Dec. 11, 1923 1,477,488

C. J. HOLLAND

KNIFE SHARPENER.

Filed Sept. 18, 1922

Fig. 1.

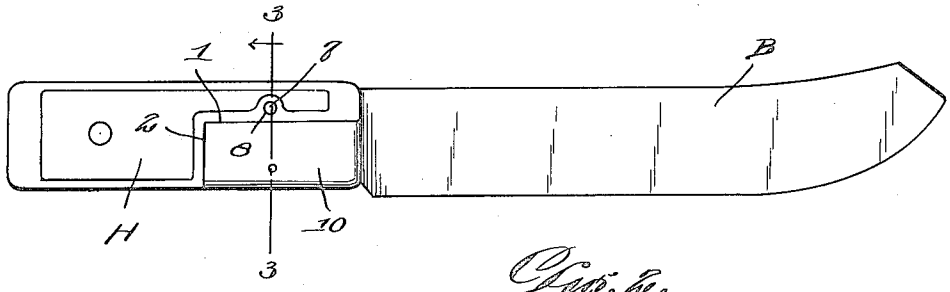


Fig. 2.

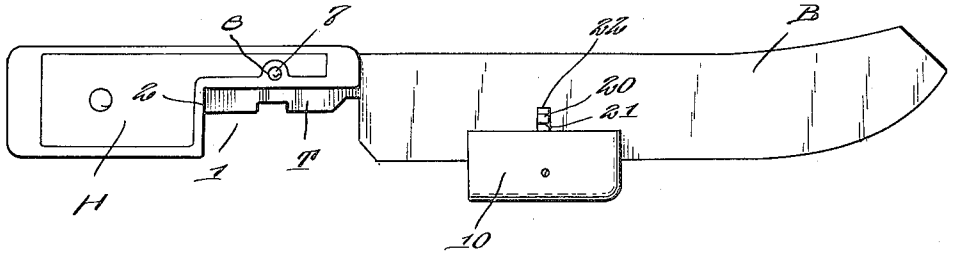


Fig. 3.

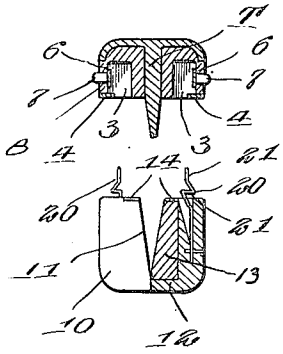


Fig. 5.

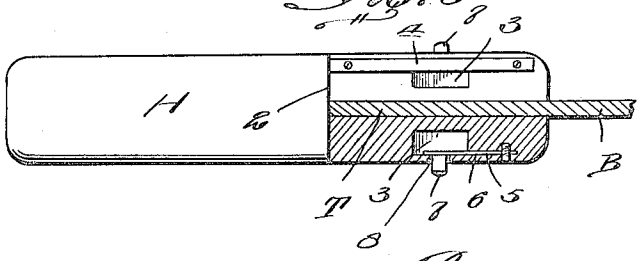
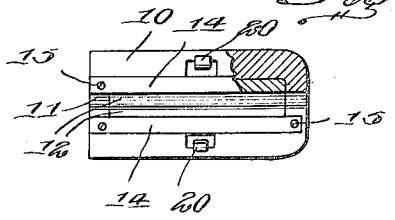


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES JOHN HOLLAND, OF PATTERSON, IDAHO.

KNIFE SHARPENER.

Application filed September 18, 1922. Serial No. 588,991.

To all whom it may concern:

Be it known that I, CHARLES JOHN HOLLAND, a citizen of the United States, residing at Patterson, in the county of Lemhi and State of Idaho, have invented new and useful Improvements in Knife Sharpeners, of which the following is a specification.

This invention relates to metal tools, and more especially to sharpeners for cutting tools; and the object of the same is to produce a knife blade sharpener carried by a box which is mounted removably within a recess in the handle adjacent the heel of the blade so that when the box is in place the contour of the blade is uninterrupted, but when the sharpener is needed the box can be instantly removed from the recess and reciprocated along the edge of the blade.

Details will appear in the following specification, reference being made to the accompanying drawing wherein:—

Figure 1 is a side elevation of this device complete, and Figure 2 is a similar view with the box removed from the recess in the handle, and applied in position to sharpen the blade.

Figure 3 is a sectional view on the line 3—3 of Figure 1, thru the handle, and an end elevation of the box slightly removed from the handle and itself partly in section to show how the sharpening stones are held in place.

Figure 4 is a plan view of the box, partly broken away.

Figure 5 is a bottom plan view of the handle, illustrating at one side the recess therein and being partly in section at the other side.

In the drawing, I have used the letter B to designate a blade of the knife whose shank or tang T is preferably integral with the heel of the blade and stands on edge in the plane thereof, and I have used the letter H to designate the wooden handle into which said tang is projected in the usual manner, the knife shown herewith being an ordinary butcher knife, altho I do not wish to be limited in this respect. In contour, handles of this kind are usually rectangular and with their corners slightly beveled off, and the broad idea of my invention is to cut away the lower side of the handle next the inner end or heel of the blade to produce a recess (shown empty in Figure 2) which recess is normally filled by a member that I call the "box" whose contour is such that it fills out the recess and preserves the exterior configuration of the handle when the box is in place, so that at this time its presence will hardly be noticed. The box is merely a carrier for the sharpening devices proper, which project inward into a longitudinal groove or channel in the upper side of the box, and fastening devices are provided to hold this box in place.

