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KNIFE OR DAGGER

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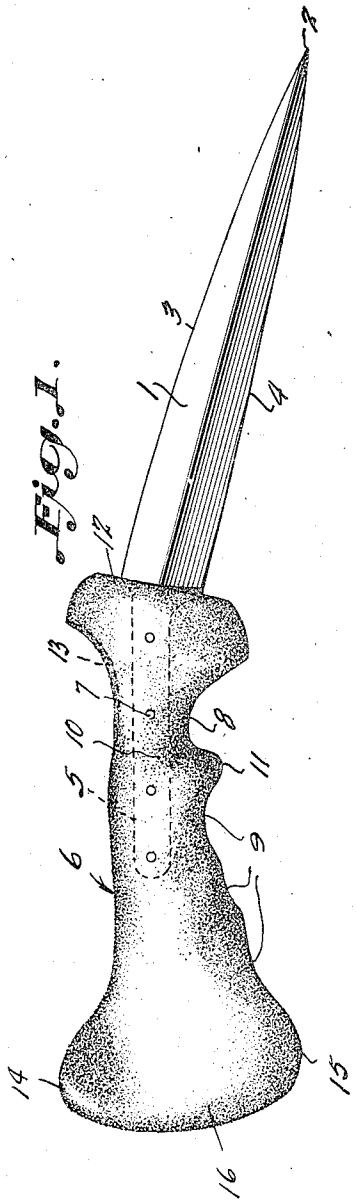

Fig. 1.

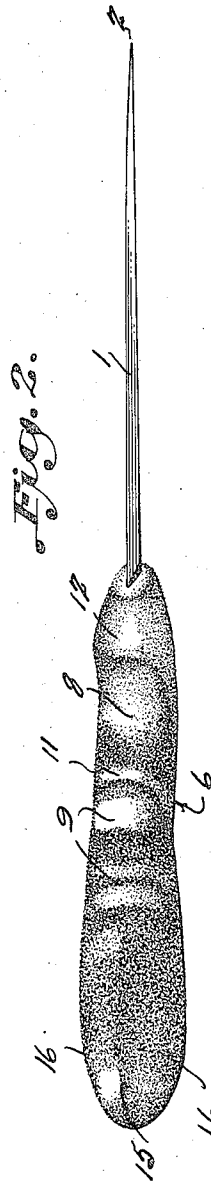

Fig. 2.

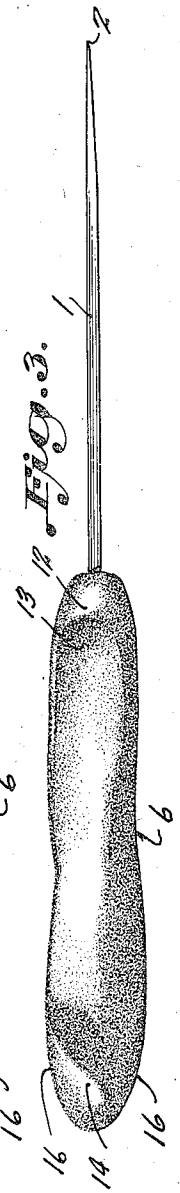

Fig. 3.

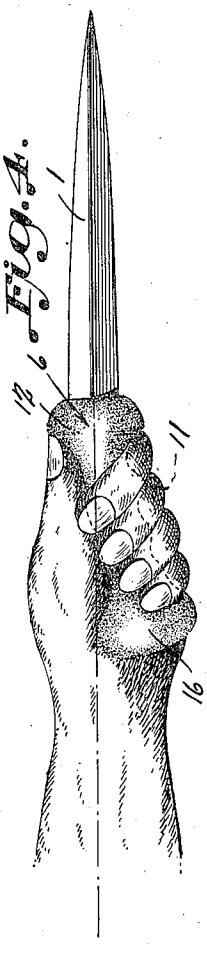

Fig. 4.

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KNIFE OR DAGGER

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4 Claims. (Cl. 30—165)

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The present invention relates to bladed instruments and more particularly to the construction and arrangement of the handle or grip of such instruments.

More specifically, the invention relates to the provision of a grip or handle which is arranged at an angle to the blade of the instrument whereby when the instrument is in use, the blade will present a substantially axial continuation of the forearm of the user while permitting the handle to be firmly grasped by the hand.

