

Jan. 19, 1926.

1,570,083

C. RUNZI

KNIFE BLADE SHARPENER

Filed April 2, 1923

Fig. 1.

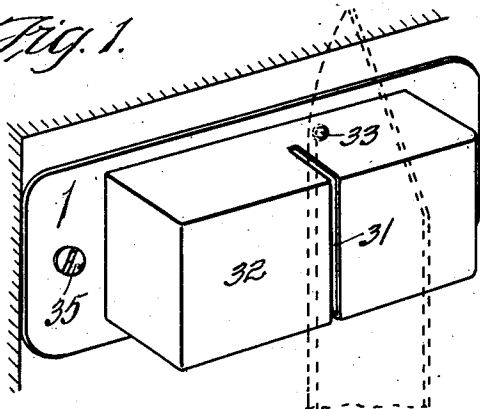


Fig. 2.

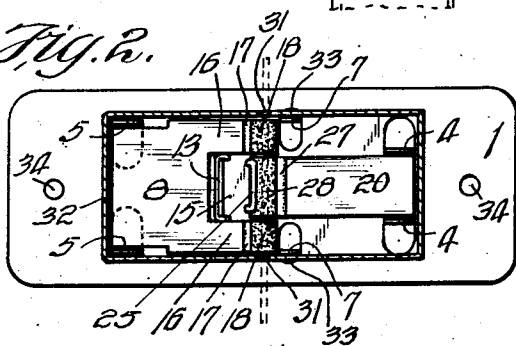


Fig. 3.

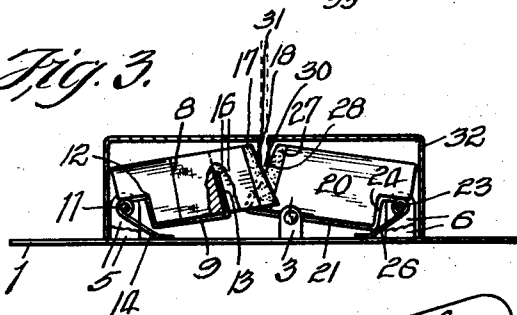
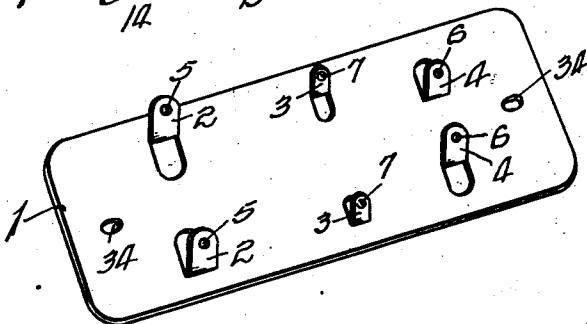


Fig. 4.

Fig. 5.

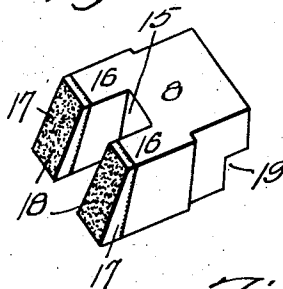


Fig. 6.

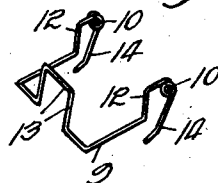


Fig. 7.

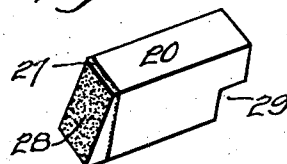
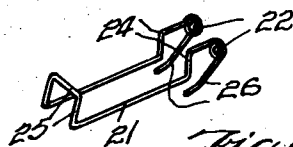


Fig. 8.

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UNITED STATES PATENT OFFICE.

CHARLES RUNZI, OF ST. LOUIS, MISSOURI.

KNIFE-BLADE SHARPENER.

Application filed April 2, 1923. Serial No. 629,333.

To all whom it may concern:

Be it known that I, CHARLES RUNZI, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Knife-Blade Sharpeners, of which the following is a specification.

This invention relates to knife blade sharpeners, and, more particularly to the class of knives used in the kitchen, although not necessarily limited thereto, and, is a distinct and practical improvement to overcome certain practical objections to, and defects in, knife blade sharpeners having yieldable sharpening members.

