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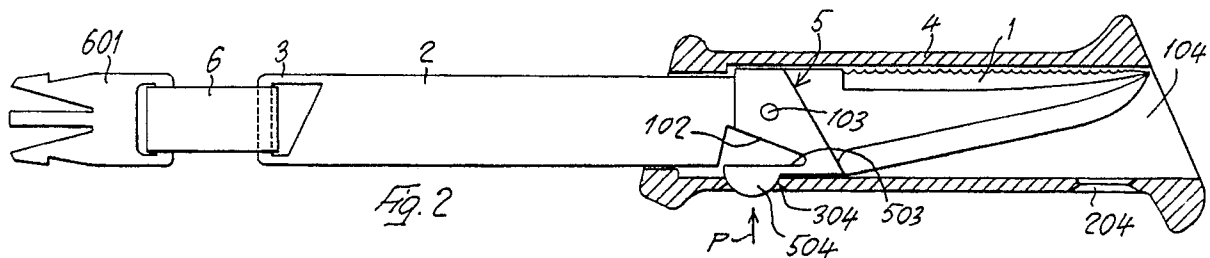
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Diver's knife.

Knife for skin-diving activities, comprising a blade (1), a tang (2) extending from said blade (1), and a tubular member (4) inserted over said tang (2) and adapted to be slid from a first position wherein it covers said blade (1), to a second position wherein it covers said tang (2) and uncovers the blade (1). The blade (1) and the tubular member (4) are provided

with co-operating releasable locking means (204, 304, 504) for firmly holding said parts in both said first and second positions. The knife is equipped with means (6, 201) for connection in a quick-releasable manner to a strap of a skin-diver's equipment as, for example, to his belt.



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Diver's knife

The present invention relates to a knife, particularly suitable for skin-diving activities, but usable as well for other activities.

Conventional knives for skin-divers comprise, in a thoroughly traditional fashion, two separate members, i.e. a sheath, made usually of plastics material, provided with means for connection to a part of a skin-diver's equipment, and a knife comprising a steel blade and a handle, usually of plastics material, secured to the tang of the blade.

The object to the present invention is to provide a knife, particularly suitable for skin-diving activities, comprising only two members, i.e. a blade provided with an integral extension forming a tang having substantially the same length as the blade, and a tubular member inserted over said tang and said blade in such a manner as to be slidable from a first position wherein it covers the blade and acts as a sheath, to a second position wherein it covers said tang and acts as a handle for the blade which is then uncovered. Both the blade and the tubular member are provided with cooperating releasable locking means for firmly holding said tubular member in both said first and second positions. Finally, the knife is equipped with means for connection in a quick-releasable manner to an element of a skin-diver's equipment as, for example, to his ballast-belt or harness.

Further objects and advantages of the knife according to the invention will become apparent from the following detailed description of a preferred embodiment thereof, shown as non-limiting example in the accompanying drawings, wherein:

Figure 1 is a partly sectional view of the knife according to the invention, with the parts shown in the position in which the tubular member has been slid onto the tang to serve as a handle, thus exposing the blade;

Figure 2 is a view similar to Figure 1, with the parts shown in the position in which the tubular member has been slid onto the blade to serve as a sheath;

Figure 3 is a perspective view of the releasable locking means for the slidable tubular member; and

Figure 4 is a perspective view of a device for connecting the knife according to the invention to a belt or the like.

With reference to the drawings and more particularly to Figures 1 to 3 thereof, numeral 1 denotes the blade of the knife. Said blade 1 is provided with a tang 2 in the form of an integral extension having at least the same length as the blade 1. Said tang 2 is, in turn, provided at the free end thereof with a ring-shaped extension 3 for the

purposes which will be described later.

