

PUBLISHED
MAY 25, 1943.
BY A. P. C.

P. JANSEN
KNIFE HANDLES
Filed June 17, 1939

Serial No.
279,774
2 Sheets-Sheet 1

Fig. 1.

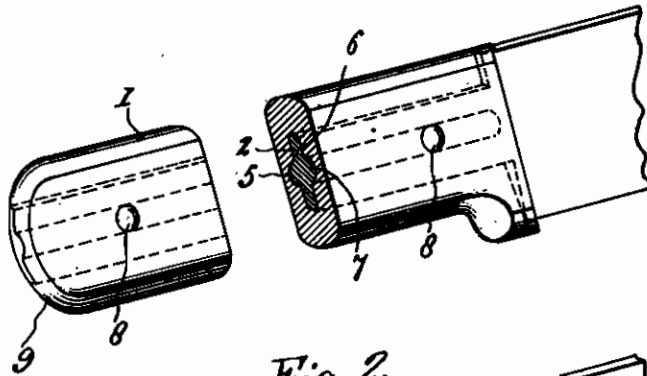


Fig. 2.

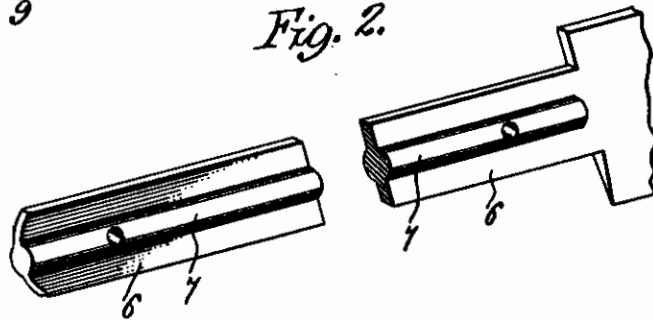


Fig. 3.

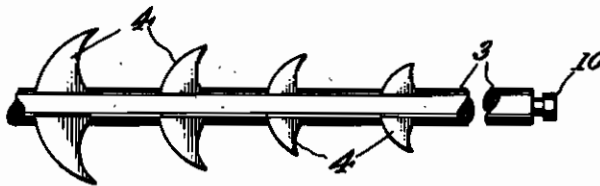
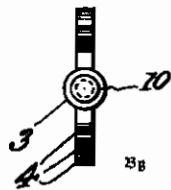


Fig. 4.



Paul Jansen
C. P. Hoepel

Inventor

Attorney

PUBLISHED
MAY 25, 1943.
BY A. P. C.

P. JANSEN
KNIFE HANDLES
Filed June 17, 1939

Serial No.
279,774
2 Sheets-Sheet 2

Fig. 3.

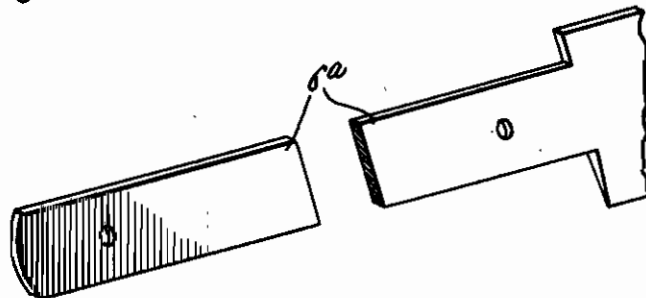
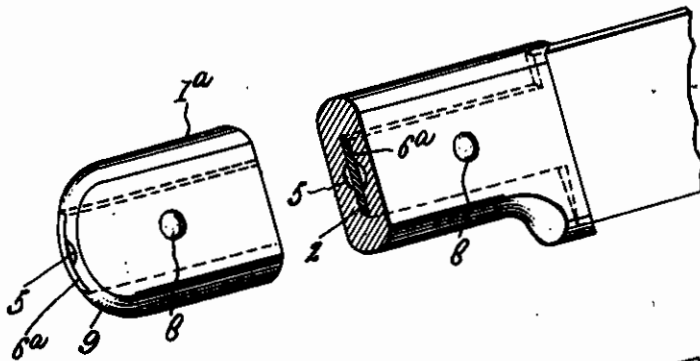


Fig. 6.

