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ADAPTER HEAD FOR TOOL HANDLE

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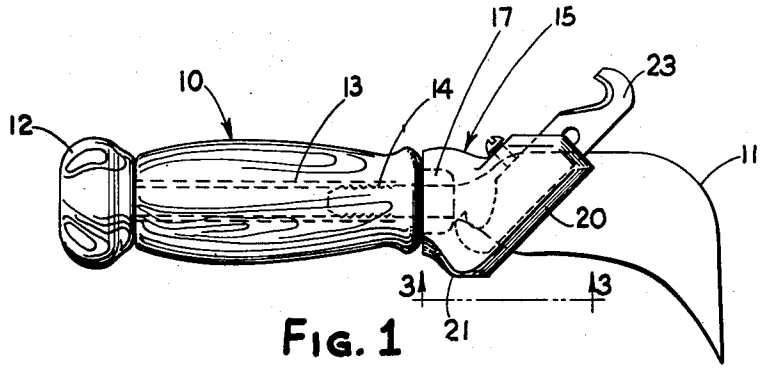


FIG. 1

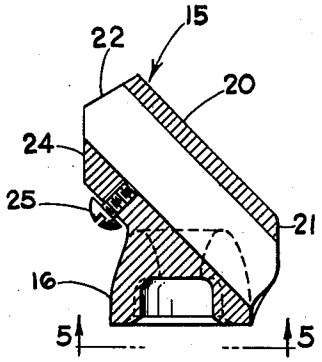


FIG. 2

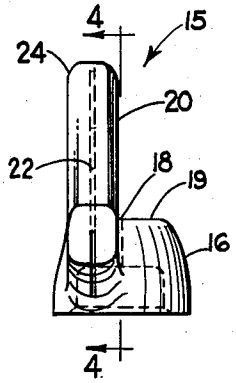


FIG. 3

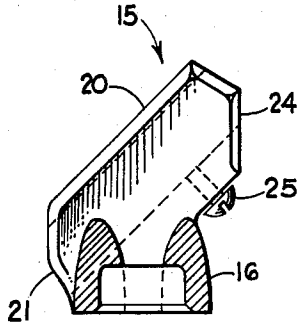


FIG. 4

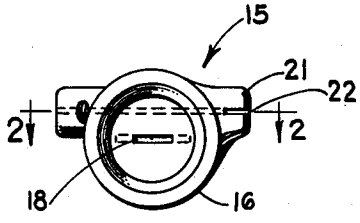


FIG. 5

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ADAPTER HEAD FOR TOOL HANDLE

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1 Claim. (Cl. 30—1)

This invention relates generally to an adapter head for attachment to a tool handle, and more particularly to an adapter head for use with a knife tool where two cutting blades are used interchangeably.

For illustrative purposes, the invention will be described with reference to a conventional linoleum knife, although it will be appreciated that the adapter head of the present invention is applicable, with slight modification, to other tools as well as other knife constructions.

In the cutting and shaping of linoleum, it is usually necessary to use at least two tools. The conventional linoleum knife is first used as a means for forming incisions in the linoleum; thereafter, a tool having a hooked blade is used as a means of cutting through the thickness of the linoleum to sever the two pieces of material along the incision line formed by the use of the linoleum knife. As a consequence, the craftsman must always have both tools at his immediate disposal, preferably on his person, and he must frequently shift from the use of one tool to the other tool.

It will be evident that there are certain time consuming and motion consuming disadvantages to this procedure. In addition, the tools in view of their sharp blades must be handled with some dexterity and when not in use must be placed in a safe position as well as a location where they may be conveniently grasped for subsequent re-use.

It is, therefore, an object of the present invention to provide an improved adapter head for attachment to a tool handle enabling two tool devices to be embodied in one tool structure.

More particularly, an object of the present invention is to provide an improved adapter head for coupling to the handle of a knife whereby two different, extending blades may be incorporated in a single knife structure.

A specific object is to provide an adapter head constructed so as to retain both the cutting blade of the conventional linoleum knife and an additional hooked blade, positioned with respect to each other, so that each blade may be used with maximum skill in the performance of its intended function.

Another specific object of the present invention is to provide an adapter head which may be quickly and simply assembled on the conventional linoleum knife without the need of any changes in the knife's construction.

A still further specific object is to provide an adapter head for use with a linoleum knife which is rugged in construction and yet susceptible of economical manufacture.

Briefly, these and other objects of the present invention are attained by providing an adapter head for coupling to a tool handle comprising a first member which is shaped so as to be mounted on an end portion of the tool handle. The first member is provided with means through which the end of a first tool device may be passed for securing to the tool handle. A second member is additionally formed integrally with the first member, and the second member is provided with means for securely retaining a second tool device.

