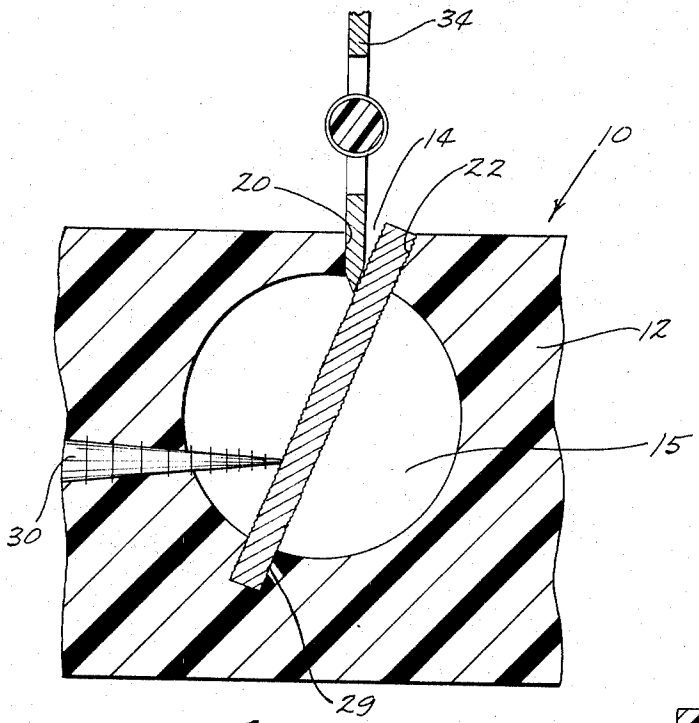


Fig. 3

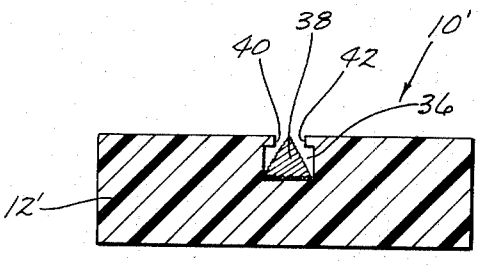


Fig. 4

SHARPENING DEVICE

BACKGROUND OF THE INVENTION

This invention relates to a sharpening device and more particularly to a sharpening device for sharpening arrowheads, knives, etc. It is frequently necessary to sharpen arrowheads, hunting knives, etc. in the field since the devices become dull during use thereof. Many sharpening devices have been previously designed but none of the previously available sharpening devices are convenient to use in the field or are convenient to carry in the field. Further, the conventional sharpening devices do not include means for properly positioning the arrowhead or knife with respect to the sharpening element so that the proper edge is formed thereon.

Therefore, it is a principal object of the invention to provide an improved sharpening device.

A further object of the invention is to provide a sharpening device for use in field sharpening arrowheads, knives, etc.

A further object of the invention is to provide a sharpening device which is compact.

A further object of the invention is to provide a sharpening device which permits the sharpening element thereon to be easily replaced.

A further object of the invention is to provide a sharpening device having guide means thereon for properly positioning the member to be sharpened.

A further object of the invention is to provide a sharpening device which is economical in manufacture, durable in use and refined in appearance.

These and other objects will be apparent to those skilled in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

This invention consists in the construction, arrangements and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, specifically pointed out in the claims, and illustrated in the accompanying drawings, in which:

FIG. 1 is a top perspective view of the sharpening device of this invention illustrating the manner in which an arrowhead is sharpened:

FIG. 2 is a sectional view seen along lines 2—2 of FIG. 1:

FIG. 3 is an enlarged sectional view similar to FIG. 3 except that the opposite sharpening element is being employed; and

