Aug. 16, 1927. 1,639,204

H. L. WELCH

POCKET KNIFE SHARPENING DEVICE

Filed Aug. 12, 1924

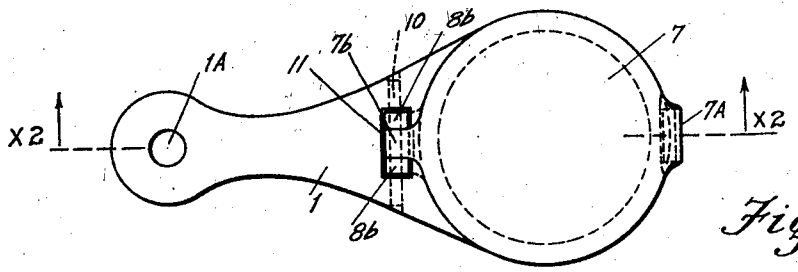


Fig. 1

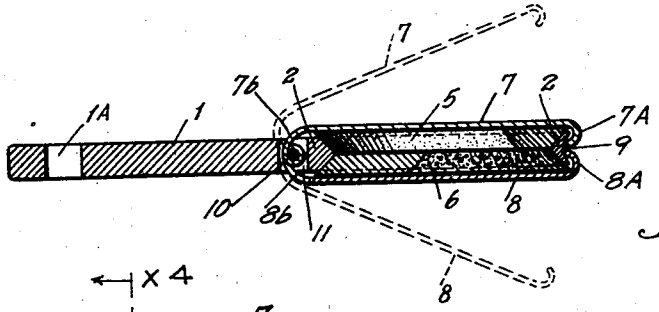


Fig. 2

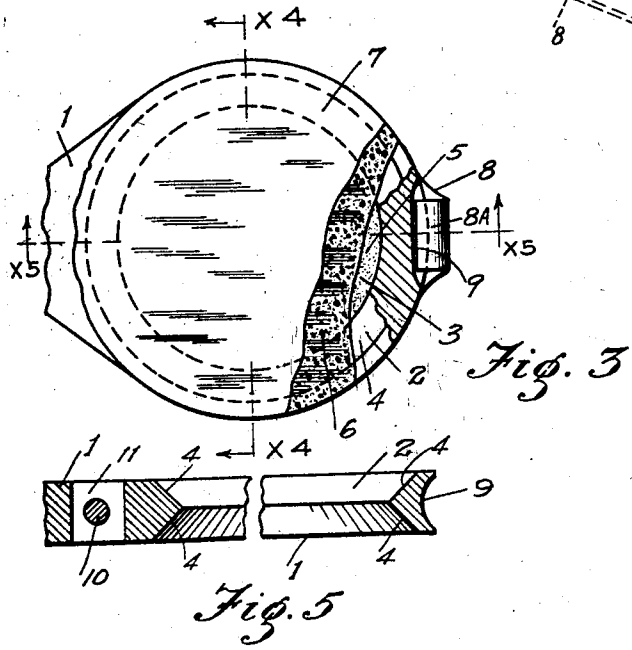


Fig. 3

Fig. 5

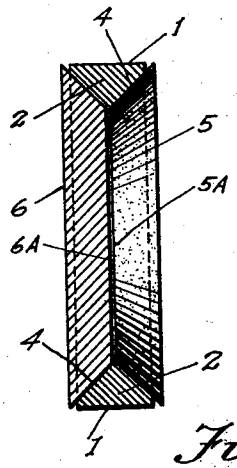


Fig. 4

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UNITED STATES PATENT OFFICE.

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POCKET-KNIFE-SHARPENING DEVICE.

Application filed August 12, 1924. Serial No. 731,581.

One of my objects is to provide a practical sharpening device for pocket knives which can be made in the size and form of a trinket, convenient to carry in the pocket.

A second object of my invention is to provide a sharpening device in which plates of abrasive sharpening material too small for practical use by themselves in sharpening pocket knives can be utilized.

A third object of my invention is to provide a sharpening device in which plates of abrasive material, too thin to withstand, unsupported, without breaking or snapping, the pressure of the blade in sharpening, are supported on their edges and bottoms so as to withstand such pressure.

A fourth object of my invention is to provide a sharpening device for pocket knives in which two thin plates of abrasive material, of different composition, one suitable for rapid grinding of knife blades and one suitable for finishing the edges of knife blades, may be used.

A fifth object of my invention is to provide a sharpening device for pocket knives, using small thin strips of abrasive material, with a thumb and finger grip for holding the device while in use.

A sixth object of my invention is to provide a sharpening device for pocket knives that can be strung on a key ring or chain.

A seventh object of my invention is to provide a sharpening device for pocket knives, using small plates of abrasive material with covers for said plates when not in use.

With the above and other objects in view, certain applications of my invention are described in the following specifications and illustrated in the accompanying drawings.

In the drawings like numerals refer to like parts in each figure.