Coming now to the details as shown illustratively in the drawing, the recess 1 best seen in Figure 2 removes the wooden portion of the handle for about one and a half inches from its front end, and from its lower edge upward a sufficient distance to expose the tang T of the blade which therefore projects down into the transverse center of such recess and constitutes a fin as seen at T in Figure 3, and at either side of this fin the remaining porton of the handle constitutes a downwardly facing shoulder 2. Into this shoulder at its mid-length is cut an opening 3 whose lower end is partly closed by a strip 4 which is secured to the face of said shoulder 2 along its outer edge. Above this strip the opening extends longitudinally within the handle as seen at 5, and within such extension is mounted a spring 6 having at its free end a button 7 which projects laterally outward thru a hole 8 in the side of the handle directly above the opening 3, and the outer ends of the buttons may well simulate the rivets which pass elsewhere thru the handle and tang for holding the blade in position in the handle, as well understood; otherwise everything thus far described is concealed.

The recess 1 in the handle is normally filled out by a box 10 which may well be of wood if the handle is of wood, and whose size and exterior configuration conform accurately therewith, and this box has a V-shaped channel 11 throughout its length as best seen in Figure 3, adapted to receive the tang or fin T when the box is in place. Each wall of said channel contains a recess 12 of less length than the box and adapted to contain the grinder or sharpener proper 13, which is of stone, carborundum, or the like, held in its recess by a longitudinal strip 14 removably mounted over the recess and secured to the upper face of the box by screws 15 or the like. It is obvious that when these are withdrawn and the strips removed, the stones can be taken out of place in their recesses for washing, grind-

ing, or replacement if they should become worn; but when they are replaced their inner or active faces project slightly into the channel 11 and converge downward toward each other, so that when this sharpener as a whole is applied to the edge of the blade as seen in Figure 2 and moved longitudinally thereon, the same will be sharpened in a well-known manner. At other times the box fills out the recess 1 in the handle, and the fin T projects into the channel 11 between the stones so that the active faces of the same are well protected from dirt and grease.

The fastening means for holding this box in place is shown herein as duplicated at opposite sides of its channel, and is perhaps best illustrated in Figures 3 and 5. The numeral 20 designates a spring tongue whose lower end is seated in the body of the box just outside the strip 14, whose body above the box carries an outwardly facing catch 21 having an abrupt lower face and a beveled upper face, and whose upper extremity or tip 22 is again straight in line with its body; and the length of the exposed portion of this tongue is such as to cause it to substantially fill the depth of the opening 3 in the remaining portion of the handle. When now the separated parts as seen in Figure 3 are brought together by raising the box, the tongues pass upward into the openings, and their catches 21 ride by the inner edges of the strips 4 so that the abrupt lower faces thereof engage over said strips just at a time when their tips 22 stand opposite the free ends of the springs 6, or in other words, opposite the buttons 7. Now the tongues spring outward, and the box is latched to the handle.

When it is desired to employ this sharpener, the operator passes his thumb and finger astride the reduced portion of the handle and bears on the two buttons 7. This presses them inward as their springs 6 permit, and the tips 22 of the tongues are borne inward so that their catches 21 disengage the strips 4. Then with the other hand he grasps the box and moves it downward out of the recess 1, after which it is carried forward and reciprocated along the edge of the blade B to sharpen the same in a manner which will be clear. After said use it is replaced, and by simply pressing it upward from the position shown in Figure 2, its spring tongues engage the openings 3 and their catches re-engage the strips 4 so that the box is latched to the handle and fills out the contour thereof in a manner which will be clear. I do not wish to be limited to the sizes, shapes, proportions or materials of parts, and details may be modified to suit the convenience of the manufacturer and the desire of the public.

Having described the invention, I claim:—

1. The combination with a knife comprising a blade and handle, the latter having a recess adjacent the heel of the blade; of a knife sharpener, a box containing the same and of a size to fill out such recess and of a contour to complement the exterior of the handle when in place within such recess, and means for detachably holding the box within said recess.

2. The combination with a knife comprising a blade, a handle having a recess adjacent the heel of the blade, and a tang on the latter projected into the handle and exposed within said recess; of a knife sharpener, a box of substantially V-shaped internal configuration to receive said tang and of an exterior configuration to fill out the recess in and complement the external configuration of the handle when in place, and means for detachably holding the box within said recess.

3. The combination with a tool and its handle, the latter having a recess in its lower edge defining downwardly facing shoulders, and said shoulders having openings, and strips partly covering the mouths of said openings; of a tool sharpener, a box containing the same and of a contour to fill out said recess, and spring tongues rising from said box at points to enter said openings and having catches adapted to engage said strips.

4. The combination with a tool and its handle, the latter having a recess in its lower edge defining downwardly facing shoulders and said shoulders having openings, and holes from the openings to the sides of the handle, strips partially covering the mouths of said openings, and spring actuated buttons mounted in said holes; of a tool sharpener, a box containing the same and of a contour to fill out said recess, and spring tongues mounted in said box and rising therefrom, each having in its projecting portion an outwardly extending catch adapted to engage over one of said strips and above the same a tip adapted to come opposite the corresponding button, for the purpose set forth.

In testimony whereof I affix my signature.

CHARLEY JOHN HOLLAND.