

Description

This invention relates to a knife sharpener of the kind which is included in a scabbard for receiving and protecting the blade of a knife. Knife sharpeners of this general kind form the subject of US—A—3,676,961 and US—A—3,774,350 and the present invention is specifically concerned with prior art devices in which additionally the actual sharpening device is mounted on a movable carrier and the knife blade is inserted into the scabbard between that carrier and a latch member. That kind of arrangement is shown in US—A—3,774,350 and in FR—A—2,321,372 in which the knife blade projects over and may engage the pivotal end of the carrier.

Sharpeners of the foregoing kind have achieved widespread use, but there are aspects which disturb their efficient operation. One particular problem is that the user is able to hold the knife in such a way that it is lifted from contact with the sharpening device in the course of a sharpening operation, or at least the pressure between the blade and sharpening device is reduced by user influence, causing an undesired reduction in the sharpening action. This can happen with the sharpeners of US—A—3,774,350 and FR—A—2,321,372, due in part to the manner in which the carrier is arranged within the scabbard housing. In that regard, the carrier is generally pivotally connected to the housing at a location such that the knife blade passes over the pivotal connection and is able to be pressed against the portion of the carrier adjacent that connection so as to lift the blade away from the sharpening device.

A further consequence of the carrier mounting is that the carrier must move through a substantial distance as a knife blade is moved into or out of the scabbard housing. The scabbard housing must have a depth sufficient to permit that movement and that naturally adds to the bulk of the sharpener unit. The sharpener of FR—A—2,321,372 has a comparatively deep housing. Also, the resulting absence of close confinement of the knife blade contributes to the possibility of the blade losing contact with the sharpening device as discussed above. Still further, the relatively large movement of the carrier makes it difficult for the sharpening device to produce a substantially consistent cutting angle along the length of the blade cutting edge.

It is an object of the present invention to provide a sharpener unit of the foregoing kind which avoids or minimizes the difficulties discussed above.

According to the present invention, there is provided a knife scabbard including an elongate housing having a knife receiving passage therein, top and bottom walls of said housing forming upper and lower extremities respectively of said passage, a latch device at a front end of said top wall and forming a forward continuation of that wall, an access opening for said passage at the front end of said latch device, means connecting said latch device to said housing for relative

pivotal movement about an axis which extends transverse to said passage and is located adjacent said top wall front end, a carrier member positioned between said latch device and said bottom wall and being at least partially located within said passage and extending lengthwise thereof, a sharpening device mounted on said carrier member at a location adjacent said access opening such that it is engageable by a knife blade extending through said opening, a pivotal mounting for said carrier member having its axis extending transverse to said passage and biasing means urging said carrier member about the pivot axis thereof to move said sharpening device towards said top wall; characterized in that said pivotal axis of the carrier member is located such that it will intersect with a knife blade located in said passage, and said pivotal axis is located closer to said top wall than to said bottom wall and is at an end of said carrier member which is spaced inwardly of said passage from said latch device pivot axis.

For a better understanding of the present invention, and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:

Figure 1 is a perspective view of one form of knife scabbard according to an embodiment of the invention and which is shown without a knife inserted;

Figure 2 is a cross sectional view taken along line II—II of Figure 1 but showing a knife inserted into the scabbard;

Figure 3 is a cross sectional view taken along line III—III of Figure 2 but omitting the knife blade for convenience of illustration;

Figure 4 is a cross sectional view taken along line IV—IV of Figure 2 but omitting the knife blade for convenience of illustration;

Figure 5 is a cross sectional view taken along line V—V of Figure 2 but omitting the knife blade for convenience of illustration;

Figure 6 is a cross sectional view taken along line VI—VI of Figure 2 but omitting the knife blade for convenience of illustration;

Figure 7 is a cross sectional view taken along line VII—VII of Figure 2 but omitting the knife blade for convenience of illustration;

Figure 8 is a cross sectional view taken along line VIII—VIII of Figure 1;

Figure 9 is a perspective view of the front end part of the carrier member showing the sharpening device removed from that member;

Figure 10 is a diagrammatic view of the major components of the scabbard showing their relative positions when a knife has not been inserted into the scabbard;

Figure 11 is a view similar to Figure 10 but showing the relative positions of the components as adopted when the knife blade is inserted, but omitting the knife blade for convenience of illustration.