Fig. 1 is a view of the device with the covers closed, the dotted lines indicating details of construction that will be hereafter explained.

Fig. 2 is a cross-sectional view taken at X^2—X^2 on Fig. 1, showing a method of constructing the frame to support the plates of abrasive material; the plates of abrasive material in place; the covers of the plates closed and by the dotted lines the covers in open position.

Fig. 3 is an enlarged view of the plate holding part of the frame showing parts cut away of the upper cover, the upper abrasive plate, the plate supporting portion of the frame. Showing also beneath the cut away part of the frame the beveled edge of the lower disk. Showing also the clamp of the lower cover in place.

Fig. 4 is a cross-sectional view taken at X^4—X^4 on Fig. 3, showing a method of inserting and supporting the abrasive plates in the frame.

Fig. 5 is a cross-sectional view taken at X^5—X^5 on Fig. 3, showing a method of constructing the abrasive plate holding part of the frame to provide support for the abrasive plates, also to provide a recess to receive the clamp of the covers; also to provide a pivot for the cover hinges.

Reverting now to Fig. 1. Part 1, is the frame, of any suitable rigid material and of any desired shape, a portion of which frame is cut away or removed, leaving depressions in which to insert plates of abrasive material and providing a rim 2, surrounding and supporting said plates on the edges and bottom thereof. Part 7 is a cover provided with an extension 7^b which forms a hinge by which it is pivoted on pin 10 which is inserted in frame 1 and passes through opening 11 in said frame. Said cover has also at 7^A an extension which is bent downward and backward to form a clamp to lock said cover to the rim of the frame, as shown in Fig. 2.

8^b—8^b in Fig. 1 are the hinges of cover 8 (shown in Fig. 2) which covers the plate on the opposite side of the frame from that covered by cover 7.

1^A is an opening or hole cut in frame 1 to permit of its being carried on a key ring or chain.

In Fig. 2, numerals 7 and 8 designate the plate covers, heretofore referred to, in closed position with clamps 7^A and 8^A locked in the notch 9, shown also in Fig. 3 and Fig. 5. The covers 7 and 8 are also shown partially open by the dotted lines.

Numerals 5 and 6, Fig. 2 designate the plates of abrasive material held and supported in the rim 2 of the frame 1. Said plate 5 projecting slightly above the edge of the rim 2 as shown by the dotted line through said plate 5, and the plate 6 projecting slightly below the edge of the rim 2 as shown by the dotted line through said plate 6.

In Fig. 4, an enlarged view of the plates and rim, the numeral 4 designates the con-

tact between the beveled rim of the frame and the correspondingly beveled edge of the plate. 5^A and 6^A show inner surfaces of the plates that abut either upon each other or on an unremoved portion of the frame.

The device is used in the following manner:

That portion of the frame near the key ring hold is grasped between the thumb and finger; the cover over the grinding plate is opened; the blade of the knife is ground to an edge by rubbing it vigorously on the grinding plate; the cover over this plate is then closed and the device is turned over, bringing the finishing plate uppermost. The cover over this plate is then opened and the edge of the blade smoothed and finished by rubbing it on the finishing plate.

Having fully described my invention, what I claim as new and patentable is—

1. A sharpening device comprising a supporting member having an elongated portion forming a handle and a substantially annular portion forming a support for abrasive materials having a central aperture therein, said central aperture having inwardly, sloping, converging upper and lower sides terminating approximately midway of the transverse thickness of the supporting member, and disks arranged in said central aperture so that one of said disks is supported by the upper inwardly sloping side thereof and another of the said disks supported by the lower, inwardly sloping sides.

2. A sharpening device comprising a supporting member having an elongated portion forming a handle and a substantially annular portion forming a support for abrasive materials having a central aperture therein, said central aperture having inwardly, sloping, converging upper and lower sides terminating approximately midway of the transverse thickness of the supporting member, substantially disk shaped members arranged in said central aperture so that one of said disks is supported by the upper inwardly sloping side thereof and another of the said disks supported by the lower inwardly sloping side; and another aperture adjacent the central aperture in the supporting member having a pin supported crosswise therein upon which are hingedly mounted members adapted to cover said disk.

3. A sharpening device comprising a supporting member having an elongated portion forming a handle and a substantially annular portion forming a support for abrasive materials having a central aperture therein, said central aperture having inwardly, sloping, converging upper and lower sides terminating approximately midway of the transverse thickness of the supporting member, substantially disk shaped members arranged in said central aperture so that one of said disks is supported by the upper inwardly sloping side thereof and another of the said disks supported by the lower inwardly sloping side; another aperture adjacent the central aperture in the supporting member having a pin supported crosswise therein upon which are hingedly mounted members adapted to cover said disk, the outer ends of said covers being curved inwardly and adapted to engage within a substantially semicircular recess in the outer periphery of said annular portion for holding the covers in position over the substantially disk-shaped members.

HERMAN L. WELCH.