J. A. WALLACE.

SHARPENING DEVICE.

APPLICATION FILED JUNE 18, 1912.

1,092,877. Patented Apr. 14, 1914.

FIG 1

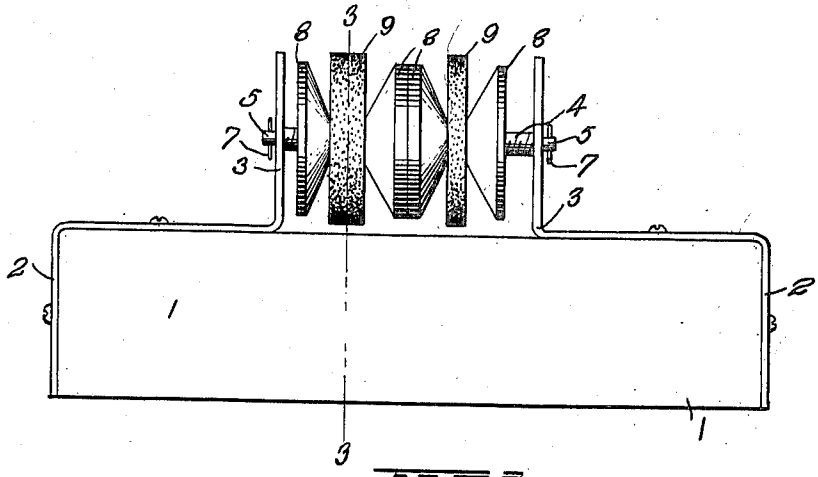


FIG 2

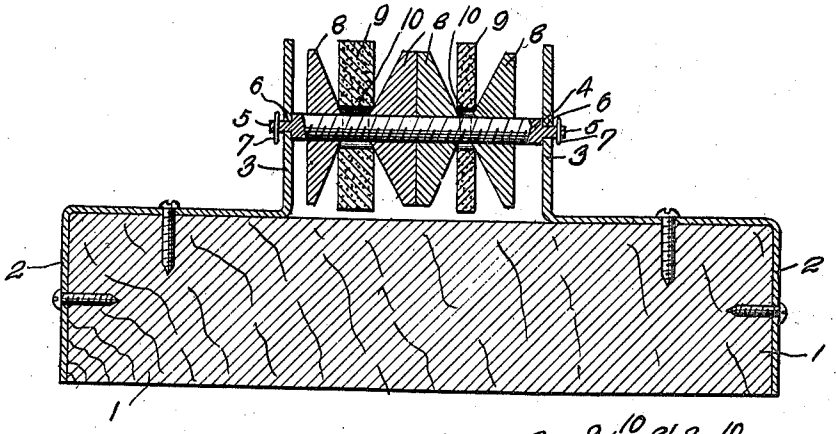


FIG 3

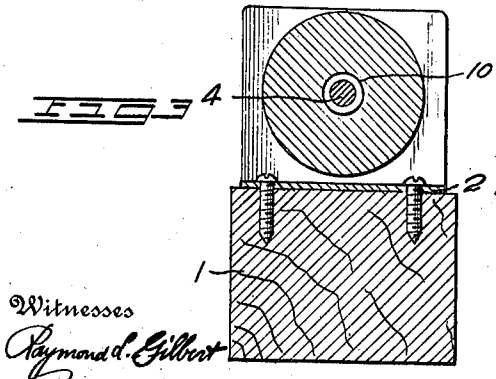
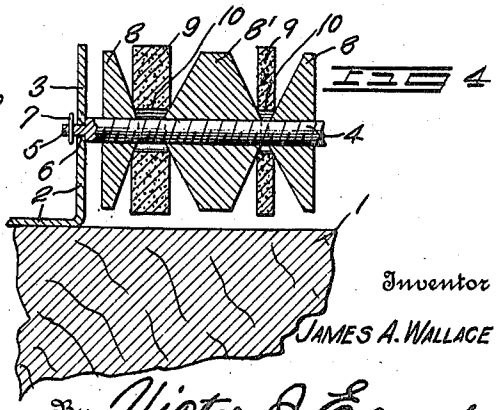


FIG 4



Witnesses

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SHARPENING DEVICE.

