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2,430,700

KNIFE-HOLDER-SHARPENER

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FIG. 1

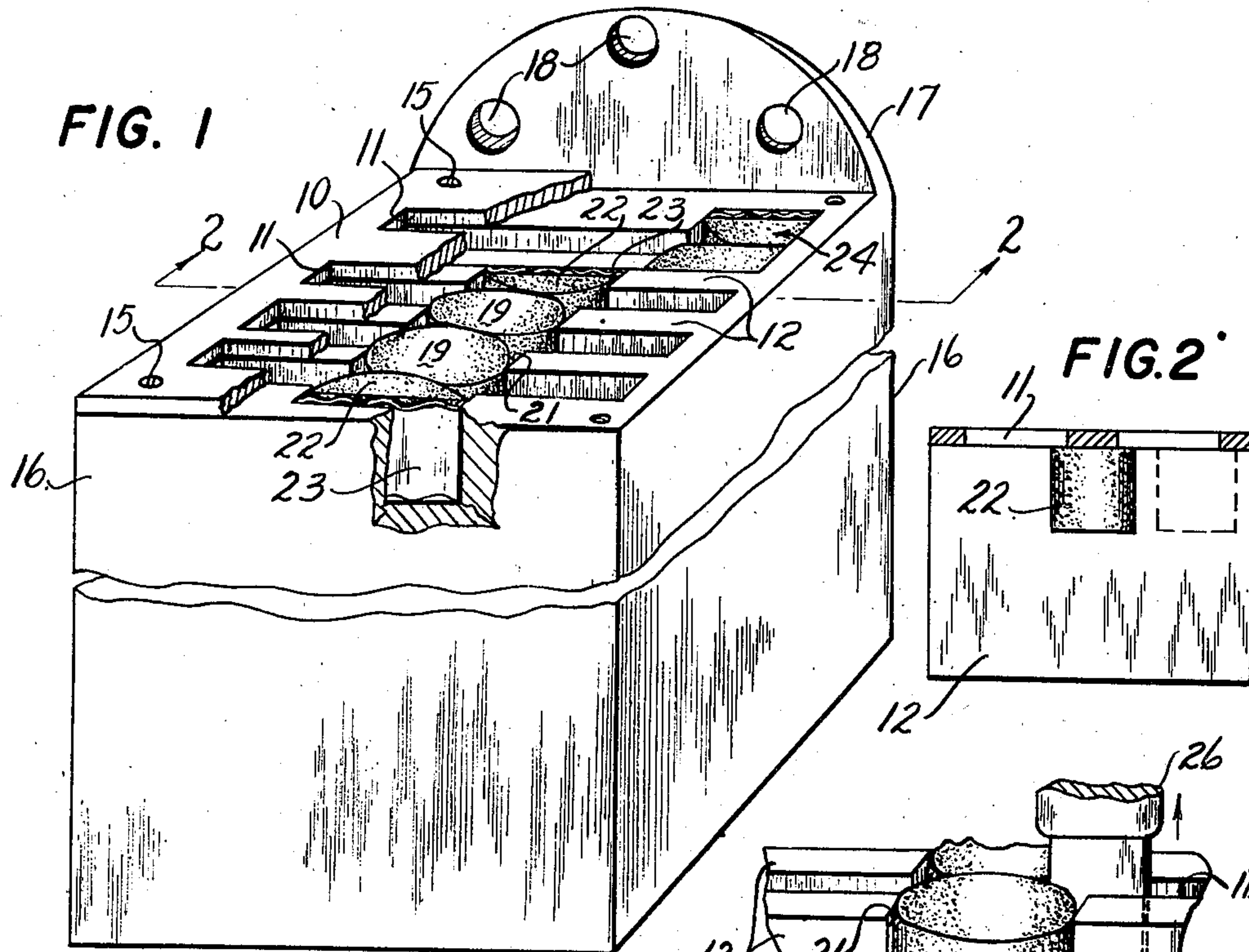