Slidably inserted on the assembly blade 1-tang 2 is a tubular member 4. The tubular member 4, which is made, preferably, of plastics material, is formed with a tubular passage 104 having a cross sectional shape which is substantially complementary to the cross sectional shape of the tang 2, and provided in proximity of the two ends of the tubular passage 104 with two slots 204, 304. The blade 1 is provided with a notch 102 at the region merging with the tang 2. Moreover, the blade 1 is provided at said region with a locking member 5 comprising, as best shown in Figure 3, a bracket-like portion 501 comprising a through-hole 502 which co-operates with a pin 103 passed through the blade 1. Connected to the bracket portion 501 is a resilient tongue 503 provided at one end thereof with a detent 504. Said detent 504 can fit into the slots 204, 304 of the tubular member 4, and it may be released from said slots by depressing its end inwards in the direction of the arrow P of Figure 1 or 2, so as to force it partly into the notch 102.

The operation of the knife described above will be now apparent.

Assuming that the knife is in the position of Figure 2, i.e. with the tubular member 4 disposed on the blade to serve as a sheath, in this position the detent 504 will protrude through the slot 304. In order to expose the blade, a force is exerted in the direction of the arrow P against the end of the detent 504 protruding from the slot 304, pushing it into the notch 102 and, thus, releasing the tubular member 4 from the blade 1. By holding the tubular member 4 stationary and by simultaneously exerting an axial thrust on the tang 2, the blade is projected outwards until it reaches the position shown in Figure 1, wherein the detent 504 snaps into the slot 204. In this position, the tubular member 4 will be positioned on the tang 2 to serve as a handle for the knife. In order to return to the rest position shown in Figure 2, the reverse operations shall be carried out.

The annular extension 3 of the tang 2 is intended for fastening with a member 6 to be connected to the skin-diver's harness. Said member 6 may be, for example, in the form of a resilient hook-like member 601 to be inserted into a complementary member worn by the skin-diver, or it may be in the form of a "velcro" fastening device, or any other suitable device. A simple and particularly suitable device is shown in Figure 4.

With reference to Figure 4, the tubular member 4 comprises, in the two larger outer faces thereof, two grooves 401,402 extending longitudinally over the entire length thereof. The tang 2 comprises a

fork-like extension 201 parallel thereto, the free end of which may be inserted into either one of the two grooves of the tubular member 4, for example, in the illustrated case, the groove 401.

In the rest position of the knife, i.e. in the position of Figure 2 wherein the tubular member 4 serves as a sheath for the blade, the fork-like extension 201 may be easily inserted, due to its resiliency, over a belt 7 forming a part of the skin-diver's equipment, so as to hold the knife. Said extension may be disengaged from the belt 7 as easily, and the knife may be turned into its operative condition by sliding the tang 2 into the tubular member 4 and by simultaneously sliding the extension 201 into the groove 401.

Claims

1. A knife for skin-diving activities, characterized by the fact that it comprises a blade (1), a tang (2) extending from said blade (1), and a tubular member (4) inserted over said tang (2) and adapted to be slid from a first position wherein it covers said blade (1), to a second position wherein it covers said tang (2) and exposes the blade (1).