While the principles involved herein are particularly adaptable to thrust weapons such as daggers, stabbing knives, swords and the like, they may be applied also with advantageous results to edged tools such as carving and slicing knives to reduce the fatigue element on the user. Whenever the term "knife" is used in the following description, it must be construed as defining pointed instruments formed either with or without a cutting edge.

It is well known that when the human wrist is in an unflexed condition, or in other words, when it is held in a natural position, it may be held more rigidly, and a greater gripping force may be exerted by the fingers. This is particularly important when using the knife as a stabbing instrument as it can be held more securely in the hand and a greater amount of thrust can be imparted to it. Additionally, the fatigue element on the user is substantially reduced because the wrist flexor muscles of the forearm are not tensed.

It is therefore one of the principal objects of the present invention to provide a bladed instrument such as a knife or dagger with a grip which is arranged at an angle to the blade to permit the blade, when in use, to be a substantially axial continuation of the user's forearm.

Another important object is to provide a blade of a knife with a grip angularly disposed to the axis of the blade as above set forth, such grip being shaped to form substantially an impression of the palm, thumb and fingers of the human hand naturally closed about the grip.

Still another object is to provide the blade of a knife with a shank which is bent downwardly at an obtuse angle to the blade to permit the blade to be presented in axial alignment with the user's forearm.

A further object of the invention is to provide a handle or grip for the knife as above described which is formed substantially to correspond to an impression made by the hand when grasping said grip, being enlarged at one of its ends to provide a guard and being somewhat flattened and extended laterally at its butt end to provide a substantial area to be contacted by the palm of the hand to inhibit rotation of the knife when grasped by the hand.

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A still further object is to provide such a grip with a substantial hook adapted to be engaged by the user's forefinger to facilitate drawing the knife toward the user.

Other objects and avantages will be apparent from the following description by reference to a preferred embodiment of my invention which is depicted in the drawings for the purpose of illustrating the principles involved.

In the drawings:

Figure 1 is a side elevational view of a dagger having its grip angularly arranged to the blade in accordance with the conception of this invention.

Figure 2 is a bottom edge view of the knife illustrated in Figure 1.

Figure 3 is an upper edge view of the knife illustrated in Figure 1.

Figure 4 is a diagrammatic view illustrating the position of the knife with respect to the user's hand and arm.

Referring now to the drawings, I have shown a knife having a blade 1 which may be tapered as shown in Figure 1 to a point 2 and also if desired, may be beveled longitudinally to form sharpened cutting edges 3 and 4. Formed integrally with the blade 1 is a shank 5 by means of which a grip, designated generally as 6, may be attached to the knife.

The shank 5 is disposed at an angle to the axis of the blade as is shown in Figure 1. More specifically the shank 5 is bent downwardly, when the knife is in a position of normal use, and forms with the blade an obtuse angle which is such that when the knife is grasped by the user, as shown in Figure 4, the axis of the blade 1 will form a substantial continuation of the axis of the user's forearm. I have found that to depress the shank 5 to an angle of approximately 160° with the blade will provide the above axial alignment of the blade and the forearm with a knife of the type illustrated, but I wish it to be understood that I do not confine myself to such a specific angle because with different styles of blade, this angle will vary somewhat. The hand grip 6 may be attached to the shank 5 by any suitable means such as riveting indicated at 7.

This hand grip, as stated above, is shaped to conform with the palm, thumb and fingers of the user. More specifically, the lower edge of the grip 6 is provided with a relatively deep groove 8 for engagement by the forefinger and shallower grooves 9 adapted to be engaged by the other fingers of the hand. These grooves 8 and 9 are extended over the side portions of the handle, as shown at 10, being directed upwardly over the sides of the grip, gradually decreasing in depth to merge with the surface of the grip. It is to be noted that a substantial ridge 11 is formed between the forefinger groove 8 and the next groove

9 to provide a projecting portion of the handle around which the forefinger may be hooked.

The forward end of the handle 6 is vertically enlarged or extended to form a guard 12. The rear surface of the guard 12 is formed with a depression 13 which extends rearwardly over a portion of the upper surface of the grip, which depression is adapted to receive the user's thumb, as shown in Figure 4. The butt end of the handle 6, as shown in Figures 2 and 3, is somewhat flattened in its horizontal plane and widened, as indicated at 14 and 15, in its vertical plane to provide a substantial flattened surface 16 adapted to be engaged by the palm of the hand to inhibit rotation of the knife when in use.