The basic concept of the invention can be applied to a wide variety of sharpener construc-

tions, but it will be convenient to hereinafter describe the invention with particular reference to one typical sharpener construction as shown in the accompanying drawings. That example construction includes the usual elongate hollow housing 1 having an access opening 2 at one end and also preferably having means 3 for releasable attachment to a support surface such as a wall or bench top. The housing 1 at least partially contains a carrier 4 and a biasing spring 5 for the carrier 4, and a latch device 6 is connected to the housing 1 to overlie part of the carrier 4 and to form at least part of the access opening 2. The carrier 4 is arranged to support a sharpening device 39.

It is generally convenient to form the main body of the housing 1 by moulding or otherwise forming a suitable plastics material. In the preferred arrangement shown, the housing 1 is composed of a base part 7 and an upper part 8 which are secured together in any appropriate fashion. The base part 7 as shown includes a bottom wall 9 and a rear end wall 10 of the housing 1, and the upper part 8 includes a top wall 11 and two side walls 12 of the housing 1. A relatively shallow wall portion 13 is provided along each longitudinal side of the bottom wall 9 so as to upstand from that wall 9, and a relatively shallow wall portion 14 is also provided across the front of the bottom wall 9. The front edge 15 of the top wall 11 is stepped back from the front wall portion 14 by a substantial distance and portions 16 of the side walls 12 which extend forwardly of that front edge form part of a strap section 17 which functions as hereinafter described. An interconnecting band 18 extends between the front edges of the two side wall portions 16.

According to the arrangement shown, an upwardly facing locating shoulder 19 is formed on the outside of each wall portion 13 to provide a location for the housing upper part 8. The arrangement is such that each side wall 12 sits neatly over a respective one of the wall portions 13 and has its lower edge resting against the associated shoulder 19. A fastening screw 20 may extend through the lower housing part 7 to engage within the other part 8 in order to hold those parts together, and that screw 20 is preferably located substantially midway between the ends of the housing. In addition, a ledge 21 at the top of the rear wall 10 may snap engage with a catch device 22 provided on the top wall 11 so as to resist separation of the walls 10 and 11, at least in the up or down direction. A similar snap engagement may be provided at the front of the two housing parts 7 and 8 between the wall portion 14 and the front band 18 of the housing upper part 8.

The latch device 6 is pivotally connected to the housing 1 and is arranged so as to be partially exposed in the space above the side wall portions 16. In the arrangement shown, the pivotal mounting for the latch device 6 includes two laterally spaced pedestals 23 which upstand from respective opposite sides of the bottom wall 9,

preferably at a location adjacent the front edge 15 of the top wall 11. The pedestals 23 are preferably of a height such as to extend substantially to the top wall. The latch device 6 is arranged to extend between and be pivotally connected to the upper end portion of each pedestal 23 and for that purpose a short axle section 24 provided on each side of the latch device 6 engages within a hole provided in a respective one of the pedestals 23. The axis 25 of that pivotal connection extends transverse to the knife receiving passage 26 provided within the housing 1 and is located between the front and rear ends of the latch device 6.

The latch device 6 as shown has top and side wall sections 27 and 28, and the top wall section 27 forms a forward continuation of the housing top wall 11 when a knife blade 29 is fully inserted into the housing 1 as shown in Figure 2. The side wall sections 28 may fit neatly between the housing side walls 12 and preferably retain some degree of overlap with those side walls 12 in the fully inserted position of the knife blade 29. A passage 30 for the knife blade 29 extends longitudinally through the latch device 6 and preferably includes narrow guide groove 31 on the underside of the top wall section 27 and which receives an upper edge portion of the knife blade 29 to provide some lateral support for the blade 29. It is also preferred that the latch device 6 includes stop means 32 which is engageable with the knife handle 33 to prevent inward movement of the knife blade 29 beyond a fully inserted position as shown in Figure 2.

