Nov. 19, 1929. J. G. ELKIN 1,735,998

HAND TOOL

Filed Nov. 13, 1926

Fig. 1.

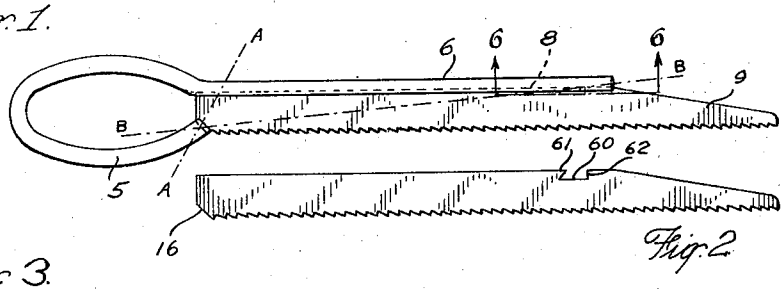


Fig. 2

Fig. 3.

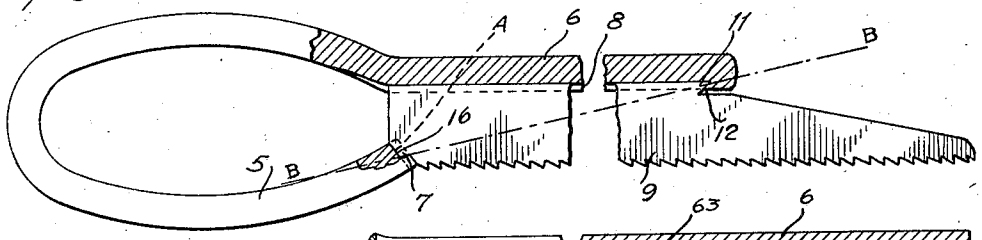


Fig. 4.

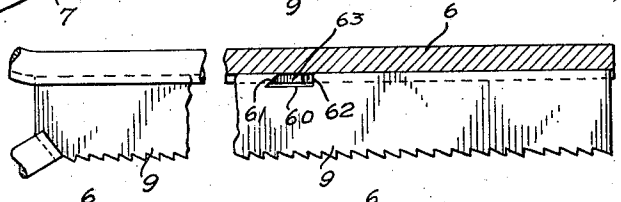


Fig. 6.

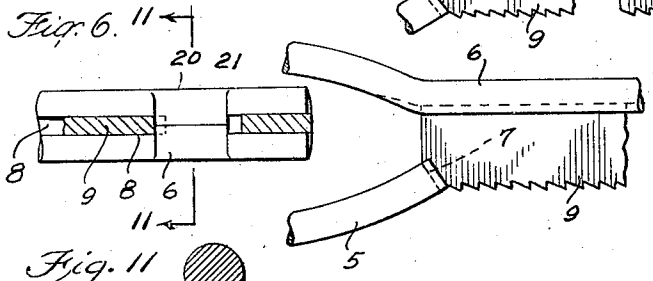


Fig. 5.

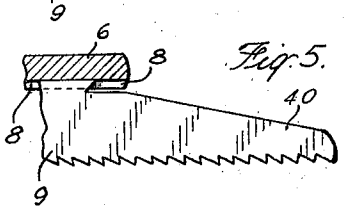


Fig. 11



Fig. 8.

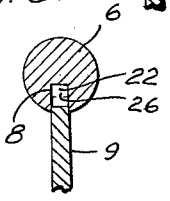


Fig. 7.

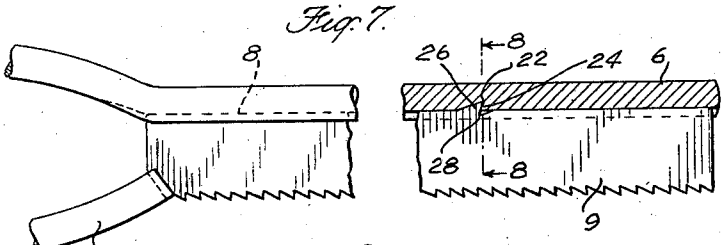


Fig. 9.