In a preferred construction, the first member is a cup-shaped structure which may be suitably disposed on a cylindrical boss extending from one end of the tool handle. The closed end of the cup-shaped member is provided with an aperture, for example, in the form of a slot through which one end of the first tool device may be passed to thereafter be attached to the handle. The second member functions as an auxiliary handle, in that it serves as a means of retaining the second tool device, which normally would be embodied in a separate tool construction. For this purpose, it is desirable that the second member be of an elongated structure of sufficient length to enable proper securing of the second tool device. In one form, the second member is provided with an inner slot extending throughout its length. Thus, an inoperative end of the second tool device may be inserted therein, and the working end of the second tool device may extend outwardly from the second member, where it may be utilized for its particular operation. With such a slotted construction, it has been found convenient in practice to use a set screw extending through the wall of the second member as a means of retaining the second tool device.

A better understanding of the invention will be had by reference to the attached drawings in which a preferred embodiment is shown, and in which:

Figure 1 is a perspective view of a linoleum knife with a preferred form of the adapter head of the present invention incorporated therein;

Figure 2 is a sectional view of an adapter head;

Figure 3 is an end view in the direction of the arrows 3—3 of Figure 1 of the adapter head;

Figure 4 is a sectional view in the direction of the arrows 4—4 of Figure 3; and,

Figure 5 is a bottom view of the adapter head in the direction of the arrows 5—5 of Figure 2.

There is shown in Figure 1 an improved linoleum knife having a conventional hollow handle 10 to which is secured a cutting blade 11. The usual means used for securing the first tool device in the form of blade 11 to the handle 10 are well known in the art. For example, in one form the handle 10 is provided with a removable knob 12 having a tubular extension 13 which is threadably connected at 14 to the cutting blade 11.

The present invention primarily resides in the provision of an adapter head 15 adapted to be mounted on an end portion of the handle. For this purpose, the adapter head 15 is provided with a cup-shaped member 16, as seen in the view of Figure 3, designed to be slidably received on a projecting boss 17 extending from the handle 10.

The cup-shaped member 16 is provided with a slot 18, shown more clearly in the view of Figure 5, in its closed end portion 19. Thus, the cutting blade 11 may be passed through the slot 18 and into the handle 10 for securing therein in the same manner as has been used with conventional linoleum knives.

The adapter head additionally includes a second elongated member 20 integrally formed with the cup-shaped member 16 and extending outwardly from the sidewalls of the cup-shaped member 16. The second member 20 is provided with an end portion 21 which is angled into the sidewalls of the cup member 16, as more clearly shown in the view of Figure 5.

The member 20 is provided with a slot 22 which extends throughout its length. The slot 22 is dimensioned so as to receive the particular second tool device being used, which in the view of Figure 1 is a hook blade

23. The hook blade 23 is inserted in the free end 24 of the member 20 and is secured therein by a set screw 25 extending through the side walls of the member 20, as shown clearly in the view of Figure 2.

For the purposes of the particular tool design shown, the free end 24 and the end portion 21 of the second member 20 are angled so as not to project more than a minimum radial distance from the axial center line of the tool, as shown clearly in the views of Figures 2 and 4.

In consequence, it is evident that the adapter 15 does significantly increase the overall dimensions of the linoleum knife structure.

In a preferred construction, the slot 18 and slot 22 are in parallel planes, as shown in Figure 3 and Figure 5, whereby a mere 180° rotation of the tool handle will properly position the particular blade with relation to the linoleum or other material being cut and shaped. In this regard, the cutting blade 11 and hook blade 23 are inserted in their respective slots so that the cutting portion of the cutting blade and the cutting portion of the hook blade extend in opposite directions.

A primary feature of the present invention is that the adapter head 15 is so constructed that when either the blade 11 or blade 23 is being used, the craftsman will have a clear line of vision looking down onto the blade and the related work. Thus, the combining of both blades in one structure through the use of the adapter head 15 of the present invention, in no way hampers the skilled use of either blade as a separate cutting tool. It will also be noted that the second member 20 is angled away from the axis of the handle 10 in the plane of the blade 11. The particular angle used depends to a major extent on the configuration of the cutting portion of the second tool device inserted in the slot 22. With the hook blade 23, as shown in the view of Figure 1, an angle of

approximately 450° is found to be most practical. However, since the member 22 is in a parallel plane to the blade 11, the member 20 may be angled away from the member 16 in a direction providing the maximum leverage for the particular tool device inserted in the slot 22.

It will be apparent from the foregoing description that the adapter head of the present invention adequately provides an effective means of combining two tool devices in a single tool structure without detracting from effective functioning of either tool device. Although the adapter head is particularly applicable to use with a linoleum knife, certain changes and modifications will be apparent to those skilled in the art, whereby the adapter head could be incorporated in other tool structures. The invention, therefore, is not to be thought of as limited to the particular embodiment shown.

What is claimed is:

A linoleum knife provided with an elongated handle, a cutting blade, and an adapter head, said adapter head having a cup-shaped member mounted on said handle in axial alignment therewith having a closed end with a central aperture in which is received said cutting blade, said cup-shaped member having an integral arm extending outwardly in a direction away from said handle, said arm having an elongated slot in a plane parallel to the plane of said blade and dimensioned to receive a hook blade.

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