FIG. 2

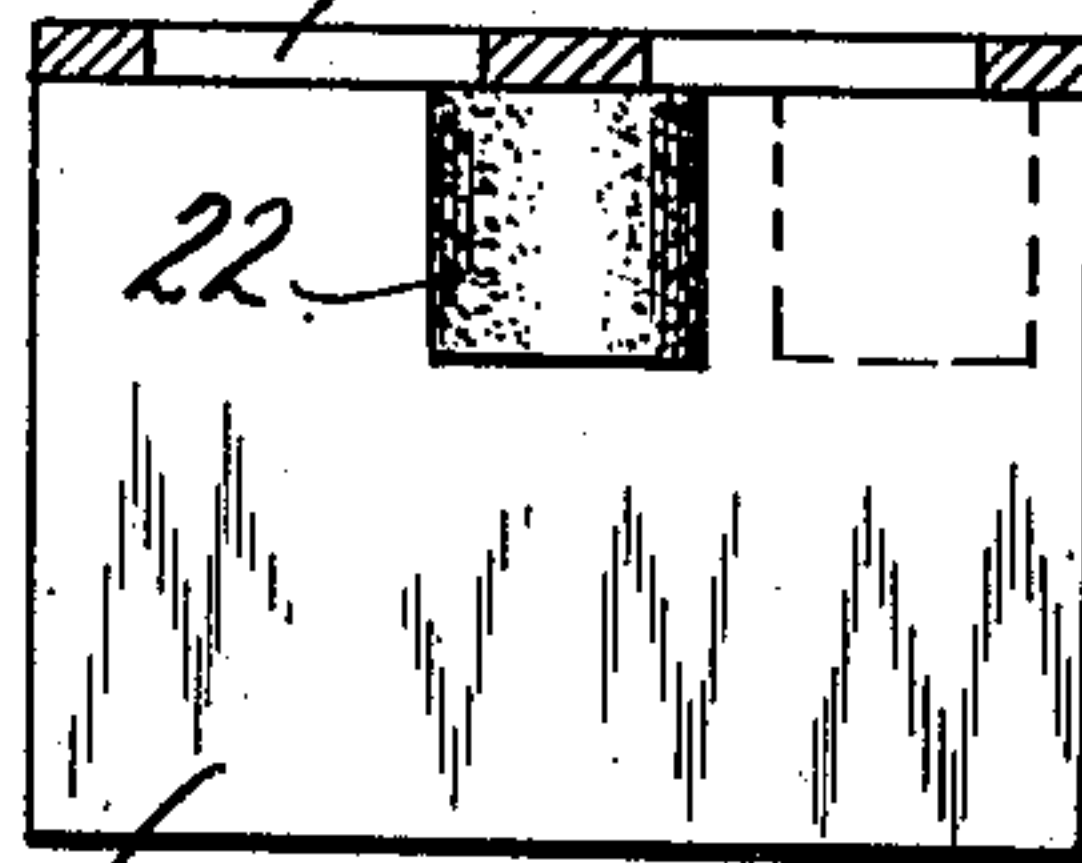


FIG. 3

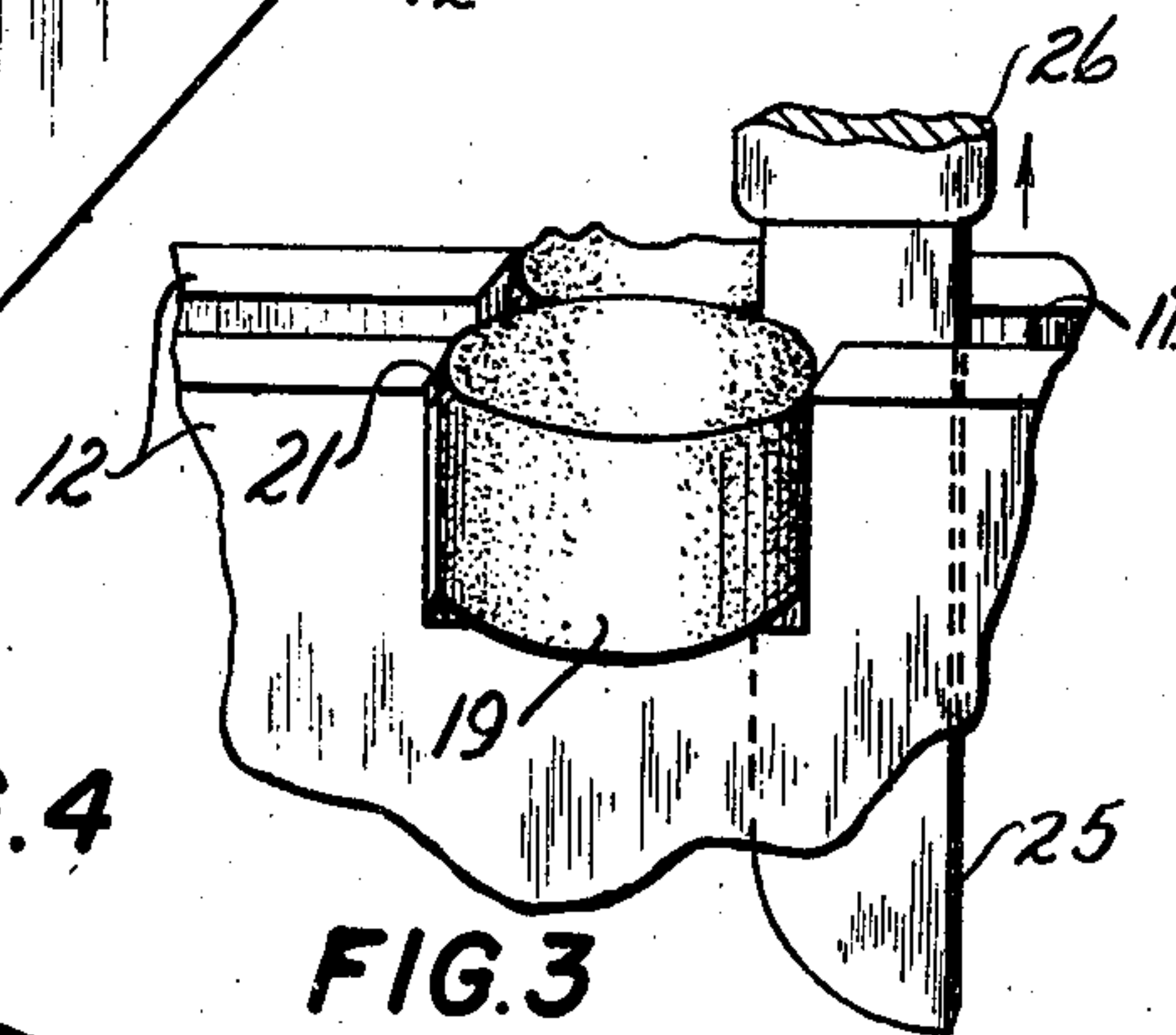