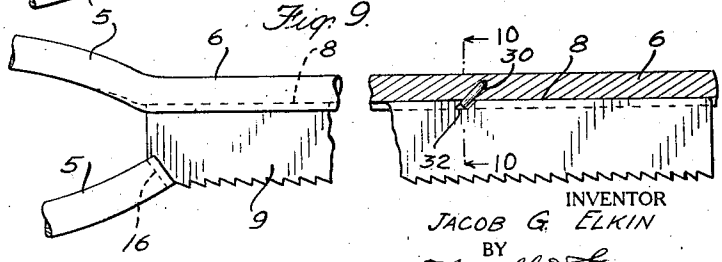
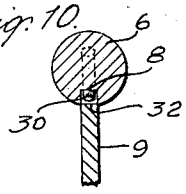


Fig. 10.



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Patented Nov. 19, 1929 1,735,998

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JACOB G. ELKIN, OF NEW YORK, N. Y.

HAND TOOL

Application filed November 13, 1926. Serial No. 148,148.

The present invention relates to new and useful improvements in tools and it pertains more particularly to tools of the class known as hand tools.

It is one of the primary objects of the present invention to provide a tool which is highly efficient and, at the same time, may be constructed at relatively low cost.

It is a further object of the invention to provide a hand tool in which the blade of the tool, while being securely retained in a suitable holder while in operative position may be readily removed therefrom for the purpose of sharpening, renewal or the like.

With the foregoing and other objects in view, the invention consists of a holder provided with a suitable abutment with which the blade is adapted to engage and an operating handle, which operating handle constitutes resilient means for retaining a blade in operative position with respect to the said abutment and holder and, at the same time, permit of its ready removal from the holder for various purposes.

Referring to the drawings:

Figure 1 is a view in elevation of a hand tool constructed in accordance with one form of the invention;

Figure 2 is a view in elevation of a tool blade used in connection with the present invention;

Figure 3 is a view on an enlarged scale, partly broken away and partly in section of a modified form of the invention;

Figure 4 is a detail view partly broken away and partly in section of a slightly modified form of the invention shown in Figure 1;

Figure 5 is a detail sectional view of a still further modified form of the invention;

Figure 6 is a detail sectional view taken on the line 6—6 of Figure 1;

Figure 7 is a detail view partly broken away and partly in section of a still further modified form of the invention;

Figure 8 is a detail sectional view taken on the line 8—8 of Figure 7;

Figure 9 is a view partly broken away and partly in section of a still further modified form of the invention;

Figure 10 is a detail sectional view taken on the line 10—10 of Figure 9; and

Figure 11 is a section taken on the line 11—11 of Figure 6.

In carrying out the present invention, an elongated strip of suitable material is employed. This elongated strip constitutes a blade holder and is provided at one end with a loop 5, the free end of which is spaced with respect to the body portion 6 of said holder, as shown in the drawings. The free end of the loop 5 is provided with a notch or the like 7. The body portion 6 is provided with a groove 8 which extends longitudinally thereof and this groove is adapted to receive the blade 9, which in the present illustration is shown as a saw blade.

In that form of the invention shown in Figures 1, 2 and 4, the blade 9 is cut out as at 60 to provide a shoulder in the form of an angular wall 61, a straight wall 62 being provided opposite to the wall 61. In this form of the invention, the abutment designated 63 is formed in any desired manner, and it lies within the cut-out portion 60 of the blade and in engagement with the angular wall 61 thereof.

With the parts in the position shown in Figures 1 and 4, it will be apparent that the resiliency of the loop 5 of the holder is exerted in the direction of the body portion 6 of the holder as designated by the line A—A and also in the direction of the abutment as designated by the line B—B, which resiliency tends to at all times maintain the blade in its operative position. When it is desired to remove the blade 9 from the holder, it is only necessary to spring the loop 5 to permit of sufficient longitudinal movement of the blade 9 to allow disengagement of the angular wall 61 with the abutment 63 and removal of the blade. To replace the blade, it is only necessary to position the same in the slot 8 with the angular portion 16 positioned in the notch 7 of the free end of the loop 5 after which the loop is sprung sufficiently to permit of the angular wall 61 engaging the abutment, it being understood that the resiliency of the loop permits of sufficient movement of the blade longitudinally of the holder to permit

of this operation. If now the loop be released, the blade is forced inwardly of the slot 8 of the holder and forwardly of the holder and engagement between the angular wall 61 and the abutment 63 is maintained by the resiliency of the loop 5.

