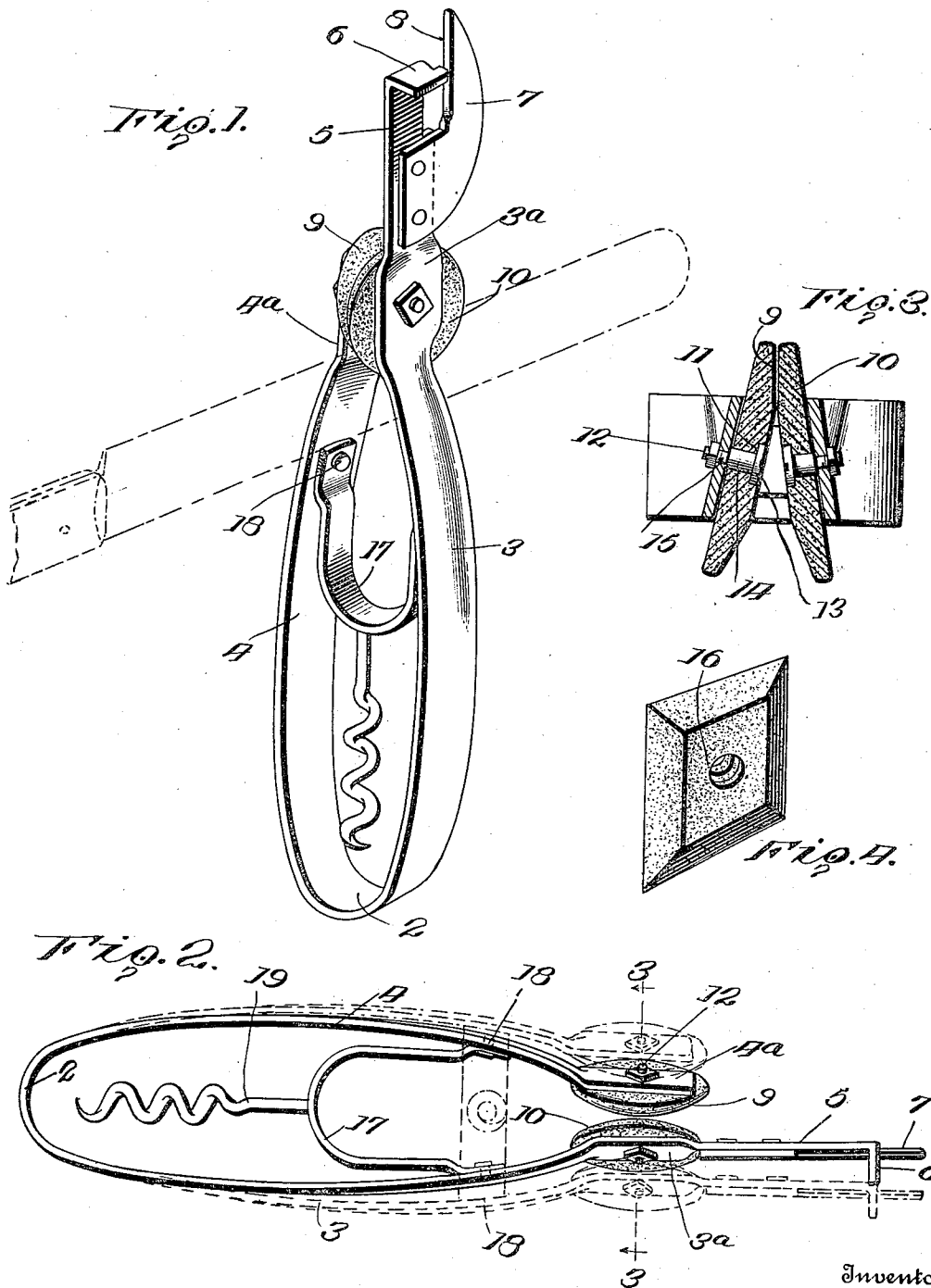


P. J. HAAS.
KNIFE SHARPENER.
APPLICATION FILED JAN. 31, 1912.

1,055,739.

Patented Mar. 11, 1913.



Witnesses
Ernest C. Speer
John M. Tallin

By

Hammer, Attorneys

Inventor
P. J. Haas

UNITED STATES PATENT OFFICE.

PHILIP J. HAAS, OF YORK, NEBRASKA.

KNIFE-SHARPENER.

1,055,739.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed January 31, 1912. Serial No. 674,560.