Inventor
Paul Jansen
34
C. P. Goepel
Attorney

ALIEN PROPERTY CUSTODIAN

KNIFE HANDLES

Paul Jansen, Solingen, Germany; vested in the
Alien Property Custodian

Application filed June 17, 1939

The present invention relates to improvements in knife handles and methods of forming the same, and has for an object to provide an improved handle and tang fastening particularly for long knives.

Heretofore, in the case of long knives having long tangs, the handle has generally comprised separate plates affixed to opposite sides of the tang; or the handle was grooved along its upper edge to receive the knife tang downwardly into such groove, the tang being then fastened in the groove of the handle by means of rivets or the like.

In accordance with the present invention, the handle is made with an internal bore which is closed on all sides by the original integral wood of the handle and is open at the ends of the handle only. This construction is made possible by first boring the handle longitudinally to provide a substantially central rounded bore. The bore is then widened on both sides by means of a scraping cutter or the like, to form slits at opposite sides of the round central bore, which slits receive the flat knife tang of corresponding cross-section. In this way the knife tang is inserted in an end of the handle and passed entirely through the handle having such closed bore and slits. The handle thus entirely surrounds the knife tang over its entire length and on all sides without any gaps.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views.

Figure 1 is a fragmentary perspective view, with parts broken away and parts shown in section of an improved knife handle constructed in accordance with the present invention.

Figure 2 is a fragmentary perspective view of the knife and the knife tang with parts broken away and parts shown in section.

Figure 3 is a side elevation with parts broken away and parts shown in section, of an improved tool for cutting the interior bore in the handle.

Figure 4 is an end view of the same.

Figure 5 shows a fragmentary perspective view, with parts broken away and parts shown in section of a combined knife and its handle showing a modification, and

Figure 6 is also a fragmentary perspective view of a knife and its tang with parts broken away and parts shown in section.

Referring more particularly to the drawings, 1 designates the handle of the knife which preferably consists of wood and is closed on all four sides. However a longitudinal bore 2 traverses the handle, this bore opening out on both ends of the handle. The central portion of the bore 2 is substantially round in cross-section to permit the introduction of a cylindrical mandrel 3 of a scraping cutter having narrow teeth 4 which progress in size from one end to the other of the mandrel 3. The teeth 4 correspond in thickness approximately to the thickness of a knife tang 6.

By means of the scraping cutters 4, the longitudinal bore 2 is shaped into a narrow slot, being narrow in the direction of the flatwise dimension of the handle 1 but said bore 2 being elongated in the edgewise dimension of the handle 1. The round or enlarged portion of the bore 2 is indicated at 5 and is at approximately the central portion of the lengthwise dimension of said slot. In other words the central portion 5 of the slot is enlarged and preferably has a round cross-section but to opposite sides of this central rounded portion are flat wings extending out in opposite directions from the central rounded part 5.

The knife tang 6 is preferably provided, for instance in the swaging process, with reinforcing and guide ribs 7 which correspond substantially with the bore 2 and its rounded central portion 5. When the tang 6 is inserted into the handle 1, the ribs 7 which collectively make up a circle in cross-section fit preferably snugly into the central portion 5 of the bore 2 and the remaining parts of the tang 6 fit preferably snugly into the narrower wings of the slot or bore 2. The tang 6 is accordingly held in the handle 1 over its entire length, whereby a firm attachment of the handle to the knife is assured. If circumstances so require, transverse rivets 8 are passed through the handle and tang in a well known fashion. The free end of the handle 1 may be rounded off at 9 in accordance with the usual practice, the bore 2 showing through this round end 9. If desired the end of bore 2 at the rounded part 9 may be closed by a suitably shaped inset piece or may be covered by a mounted cap. The wings or slits of the bore 2 may be formed in any suitable manner and the form of the bore 2 may be varied. For instance several longitudinal slits or wings, for instance two crossed wings, may be provided; and for this purpose the tang of the knife would have to possess suitably shaped strips applied at right angles. The requisite formed longitudinal bore may be formed by turning the

scraping cutter 3 in the further treatment to the extent of the required amount, for instance 90°. If circumstances so require scraping cutters 4 having teeth arranged in starlike fashion may also be used.