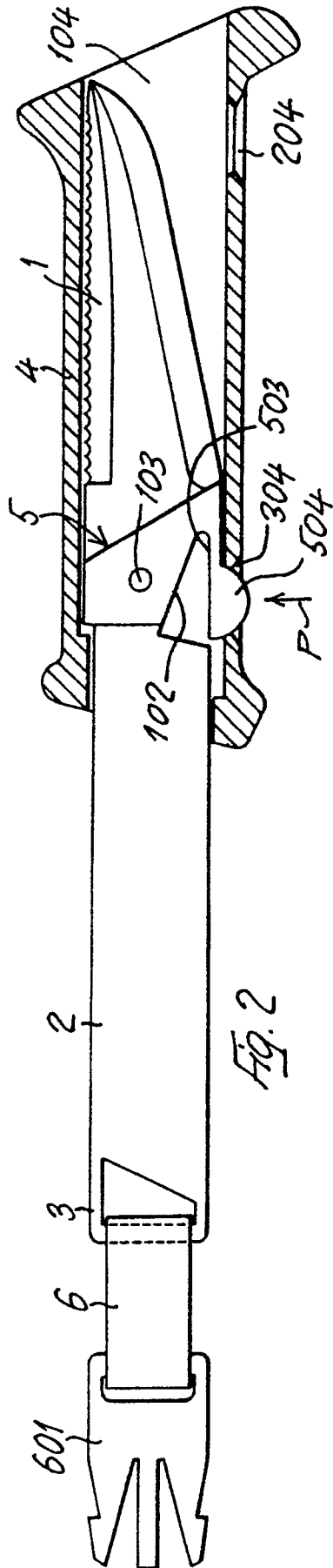
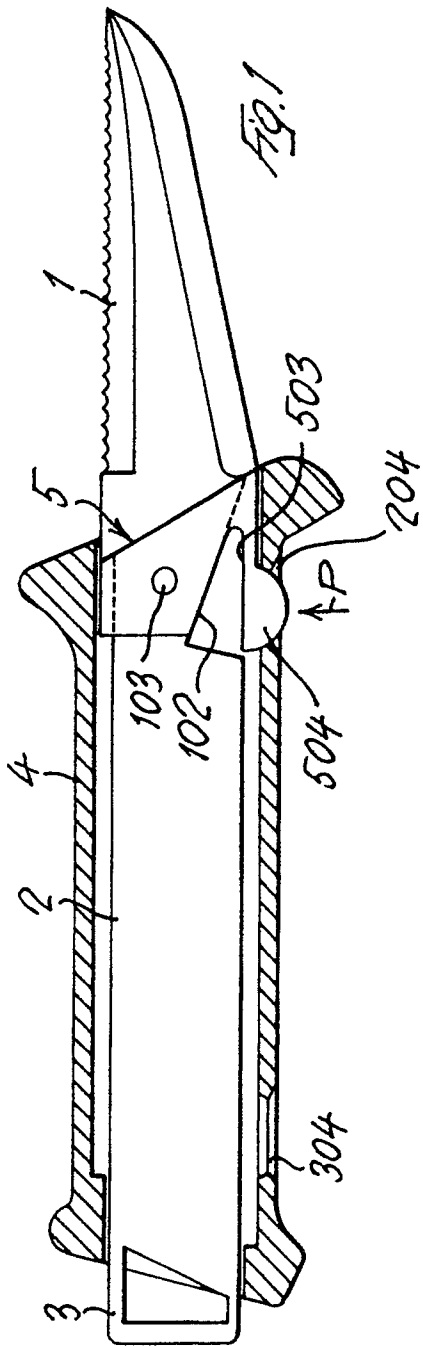
2. A knife according to claim 1, characterized by the fact that said tang (2) is of a length which is equal or slightly longer than that of the blade (1).

3. A knife according to claim 1, characterized by the fact that either said blade (2) or a member (5) associated with said blade, and said tubular member (4) are provided with co-operating releasable locking means (204, 304, 504) to firmly hold said tubular member (4) in said first and second positions.

4. A knife according to claim 1, characterized by the fact that it further comprises means (6, 201) for connection in a quick-releasable manner to a piece of the skin-diver's equipment, for example, his belt, harness, vest, suit, or the like.

5. A knife according to claim 3, characterized by the fact that said locking means comprises two radial slots (304, 204) at the ends of said tubular member (4), and a detent member (504) secured to a resilient tongue (503, which is fixed to said blade (1), and adapted to fit into said radial slots (204, 304).

6. A knife according to claim 4, characterized by the fact that said connecting means comprises a resilient tongue (201) of a length slightly longer than said blade portion (1), secured at one end thereof to the end of said tang (2) and extending parallel to said tang (2) into a groove formed in said tubular member (4).