The object of my present invention is the provision of a knife blade sharpener so constructed with yieldable abrasive supporting blocks that it can be successfully used for sharpening knife blades by persons inexperienced in the art, such for instance as women and children.

A further object of the invention is the provision of means for removably mounting the abrasive means upon yieldable supporting blocks within a slotted casing in overlapped relation with one another for guiding the knife blade during sharpening operations, thus causing the sharpening stone to be worn down evenly.

A further object of the invention is to provide a device which will be durable and practical as a kitchen accessory, inexpensive in manufacture and highly efficient for the purpose intended.

A further object of the invention is to provide a device which can be secured to the wall or to a table top, as desired.

With the above and other objects in view, the invention consists in the novel features of construction, arrangement and combination of parts hereinafter more fully described and finally pointed out in the claim hereto appended.

Referring to the accompanying drawings forming a part of this specification, wherein like characters of reference denote similar parts throughout the several views:

Fig. 1 is a perspective view of the device fixed to a wall.

Fig. 2 is a horizontal sectional view of the device.

Fig. 3 is a vertical sectional view of the device.

Fig. 4 is a perspective view of the base plate.

Fig. 5 is a view in perspective of one of the abrasive supporting blocks.

Fig. 6 is a view in perspective of the spring wire holder for the abrasive supporting block shown in Fig. 5.

Fig. 7 is a view in perspective of one of the sharpener blocks.

Fig. 8 is a perspective view of the spring wire holder for the abrasive supporting block shown in Fig. 7.

In carrying out the aim of my present invention, I employ a suitable rectangular metallic base plate 1 provided with a plurality of upwardly directed ears punched from the plate, arranged in opposed pairs and designated 2, 3 and 4. These ears 2 and 4 are provided with the openings 5 and 6 respectively. The ears 3 are each provided with an outwardly directed locking protuberance 7 formed by pressing the same in each ear.

An abrasive supporting block 8 is yieldingly supported upon the base plate 1 by means of a spring wire holder 9, shown in Fig. 3, which holder is provided at one end with a pair of opposed openings 10 formed by coiling the wire, as shown in Fig. 6. A pin 11 passes through the openings 10 of the wire holder 9 and the pin is supported by the ears 2 by passing through the openings 5 thereof. The wire holder 9 is provided at its rear end with the upwardly directed arm section 12 and at its forward end with the upwardly directed inverted U-shaped arm section 13, which arm sections embracingly engage the front and rear walls of the abrasive supporting block 8 for holding the abrasive supporting block 8 in position upon the wire holder 9. Extensions 14 lead from each opening 10 of the wire holder 9 in a downwardly and forwardly direction and the ends thereof engage the upper face of the base plate 1 which causes the block supporting portion of the wire holder 9 to yield if pressure is directed downwardly upon the free inner end of the block, as is evident from Fig. 3 of the drawing.

The abrasive supporting block 8, supported by the wire holder 9, has its forward portion centrally cut away so as to provide a recessed passage 15, thus providing the two opposed arms 16. The end face of each arm 16 of the abrasive supporting block 8 is provided with a suitable abrasive element 17, such for instance as carborundum, or its equivalent. The abrasive sur-

face 18 of each abrasive element 17 is beveled, as clearly shown in Figs. 3 and 5. The under and rear face of the abrasive supporting block 8 is cut away, as at 19, to rest upon the outer ends of the wire holder 9 and engage arms 12 thereof.