By means of the invention I am enabled to anchor a knife having a long tang firmly inside a handle which is closed on all sides. As compared with the well-known handles consisting of two riveted-on wooden plates or milled handles, the closed handle possesses the advantage that it always retains its shape and its appearance. The shrinking which often occurs in wooden handles cannot have a disturbing effect with respect to the tang. Whereas, in the case of table knives and other small knives the inserting of the blade into the closed handle by means of a pin-shaped pointed tang suffices, this type of fastening would not be adequate in the case of knives having a long blade, which principally are those intended to be benefited by the present invention, since the forces occurring in cutting would bring about a loosening of the handle in sequence of the long lever arm.

The production of the narrow longitudinal slits, corresponding to about the width of the tang, is made possible by the central bore 5 which being made centrally of the handle and may have a diameter of perhaps six millimeters, admits of the introduction of scraping cutter 3 or a similar tool.

By the arrangement of the ribs 7 provided on the tang 6 and which fit snugly yet slidably in the central part of the bore 5, the firm setting of the tang is assured, and at the same time the tang lies throughout its great length in snug contact with walls of the slot in the handle. Furthermore the inserting of the tang in the handle is greatly simplified since the knife tang follows the prepared bore in the handle without any interference. Therefore no fine operations are necessary.

In practicing the method, the central round bore 5 is first made by an auger or similar tool longitudinally through the central part of the handle 1. This round bore opens out on both ends of the handle 1. The bore 5 will be made of a diameter to snugly and slidably receive the mandrel 3 of the cutting tool. This mandrel is inserted in one end of the bore 5 and it is drawn through the handle by any suitable means, for instance by a cord or wire attached to the head 10. If desired a rigid connection may be made at the point 16, which rigid connection passes all the way through the bore 5 and projects for op-

eration upon the outside of the handle 1 at that end opposite to that at which the mandrel 3 is inserted. The mandrel 3 is then reciprocated back and forth at the same time progressively pulling the mandrel through the bore 5. In this manner the smallest cutter 4 will first encounter the walls of the bore 5 at diametrically opposite sides of said bore and cause the chipping off of the wood. Such cutter is then followed by a cutter of slightly larger diameter or radius, by reason of which the slits started by the first smallest cutter are enlarged. By means of a number of progressively larger cutters 4, the slits 2 at opposite sides of the bore 5 may be extended out to any desired radial distance from the center of the circular bore 5.

Referring more particularly to Figures 5 and 6, a knife having a customary flat tang 6^a is shown, which tang can be received in the handle 1^a as shown in Figure 5 without being affected by the bulged central form of the bore 5. Opposite portions of the tang 6^a are received in the slits at opposite sides of the bore 5, and the tang 6^a simply diametrically spans this central rounded bore 5. Thus the handle produced according to the invention is applicable for use with the ordinary flat tang 6^a or with a tang 6 made conformable to the handle and having the rounded ribs 7.

The rounded form of the bore 7 enables the mandrel 3 of similar form to easily fit into the bore 5 and to easily slide along in the same. The rounded configuration lends itself to this purpose much better than a square or straight sided bore 5 could possibly do.

It will be appreciated that after the central round bore 5 is first made in a handle 1, the tool 3 may be used, its mandrel 3 guided by the rounded walls of the bore 5, to form the flat narrow slits 2 at opposite sides of the enlarged rounded bore 5. Thus the bore 5 and the slits 2 are all made by methods that operate from one or both ends of the handle 1 and which do not require the removal of any part of the side walls of the handle 1 either for the purpose of making the initial bore or slits or for afterwards introducing the tang of the knife; the tang of the knife being also introduced endwise of the handle 1. Thus the entire circumambient closed and integral wall of the handle 1 has not been disturbed from the original growth structure of the natural wood or other substance out of which it is made. Therefore there will be less tendency of the wood to warp or become distorted.

PAUL JANSEN.