1,092,877. Specification of Letters Patent. Patented Apr. 14, 1914.

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To all whom it may concern:

Be it known that I, JAMES A. WALLACE, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented new and useful Improvements in Sharpening Devices, of which the following is a specification.

This invention relates to an improved sharpening device for knives and other cutlery, and the invention has for its object to produce a simple and efficient device including a rotary sharpening disk and a guide disk supported in proximity thereto, said sharpening disk and guide disk being rotated by the movement of the blade to be sharpened, which latter is held by the guide disk in proper engagement with the sharpening disk.

A further object of the invention is to produce a simple and efficient construction whereby the relative positions of the sharpening disk and the guide disk shall be capable of easy and convenient adjustment.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawing,—Figure 1 is a side elevation of a sharpening device constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a vertical transverse view taken on the line 3—3 in Fig. 1. Fig. 4 is a longitudinal sectional detail view illustrating a slight modification.

Corresponding parts in the several figures are denoted by like characters of reference.

In the simple form of the invention illustrated in the drawing, 1 designates a block or base which may be made of wood and which is protected by plates 2 which are bent to form upstanding flanges 3 serving to support a screw threaded rod or shaft 4 which latter may be reduced at the ends thereof to form journals 5 that extend through bearings 6 in the flanges 3. The journals 5 may be provided with pins or keys 7 extending transversely therethrough, or the parts may be otherwise assembled securely in any convenient or well known manner that will permit the shaft or rod 4 to rotate.

Mounted on the shaft or rod 4 are conical guide disks 8 which are arranged in pairs with their apices facing each other. These guide disks have threaded engagement with the shaft 4, and one or more pairs of said disks may be used according to the desired capacity of the machine. In the example illustrated in the drawing two pairs of such disks have been shown, and between each pair of guide disks is included an abrading disk or sharpening disk 9 of emery, carborundum or other suitable material or composition, said disks being preferably of different grades of fineness so that a blade after being sharpened by one of said disks may be finished on another disk. When, as in the present instance, two pairs of conical disks are shown, it is obvious that the bases of one disk of each pair will be presented toward each other, and such being the case, the two disks may be combined to form a single double cone, as indicated at 8′ in Fig. 4. The abrading disks 9 are provided with eyes 10 to receive the apices of the conical guiding disks, and it will be observed that by manipulating the guide disks adjacent to opposite sides of an abrading disk, the latter may be clamped and held securely between such guide disks.

In the operation of this device, the blade that is to be sharpened is inserted between a guide disk and the proximate face of an abrading disk and drawn to and fro, the shaft carrying the disks being thereby rotated in its bearings, and the edge of the blade being sharpened by the abrasive action of the face of the disk with which it is held in engagement by the guiding disk. When several grades or abrading disks are used, the blade may be transferred from one to another until the requisite fine edge has been produced.

The device is simple in construction, and it will be seen that the guiding disks may be adjusted on the screw threaded shaft so as to clamp the abrading disks between them, and to compensate for wear on said abrading disks.

It will be evident that while a frame has

been described consisting of a block of wood reinforced and protected by plates of sheet metal, the wooden block or base may be omitted, and the frame may be constructed of sheet metal bent, stamped or otherwise constructed to present a suitable shape including the upstanding flanges 3 which support the shaft that carries the abrading devices.

Having thus described the invention, what is claimed as new, is:—

1. In a sharpening device, a threaded shaft supported for rotation, conical guide disks having threaded engagement with said shaft with their apices opposed, and an abrading disk clamped between the guide disks and having an eye to receive the apices thereof.

2. In a sharpening device, a supporting device including upstanding flanges, a screw threaded shaft supported for rotation in said flanges, conical guide disks having threaded engagement with said shaft with their apices opposed, and an abrading disk clamped between the guiding disks and having an eye to receive the apices thereof.

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

JAMES A. WALLACE.

Witnesses:

OWEN D. CONNOLLY,

LOUIS UNSER.