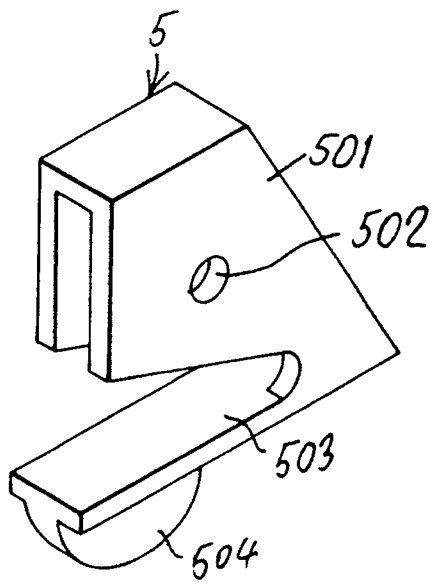


Fig. 3

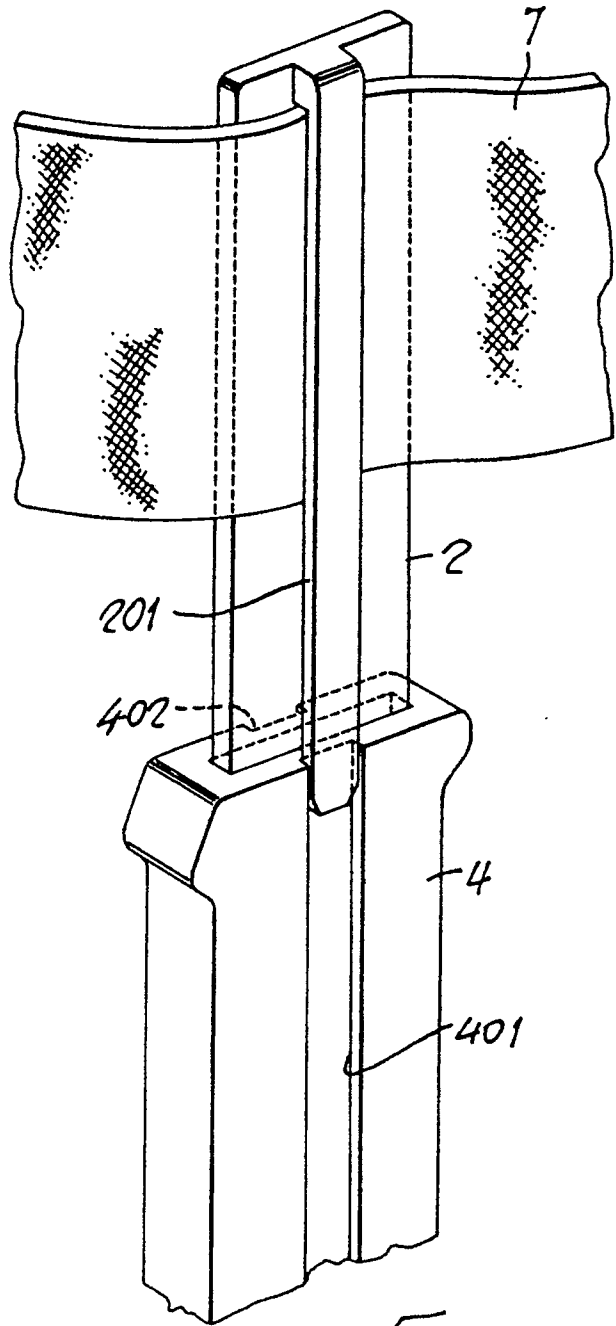


Fig. 4

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 90107241.3
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.')
Y	<u>DE - C - 69 189</u> (HEINRICH) * Totality *	1	B 26 B 1/08 B 26 B 29/02
A	---	3	
Y	<u>GB - A - 2 155 841</u> (MANUFACTURAS Y ARTES DE TOLEDO SL) * Abstract *	1	
A	<u>EP - A1 - 0 212 530</u> (TAKAYAMA SANGYO CO.LTD.) * Totality *	1, 2, 3, 4, 5	
A	<u>US - A - 4 523 379</u> (OSTERHOUT) * Fig. 1-4B *	1, 2, 3	
A	<u>US - A - 2 260 141</u> (HANLE) * Fig. 1-7 *	1, 3	
A	<u>US - A - 2 559 689</u> (TRUESDELL) * Fig. 1-5 *	1, 2, 3	TECHNICAL FIELDS SEARCHED (Int. Cl.')
			B 26 B 1/00 B 26 B 29/00 B 26 B 3/00 B 26 B 11/00
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 27-06-1990	Examiner BRÄUER
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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