In use, the knife is grasped, as shown in Figure 4, by the hand with the thumb lying along the upper surface of the handle within the groove 13, the ball of the thumb resting against the guard 12. The fingers are curved around the lower surface of the handle resting in the grooves 8 and 9, the forefinger engaging the projecting ridge 11. When in this position, the flattened and enlarged butt end 15 rests against the heel portion of the user's palm and the blade of the knife presents substantially an axial continuation of the forearm of the user when the hand is held in a natural position, that is, the position in which the wrist is not bent. When the knife is so grasped and the wrist and hand are in this position, a maximum thrust can be imparted to the blade. Also when the wrist is in this natural position, the fingers are enabled to exert their maximum gripping force; the wrist may be held more rigidly and consequently the knife may be used without imparting undue strain on the wrist bones, tendons and muscles.

While I have illustrated a knife which is used primarily for stabbing, it is to be understood that the blade 1 may be formed to function as an edged tool such as a carving or slicing knife. When the knife is employed as such a cutting instrument, the principle involved in positioning the handle at an angle to the blade is important in that it substantially reduces the fatigue element of the user. When a straight handled knife is securely grasped with its blade parallel to the forearm, the wrist must be flexed downwardly tensing the wrist flexor muscles to a degree which soon tires the user. In addition, when the wrist is so bent the fingers tend to loosen their grip on the handle and the attempt to overcome this imposes an added muscular strain. However with the grip affixed to the blade in accordance with this invention, these muscles are relaxed and the knife may be comfortably used over long periods of time.

From the above, it will be seen that I have devised a bladed instrument having a grip so positioned with respect to the blade that the blade will present a substantially axial continuation of the forearm of the user, thereby permitting the user to exert a maximum of thrust to the blade, because the wrist can be held at its most rigid condition and also will permit the instrument to be used with a minimum of fatigue to the user.

While I have shown and described only the preferred embodiment of the invention, I wish it to be understood that many changes may be made by those skilled in the art such as modifying the form of blade employed, the specific angular relation between the blade and handle and the specific comformation of the grip itself, and other changes without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A bladed instrument comprising a blade, a straight shank forming an integral continuation of the blade at an angle of substantially 160° thereto, a hand grip secured axially to the shank, said hand grip shaped to form substantially an impression of the palm and fingers of a closed human hand, vertical extensions formed on the grip adjacent the blade to provide a guard, a thumb engaging depression formed in the surface of the grip and guard opposite the finger engaging grooves, and a substantially enlarged and flattened palm engaging extension on the butt end of the grip.

2. A bladed instrument comprising a substantially straight blade, said blade having a cutting edge, a straight shank integrally formed with and downwardly bent from the blade and presenting an obtuse angle to said cutting edge, a substantially straight grip attached to said shank, finger engaging projections on the lower surface of the grip and a thumb engaging projection on the upper surface of the grip.

3. A knife comprising a blade having a straight cutting edge, a straight shank formed integral with and extending as a continuation of the blade from the hilt thereof at an angle of approximately 160 degrees with respect to the longitudinal axis of the blade, a hand grip for the shank, said grip having a shape similar to that of a closed hand, an enlarged and flattened palm engaging portion formed on the butt end of the grip, and a similarly widened and flattened portion formed on the grip adjacent the blade substantially in alignment with the major axis of the blade cross section and serving as a guard for the thumb and fore finger.

4. A knife comprising a blade having a straight cutting edge, a straight shank formed integral with and extending as a continuation of the blade from the hilt thereof at an angle of approximately 160 degrees with respect to the longitudinal axis of the blade, a hand grip for the shank, said grip having a shape similar to that of a closed hand, an enlarged and flattened palm engaging portion formed on the butt end of the grip, and a similarly widened and flattened portion formed on the grip adjacent the blade substantially in alignment with the major axis of the blade cross section and serving as a guard for the thumb and fore finger, the shape of the grip including a depression formed in one marginal edge of said grip adjacent the guard to receive the thumb of the hand and a rounded projection formed on the opposite marginal edge of the grip to support the index finger of the hand.

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