FIG. 4

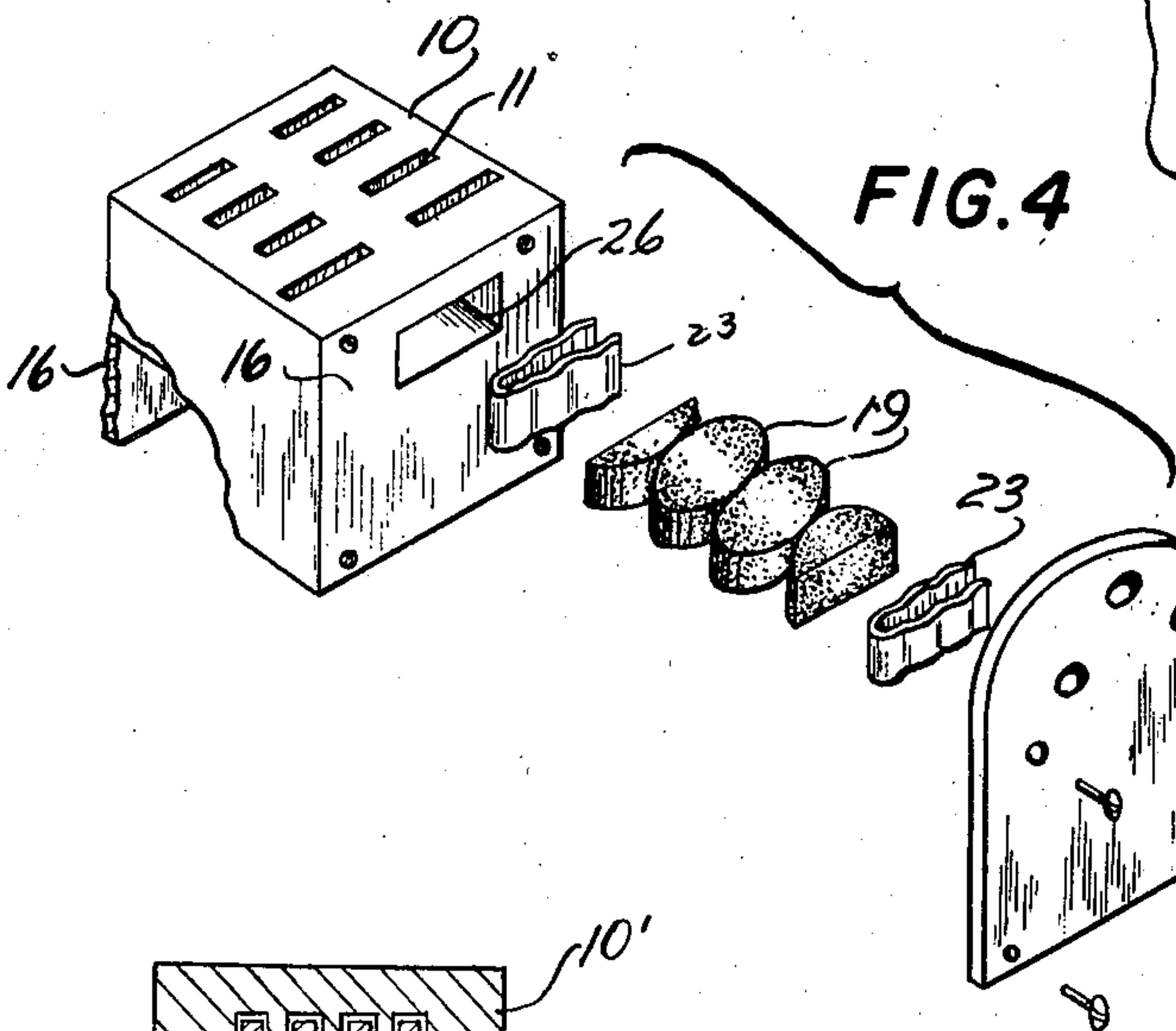
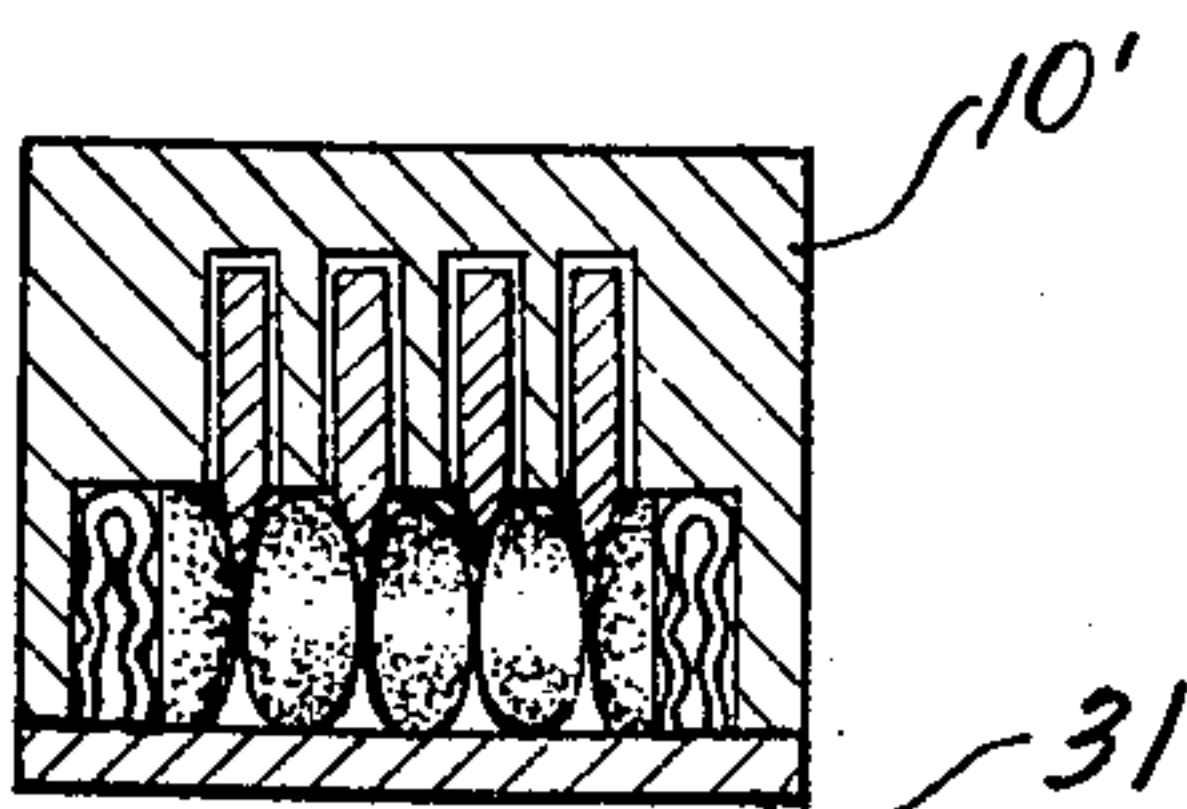