The rear end of the blade 9 has an angular portion 16 which is received in the notch 7 of the loop 5 for the purpose of preventing accidental displacement of the blade relative to the holder.

In the form of the invention shown in Figures 3, 5 and 6, the forward end of the blade 9 is cut away to form a projecting member 11 which provides a shoulder or abutment 12.

In that form of the invention shown in Figure 3 the forward end of the groove 8 preferably terminates short of the end of the body portion 6 of the holder and is undercut to provide an abutment with which shoulder 12, provided by the member 11, is adapted to engage as more clearly shown in Figure 3.

In the form of the invention shown in Figures 5 and 6, an abutment 20 is provided by distorting the side walls of the slot 8 in the body portion 6, as indicated at 21 in Figure 6 and as shown in Fig. 11. It will be understood that the action of placing and removing the blade is the same in this form of the invention as heretofore described.

In that form of the invention shown in Figures 7 and 8, the body portion of the tool is formed with a recess 22, which construction provides an abutment 24 for engagement by the shoulder 26 formed on the blade 9. This shoulder 26 is preferably formed by cutting the back or rear edge of the blade 9 as indicated at 28 and forcing a portion of the material from which the blade is formed, laterally outwardly with respect to the body portion thereof. In this form of the invention, it will be noted that the blade is retained in position and removed from the holder in the same manner as in the forms heretofore described.

In that form of the invention shown in Figures 9 and 10, it will be noted that a pin 30 is angularly positioned in the slot 8 of the body portion 6 of the holder, which pin provides an abutment for the blade 9 and in this form of the invention, the rear edge of the blade 9 is provided with a notch or cut-out portion 32 within which the end of the pin 30 is received when the blade is placed in the holder, it being understood that the placement of the blade in the holder and the removal of the blade therefrom is the same as in the heretofore described forms of the invention.

The construction shown in the modified forms of the invention illustrated in Figures 4 and 7 to 11 inclusive, permits of the holder extending throughout the entire length of the blade thus lending rigidity to the same during its use. While this is an advantage in some instances, the construction shown in Figures 1 to 3 inclusive and Figure 5, in which the blade projects beyond the holder as indicated by the reference character 40 has its advantages in that it permits of the blade being used in the manner of a keyhole saw, for operation in relatively close quarters where space or dimension would not permit of the use of a tool of full size.

From the foregoing, it will be apparent that the present invention provides a new and improved form of hand tool in which the blade is rigidly held or retained in the holder when in its operative position with respect thereto and at the same time, the blade is capable of ready removal from the holder when desired, and while in the present instance the preferred forms of the invention have been illustrated, it is to be understood that certain changes and modifications which rightfully fall within the scope of the appended claims may be resorted to without departure from the spirit of said invention.

What is claimed is:

1. A hand tool comprising a holder having a groove extending therealong, an abutment in said groove, a handle for said holder, said handle being resilient, and spaced with respect to the abutment, and a blade, said blade having a notch in its back edge, for engagement with said abutment to limit movement of said blade in the direction of said abutment, and said blade having means for interengagement with the handle of the holder to prevent movement of the blade in a direction away from the holder.

2. A hand tool comprising a holder having a groove extending therealong, an abutment in said groove at the forward end of the holder, a resilient handle formed upon the rear end of said holder, and a blade adapted to be received in the groove of the holder, said blade being notched for the reception of the abutment in the groove, and adapted to be engaged by said handle whereby the blade is secured in the groove of the holder between the abutment and the handle.

Signed at New York, New York, this 9th day of November, 1926.

JACOB G. ELKIN.