To all whom it may concern:

Be it known that I, PHILIP J. HAAS, citizen of the United States, residing at York, in the county of York and State of Nebraska, have invented certain new and useful Improvements in Knife-Sharpener, of which the following is a specification.

The primary object of my invention is the provision of a very simple and effective knife sharpening device capable of use in sharpening all kinds of blades, and so constructed as to be very easily operated.

A further object is to provide in this connection a sharpening device including a handle having oppositely disposed arms resiliently forced toward each other and carrying opposed abrading members, the resilience of the arms yieldingly forcing these members toward each other and against a knife blade drawn between said abrading members.

A further object in this connection is to provide means for spreading the arms of the handle apart to permit the abrading members to be readily applied or detached, and when in position between the arms of the handle will permit said arms to contract, but which when turned down into operative position will spread the arms.

My invention is illustrated in the accompanying drawings wherein:

Figure 1 is a perspective view of my improved implement showing it in position for sharpening a knife, the knife being shown in dotted lines. Fig. 2 is a face view of the implement showing in dotted lines the position taken by the arms when the spreader is turned at right angles to the handle. Fig. 3 is an enlarged detail sectional view on the line 3—3 of Fig. 2. Fig. 4 is a detail perspective view of a modified form of abrading member.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring to these drawings, 2 designates the handle generally, composed of spring steel or like material bent at its middle so as to provide the oppositely disposed bowed arms 3 and 4, these arms being practically alike in all essential respects. The extremity of the arm 4 is angularly twisted as at 4^a so that said extremity is inclined at an angle to the plane of the body of the arm 4. The portion of the arm 3 opposite the ex-

tr extremity of the arm 4 is also angularly twisted as at 3^a, the inclination of said portion, however, being opposite to the inclination of the extremity of the arm 4 so that these deflected portions of the arms 3 and 4 are inclined toward each other.

The arm 3 in the embodiment of my invention illustrated in the drawings is extended so as to form a can opener, the arm 3 being extended as at 5 to form a bearing member having an angular bend 6 at its terminal end adapted to rest upon the top of a can, while attached to this part 5 is the angular blade 7 of a usual form and having a cutting edge 8. This form of can opening tool is so well known, that its operation need not be particularly described.

Mounted upon the twisted extremity of the arm 4 is an abrading member designated 9, while mounted upon the corresponding portion of the arm 3 opposite the terminal end of the arm 4 is an abrading member 10. It will be seen that these abrading members are held against the faces of the deflected portions of the arms, and that as a consequence the abrading members incline toward each other. Considering the blade 5 as being at the top of the tool, it will be seen that the abrading members incline laterally toward each other. Preferably, and in the form shown in Fig. 2, these abrading members consist of disks of carborundum or like abrading material such as emery rotatably mounted upon the arms 3 and 4. In the preferable form of my invention, each abrading disk is countersunk as at 11, and through the disk passes a bolt 12, this bolt being formed with a head 13, a relatively large body portion 14 slightly less in diameter than the head and forming a bearing for the disk, and a reduced screw threaded shank 15 with which a nut engages. The head 13 holds the disk in place against the face of the deflected portion of the corresponding arm, while the enlarged body rotatably supports the disk. Each disk has a beveled margin so that the face of the disk is approximately convex.

I do not wish to be limited to the use of rotatable disks upon the arms as I may use abrading members which are not rotatable and which do not have the shape of a circular disk but the shape of a rectangle or oblong, as illustrated in Fig. 4. These members which are designated 16 have beveled margins, and each member may be so placed

upon its arm as to bring any desired margin downward.

The resilience of the bowed spring arms 3 and 4 tends to force the extremities of the arms toward each other and resiliently hold the disks 9 and 10 with their upper faces in contact with each other so that the disks will be resiliently pressed against a knife blade passed between them.

In order to assist the resilience of the bowed spring arms 3 and also to provide means for opening out or spreading apart the arms 3 and 4 so that the disks 9 and 10, or the members 16 as the case may be, may be removed when worn and replaced, I have provided a member designated 17 comprising a strip of resilient metal preferably spring steel, bent in approximate U-shape and pivotally mounted at its ends by means of rivets 18 between the arms 3 and 4 adjacent to the abrading disks. It will be seen that at the point of pivotal attachment of the member 17 with the arms 3 and 4, the arms converge toward each other. When the U-shaped member 17 is so turned as to be disposed in the same plane as the handle, that is, between the arms 3 and 4 in the position shown in Fig. 2, the resilience of the arms 3 and 4 and of the arms of member 17 will hold the disks 9 and 10 in approximate contact with each other. When, however, the member 17 is turned to a position at right angles to the handle, it will act to force the members 3 and 4 apart, permitting a screw driver to be readily engaged with the notched head 13 and thus permitting the nuts 15 to be readily removed and the abrading disks also removed and replaced.