FIG. 5

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FIG. 6



UNITED STATES PATENT OFFICE

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KNIFE HOLDER-SHARPENER

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6 Claims. (Cl. 51-214)

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This invention relates to new and useful improvements in holders for knives.

A primary object of the invention is to provide a simple and efficient device for holding and for sharpening kitchen knives.

A second object of the invention is to provide a simple and efficient device wherein knives are supported for storage and in which the knives may be sharpened as they are introduced into and withdrawn from the device.

A further object is to provide in such a device, a compartment for housing a plurality of curved whetstones in yielding contiguous relation and so that the line of contact between contiguous stones lies in a plane which is substantially central of the grooves into which the knives extend.

A further object of the invention is to provide a simple and efficient device which can be made with a few simple parts, which is economical to manufacture and is capable of quick assembly and disassembly for replacement and repair of the parts.

Still another object is to provide a device of the type described which can be made either in the form of a complete housing for the knives or as a shelf from which the blades of the knives may be suspended.

A further object is to provide a simple and efficient device which can be hung on a wall or other vertical support, or laid on a flat surface and in either case operate on the knives both as a support and as a sharpener thereof.

Further and more specific objects, features, and advantages will more clearly appear from a consideration of the detailed specification hereinafter set forth especially when taken in connection with the accompanying drawings which illustrate only one preferred form which the invention may assume and which form part of the specification.

In brief and the most general terms, the invention relates to a support having slots in which knives may be suspended, or to a casing having slots into which the knives are introduced and in either case in association with a compartment in which sharpening stones are disposed and adaptable to be engaged by the cutting edges of the knives as the knives are introduced through the slots or withdrawn therefrom.

Particularly, the device may comprise a box or casing provided with slots in its top through which the knives are projected for housing or suspension, the slots being too narrow to admit the knife handles so that the knives, especially when suspended, may not drop through the slots.

On the support or within the casing are ar-

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anged sharpening stones so disposed and supported that when the knives are introduced into, or withdrawn from the support, their cutting edges come into contact with the stones and are sharpened. The stones are disposed in a compartment on the support adjacent the entrance slots or openings so that the cutting edges of knives may be abraded along their entire length as they move in or out.

It is also desirable, although not necessary, that the knives and the whetstones be so related that knives may be moved laterally of their length by the operator so as to press the cutting edge against the stones. Preferably also the stones are disposed in pairs or with pairs of edges related to each knife so that both sides of the cutting edges are simultaneously properly treated.