An abrasive supporting block 20 is yieldingly supported upon the base plate 1, by means of a spring wire holder 21, which is provided at one end with a pair of opposed openings 22 formed by coiling the wire forming the holder, as clearly shown in Figs. 2 and 8. A pin 23 passes through the openings 22 of the wire holder 21 and is supported by the ears 4 in passing through the openings 6 thereof. The wire holder 21 is provided at its rear end with the upwardly directed arm sections 24 and at its forward end with the upwardly directed inverted U-shaped arm section 25, which arm sections embracingly engage the front and rear walls of the sharpener block 20 for holding the abrasive supporting block 20 in position upon the wire holder 21. Extensions 26 lead downwardly and forwardly from the openings 22 and engage the upper face of the base plate 1 to cause the block supporting portion of the wire holder to yield under downward pressure upon the inner free end of the block, as is evident from Fig. 3 of the drawing. The inner end face of the block 20 is provided with a suitable abrasive element 27, such for instance as carborundum, or its equivalent and the abrasive surface 28 thereof is beveled as shown in Figs. 2, 3 and 7. The under and rear faces of the block are cut away, as at 29, so as to rest upon the outer ends of the wire holder 21 and engage the arms 24 thereof. The inner inverted U-shaped arm 25 of the holder engages the beveled abrasive surface 28 of the abrasive element 27, thus securely holding the abrasive supporting block 20 upon the wire holder 21. The inner or free end of the abrasive supporting block 20 is receivable in the recessed passages 15 of the abrasive supporting block 9, thus when the blocks are assembled, as shown in Figs. 2 and 3, there are three independent abrasive surfaces, two of which are upon one side of the blade and one upon the other side thereof, as clearly shown in Fig. 2. This arrangement of the abrasive supporting blocks will cause the beveled abrasive surfaces 18 and 28 to overlap each other and form a V-shaped recess 20 to receive the cutting edge of a knife blade to be sharpened, as clearly shown in Fig. 3. The apex of the V-shaped blade receiving recess is directly below the transverse slot 31 of a cover 32, which cover is held in position upon the base plate 1 by means of the ear protuberances 7 engaging openings or depressions 33 in the side walls

of the cover 32, thereby frictionally holding the cover in position upon the plate 1.

The reason for having the abrasive elements members 17 and 27 assembled in staggered relation is to prevent undue twisting of the knife blade by the person sharpening the knife blade should the slotted passage of the cover become worn thereby widening the slot 31 and permitting side play of the knife blade in pulling it across the abrasive surfaces 18 and 28 of the abrasive elements 17 and 27, respectively.

The base plate 1 is provided with a pair of openings 34 so that the device can be secured to a wall or table top by means of suitable fastening devices 35.

It will be understood that when pressure is exerted upon the knife blade in drawing it across the abrasive surfaces 18 and 28, that the inner ends of the abrasive supporting blocks 8 and 20 abrasive elements 17 and 27, respectively, will yield under the pressure thereby causing the beveled abrasive surfaces 18 and 28 of the abrasive elements 17 and 20 to embracingly engage the sides of the cutting edge of the knife sufficiently to sharpen the knife by drawing the knife blade back and forth over the beveled abrasive surfaces of the abrasive elements several times, as is manifest. It will be observed that the yieldingly supported abrasive supporting blocks 8 and 20 normally assume an inclined position, as shown in Fig. 3 to permit them to yield under pressure of a knife blade.

From the foregoing description, it is evident that I provide a knife sharpening device which is simple in construction, inexpensive in manufacture, consisting of a minimum number of parts and so assembled that any inexperienced person can quickly sharpen the blade of a knife with safety.

The many advantages of the herein described invention will readily suggest themselves to those skilled in the art to which it appertains.

I do not wish to be understood as having limited myself to the exact details of construction shown and described, but desire to have it understood that the invention I have shown in the drawings is merely illustrative, as it is manifest that various minor changes may be made in the exact construction and particular arrangement of parts without departing from the spirit of my invention, hence I reserve the right to make any such changes, or modifications, as may fairly fall within the scope of the appended claim when fairly construed.

What I claim is:

A knife blade sharpening device comprising a base plate, a cover for said plate having a transverse slot in the top and side walls thereof, wire holders arranged in op-

posed relation and pivotally supported by
said base plate, a pair of resilient legs di-
rected downwardly and inwardly from the
outer end of each wire holder and engaging
5 the base plate to normally support the hold-
ers in inclined positions, a block mounted
upon each holder, abrasive members each
provided with a beveled abrasive surface
secured to the inner faces of the blocks, said
abrasive members crossing each other to 10
provide a V-shaped blade receiving recess
adapted to change its angles upon pressure
being brought to bear against the abrasive
members while drawing a knife blade over
the beveled abrasive surfaces thereof. 15

In testimony whereof, I have hereunto
signed my name to the specification.

CHARLES RUNZI