The U-shaped member 17 is formed of spring steel in order that it may add resilience to the arms 3 and 4 and when rotated to a position wholly between the arms will assist the arms 3 and 4 in urging the abrading members into close engagement with a knife passed between them. The form of the U-shaped member is such, however, and its arrangement relative to the arms 3 and 4 is such that when the U-shaped member 17 is rotated to a position at right angles to the handle formed by the arms 3 and 4, it will act to separate the arms.

While the member 17 might be provided with any sort of a shank or handle whereby it could be readily operated, I preferably form this handle as an implement, and in the illustration this implement has the form of a corkscrew 19. It will be seen that when the member 17 is in the position illustrated in Fig. 1, this corkscrew is entirely housed between the arms 3 and 4, but that when the member is turned at right angles to the handle, the corkscrew is in operative position. Furthermore, as before stated, when the member is turned at right angles

to the handle, it spreads the arms 3 and 4 apart, thus increasing the width of the handle and providing a better bearing for the hand of the operator.

While I have shown the handle of my improved implement as being formed of one piece of spring metal bent at its middle to provide the arms 3 and 4, it should be understood that I do not wish to limit myself to this as it might be formed of two pieces of spring metal joined in any suitable manner to provide said arms. Neither do I wish to limit myself to providing a can opening tool mounted upon one of said arms as the arm 3 might terminate opposite to the termination of the arm 4, in which case the implement would be only adapted to sharpening knives, or to such other uses as might be provided by the tool carried within the handle and forming the spreader.

To use the sharpening devices, the knife to be sharpened is held in one hand with the edge of the blade up. The sharpener is held in the other hand with the point of the can opener up and top of same toward the knife blade. The knife blade is placed through the handle of the sharpener just under and between the abrading members so as to allow the abrading members to come up close to the handle of the knife and the knife is drawn rearward across the abrading members toward the point of the knife. This is repeated as often as required. Another way to use this sharpener is to place the guide of the can opener on the edge of a table allowing the point of the opener to pass over the edge. The sharpener is then held firmly in this position and the knife blade is drawn between the stones as before described.

My improved implement forms a particularly effective combination device for sharpening all kinds of knife blades, opening cans and pulling corks. It is especially adapted to household uses, and to the uses of campers, hunters, etc. on account of its convenient size and shape for carrying.

What I claim is:

1. A knife sharpener including a handle formed of a strip of resilient metal folded to provide oppositely disposed resilient arms, resiliently urged toward each other, said arms being formed at their extremities with oppositely disposed portions angularly deflected and having an angular relation to each other, and abrading members carried upon said deflected portions and inclined toward each other, said abrading members being each formed upon its inner face with a beveled margin, the beveled margins of the abrading members on one side of the center of said members being approximately parallel to each other.

2. A knife sharpener including a handle having oppositely disposed arms resiliently urged toward each other, opposed abrading

members carried on said arms, and a spreader disposed between the arms and shiftable to spread the arms away from each other.

3. A knife sharpener including a handle
5 having oppositely disposed arms resiliently urged toward each other, opposed abrading members carried on said arms, and a U-shaped spreader pivoted between the arms and rotatable into a position to spread the
10 arms apart.

4. A knife sharpener including a handle composed of oppositely disposed bowed arms connected to each other at one end and resiliently urged toward each other at the
15 other end, opposed abrading members carried on said arms, and means mounted between the arms shiftable to separate the arms.

5. A knife sharpener including a handle
20 formed with oppositely disposed, approximately parallel bowed resilient arms, the resilience of the metal urging said arms inward and toward each other, and oppositely

disposed abrading members carried upon the extremities of said arms and each rotatably
adjustable upon its arm, said members being
25 angularly inclined with relation to each other and said members having beveled margins, the beveled margins of the members on one side of the center of said members extending approximately parallel to each
30 other.

6. A knife sharpener including a handle having oppositely disposed arms resiliently urged toward each other, opposed abrading
35 members carried on said arms, and a U-shaped member of spring metal disposed between the arms and pivoted at its termini to said arms.

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

PHILIP J. HAAS. [L.S.]

Witnesses:

M. M. WILDMAN,
I. M. HAAS.