More particular details of the invention with especial reference to at least one form thereof, will be seen from the following detailed description.

The present preferred form which the invention may assume is illustrated in the drawings, of which:

Fig. 1 is a perspective view of one form which the invention may assume and is represented as a receptacle in which the knives are housed.

Fig. 2 is a vertical section taken therethrough on line 2-2 of Fig. 1.

Fig. 3 is a fragmentary perspective view drawn to an enlarged scale, showing the particular relation of the stones and the cutting edge of a knife, and the compartment for housing and supporting the stones.

Fig. 4 is an exploded view of a modified form of the construction showing the stone compartments and the disposition of the stones therein.

Fig. 5 is a fragmentary perspective view of a modification of the invention.

Fig. 6 is a sectional view taken on line 6-6 of Fig. 5.

As shown in the drawings, one form which the invention may assume, is represented by a support having a top wall 10 with a plurality of slots 11 therein, of any desired length, and they may be of different lengths, if desired, to support knives of different widths. These slots are those through which the knife blades are inserted to be supported on the plate 10, or to be housed within a chamber formed beneath the top plate 10. This chamber may be formed by disposing a series of spaced partition walls 12 below the top plate 10 on each side of the slots therein. These walls 12 may be quite deep; if desired, they may extend to the bottom to provide a complete hous-

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ing, or they may be only of slight depth to merely provide a support for the knives and serve as spacers to keep the blades somewhat in a direction to avoid contact with adjacent blades projecting through adjacent slots 11.

In the particular form shown in Fig. 1, a top plate 10 may be screwed on top of this assembly by means of screws 15. The assembly is provided at each end with walls such as 16, one of which may be extended upwardly as at 17, and be provided with holes 18 to enable the device to be hung from a hook or screw on a wall.

The invention further includes a series of sharpening stones 19 which may be of any desired shape, which are disposed suitably adjacent, preferably, to the slots in the plate 10, and are generally related to each other so that opposite edges of each stone may cooperate with edges of adjacent stones to form the usual inclined trough to receive the blade of a knife and hone it.

The particular construction herein illustrated by way of example, whereby the stones are related and mounted, includes a compartment produced by cutaway recesses 21 in the top edges of the partition walls, obviously, preferably in the center thereof if the slots to be formed are to be of equal length. If the knives to be supported are generally within a maximum of width, the recesses can all be cut at the same place and be of the same size, thus increasing the speed of quantity production and reducing the cost of the device. The sharpening stones 19 rest in the compartment on the bottoms of these recesses.

As shown, adjacent edges of the stones lie near each other and meet along a central line thereof. These stones may be, of course, of other shapes, but their adjacent faces should be inclined toward each other to provide, when they are contiguous, the V-shaped trough into which the knife blade may be drawn and along which it may move in moving in one direction or another. As shown, the stones are oval in shape and form a regular series from one partition wall to the other. The end stones such as 22 are semi-oval in shape and the flat face thereby formed abuts a resilient element against the end wall 16, or it may be the adjacent wall of one of the partition plates, as shown at 24, in case of a slot of different length.

When the stones are thus disposed, the end ones are backed by spring means 23 which may be wavy spring plates lying between the flat face of the nearest stone and the adjacent wall of the partition plate or the end plate as the case may be.

As shown in Fig. 3, when the knives 25 are inserted into and through the slots 11, their handles 26 prevent further projection and, therefore, they may hang from the top plate if the device is used as a mere shelf or they may project into the casing or housing if the device is as formed in Figs. 1 and 4.

Adjacent the supporting plate 10, the stones are in such position that the hand of the operator may press lightly or heavily on the blade or handle to cause the cutting edge of the knife to frictionally rub against the stones in the manner usual with such pairs of stones, and hone it, and this action may also take place in the same manner and by the same manipulation as the blade is withdrawn.

In the form shown in Fig. 4, the top plate 10 is shown with the slots 11 and the end walls 16 in the form of a box with an open bottom. How-

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ever, a bottom may be added so that a closed case may be provided. A compartment 26 is provided under the slots 11 to house the spring plates 23 and the stones 19 which may be laterally introduced to facilitate assembly without removing the top plate, thus the top and sides can be made of one piece at the outset.