FIG. 4 is a sectional view similar to FIG. 2 except that a modified form of the invention is disclosed.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In FIGS. 1–3, the numeral **10** generally refers to the preferred embodiment of this invention. Sharpening device **10** comprises a support block **12** comprised of wood, plastic, etc. A pair of elongated grooves **14** and **16** extend downwardly into the upper end **18** of block **12** as illustrated in FIG. **2.** Grooves **14** and **16** communicate with elongated bores **15** and **17** respectively. Groove **14** is defined by a vertically disposed wall **20** and an inclined wall **22.** Likewise, groove **16** is defined by a vertically disposed wall **24** and an inclined wall **26.**

An elongated sharpening means **28** in the form of a file or the like is positioned in the groove **14** and is maintained against the inclined wall **22** and in the slot **29** by a screw **30** extending inwardly from one side of the block **12** as illustrated in FIGS. **2** and **3.** An elongated sharpening means **30** is positioned in the groove **16** and is maintained against the inclined wall **26** and in the slot **31** by means of a screw **32** extending inwardly from the other side of the block **12.**

The numeral **34** refers generally to an arrowhead which may be sharpened as follows. The arrowhead **34** is first extended downwardly into the groove **16** so that one side of its cutting edge is in engagement with the file **30.** The side of the arrowhead is placed in engagement with the wall **24** so that the cutting edge of the arrowhead is disposed at the proper angle with respect to the file **30.** The arrowhead **34** is then pulled longitudinally in one direction on the file **26** to sharpen one side of the cutting edge (FIG. **1**). When the one side of one cutting edge has been sharpened, the arrowhead **34** is placed in the groove **14** so as to sharpen the other side of the cutting edge as illustrated in FIG. **3.** The arrowhead **34** is moved longitudinally in one direction on the file **28** until that side of the cutting edge is sharpened. The arrowhead **34** is then rotated 180° about the rotational axis of the shaft and the sharpening operation continued in both of the grooves **14** and **16** to sharpen the opposite side of the arrowhead.

In FIG. **4,** the numeral **10'** generally designates a modified form of the sharpening device. The numeral **36** refers to an elongated channel which is formed in the block **12'** and which extends downwardly into the upper surface thereof. A triangular shaped sharpening device in form of a file or the like is positioned in the channel **36** and is referred to generally by the reference numeral **38.** Shoulders **40** and **42** extend horizontally into the upper end of the channel **36** as seen in FIG. **4.** The arrowhead or knife may be sharpened by simply extending the cutting edge thereof downwardly into the channel **36** on either side of the file **38** to sharpen the opposite sides of the cutting edges. The shoulders **40** and **42** are provided so that the arrowhead or knife can be placed thereagainst to position the cutting edge of the knife or arrowhead in the proper attitude with respect to the file **38.** The opposite sides of the file **38** should be disposed at approximately 22° with respect to the inner ends of shoulders **40** and **42.** Likewise, the files **28** and **30** should be disposed at approximately 22° with respect to the walls **20** and **24** respectively.

Thus it can be seen that a compact sharpening device has been provided which efficiently sharpens arrowheads, hunting knives, etc. The files in the devices are easily replaced as desired. It can therefore be seen that the devices accomplish all of their stated objectives.

I claim:

1. A sharpening device comprising, a support means having an upper end, and an elongated cavity formed therein extending downwardly thereunto,

an elongated sharpening means in said cavity adapted to sharpen the cutting element of a member extending downwardly into said cavity, said cavity being defined by an elongated groove formed in the upper end of said support means and an elongated bore formed in said support means below said groove and being in communication therewith, said groove having a vertically disposed wall and an inclined wall, said sharpening means being maintained adjacent said inclined wall,

said groove defining a guide path wherein an implement to be sharpened is placed in a predetermined attitude with respect to the sharpening means.

2. The device of claim 1 wherein the plane of said sharpening means is disposed at an approximate angle of 22° with respect to said guide means.

3. The device of claim 1 wherein a screw means extends into said support means and has its inner end in engagement with said sharpening means to selectively maintain said sharpening means in said cavity.

4. The device of claim 1 wherein a second cavity is formed in said support means spaced from the first mentioned cavity, and a second sharpening means in said second cavity, said sharpening means in said cavities being oppositely disposed with respect to each other.

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