It must be noted that the partition plates 12 may be of a depth only enough to provide support for mounting the stones.

In Fig. 5 there is shown a device which is, in all respects, like those previously shown, except that the whetstone compartment is shown as being accessible from the rear merely by removing the back plate. The assembly of whetstones and springs may be inserted into compartment 30 directly beneath the slotted top with the contiguous stones arranged to so register with the respective slots that the contacting line of contiguous stones lies in a plane extending substantially centrally through one of the slots. The back plate 31 may be screwed or otherwise secured to the box or housing 10'.

The device may be otherwise formed than shown herein, but the main fact of construction will always be a support for the knife blades and a compartment for the associated stones adjacent the slots in the support, and so related that the blades may be rubbed against the stones when being entered or withdrawn. This broad form may include a mere slotted shelf with associated stones, or it may include an enclosed box to keep the hands and fingers from contact with the suspended knives, but always with a stone-holding compartment or recess.

While the invention has been described in detail and with respect to present preferred forms which the invention may assume, it is not to be limited to such details and forms since many changes and modifications may be made in the invention without departing from the spirit and scope of the invention in its broadest aspects. Hence it is desired to cover any and all forms and modifications of the invention which may come within the language or scope of any one or more of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A knife support which comprises a casing having top and side walls forming a box-like structure, the top wall having slots to receive knife blades, partitions within the casing coextensive with the slots and on each side thereof, the tops of the partitions cut away along aligned portions, sharpening stones in said cut-away portions with adjacent edges aligned below the slots to receive the cutting edges of the blades.

2. A knife support which comprises a casing having top and side walls, the top wall having slots to receive the knife blades, partitions within the walls coextensive with the slots and on each side thereof, the tops of the partitions cut away along aligned portions, sharpening stones in said cut-away portions with adjacent edges aligned below the slots to receive the cutting edges of the blades, and spring means at the end of the series of stones to hold them closely and resiliently together.

3. A knife support which comprises a casing having top and side walls, the top wall having slots to receive the knife blades, partitions within the walls coextensive with the slots and on each side thereof, the tops of the partitions cut away along aligned portions, sharpening stones

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in said cut-away portions with adjacent edges aligned below the slots to receive the cutting edges of the blades, spring means at the end of the series of stones to hold them closely and resiliently together, one of said side walls having an aperture aligned with said cut-away portions whereby the spring means and the stones may be slid into place without removing the top wall.

4. A knife support and sharpener comprising a support plate having knife receiving slots and constituting one wall of a compartment, another wall for said compartment spaced from said support plate and parallel thereto, means for retaining said walls in said relation, a knife sharpening assembly in said compartment, said assembly comprising a plurality of contiguous sharpening stones having adjacent surfaces that diverge with means to yieldingly press said stones together, the stone assembly being so positioned relative to the slots that the line of contact between adjacent stones lies in a plane extending longitudinally through the substantial center of a slot to receive a knife blade between them.

5. A knife support and sharpener comprising a support plate having knife receiving slots and constituting one wall of a compartment, another wall for said compartment spaced from said support plate and parallel thereto, means for retaining said walls in said relation, a knife sharpening assembly in said compartment, said assembly comprising a plurality of contiguous sharpening stones having adjacent surfaces that diverge, the stone assembly being so positioned relative to the slots that the line of contact between adjacent stones lies in a plane extending longitudinally through the substantial center of a slot to receive a knife blade between them.

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6. A knife support and sharpener comprising a support plate having knife receiving slots only large enough for the passage of a knife blade therethrough and constituting one wall of a compartment, another wall for said compartment spaced from said support plate and parallel thereto, means for retaining said walls in said relation, a knife sharpening assembly in said compartment, said assembly comprising a plurality of contiguous sharpening stones having adjacent surfaces that diverge, the stone assembly being so positioned relative to the slots that the line of contact between adjacent stones lies in a plane extending longitudinally through the substantial center of a slot to receive a knife blade between them.

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