The latch device 6 includes a reaction portion 34 which projects rearwardly from the pivot mounting 23, 24 as best seen in Figures 3 and 8. The reaction portion 34 engages against an upper surface 35 of the carrier 4 at a location as hereinafter described, and is divided into two laterally spaced parts 36 by a slot 37 which in effect forms a continuation of the guide groove 31. Thus, the two parts 36 are located on respective opposite sides of a knife blade 29 positioned within the housing 1. As shown in Figure 4, the guide groove 31 preferably extends through the pivotal mounting of the latch device 6 so as to intersect with the pivot axis 25. Such an arrangement is not essential, but does aid in providing a compact assembly.

The carrier 4 is an elongate member having a front section 38 which carries the sharpening device 39 and a rear section 40 which is divided by a longitudinal slot 41 to comprise two laterally spaced arms 42 which extend rearwardly from the front section 39. An upwardly opening cavity 43 is provided in the front section 38 to provide a location for the sharpening device 39 and in the form shown, front and rear sides 44 and 45 respectively of that cavity 43 provide stop surfaces for the sharpening device 39 (Figure 2).

Any suitable sharpening device 39 may be adopted, but in the preferred form shown it comprises a pair of plates 46 of suitable material arranged in overlapped relationship so that a "V" shaped sharpening recess 47 is defined between

them. The plates 46 are carried by a mounting block 48 which is located within the cavity 43 and is pivotally connected to the carrier 4 for relative movement about an axis 49 extending transverse to the longitudinal axis of the housing 1. It is preferred, as shown, that the mounting block 48 is snap engaged with the carrier 4 and for that purpose cylindrical axle portions 50 of the block 48 snap engage within suitable openings 51 provided in respective sides of the cavity 43 (see Figures 3 and 9). An integral plate spring 52 may extend from the underside of the block 48 for engagement with opposed surfaces 53 (Figure 2) of the carrier 4 to provide a forward and rearward bias in the extreme rearward and forward positions respectively of the sharpening device 39.

The sharpening device 39 is preferably positioned on the carrier 4 so as to be within the confines of the latch device 6 and adjacent the front end thereof as shown in Figure 2. A lead recess or groove 54 is provided in the front section 38 of the carrier 4 at a location forwardly of the sharpening device 39 so as to assist in locating a knife blade 29 for engagement with that device 39. That recess or groove 54 is preferably exposed forwardly of the latch device 6 as shown in Figure 1 and may have a sloping base or ramp surface 55. Furthermore, the sides of the recess or groove 54 may diverge upwardly as shown, at least over a front section located remote from the sharpening device 39.

Pivotal mounting of the carrier 4 is effected at the rear end portion of the carrier arms 42. That rear end portion is separated into two laterally spaced parts 56 by the slot 41 and cooperates with mounting means as hereinafter described. In the form shown, at least one of the end parts 56 includes a cylindrical section 57 which projects laterally from the main body of the associated arm 42 and engages against an arcuate bearing surface 58 which forms part of the aforementioned mounting means. The bearing surface 58 may be formed by a section 59 projecting downwardly from and formed integral with the top wall 11 and is arranged to provide a limit for upward and rearward movement of the rear end portion of the carrier 4. Any suitable means may be provided to releasably retain the cylindrical section 75 in engagement with the bearing surface 58, but the biasing spring 5 preferably serves that function as hereinafter described. The bearing surface 58 is located rearwardly of the latch device pivot 23, 24 and is at a height such that in the fully inserted condition of a knife blade 29, the pivot axis 70 of the carrier 4 is intersected by that blade 29. As shown, that axis 70 is located closer to the top wall 11 than the bottom wall 9 thereof, and in the fully inserted position of the blade 29 the axis 70 is preferably close to the upper edge 60 of that blade 29.

The carrier biasing spring 5 may take any appropriate form, but in the form shown it comprises a helical coil section 61 with two arms 62 and 63 extending laterally from respective opposite ends of that section 61. The two arms 62 and

63 extend generally in the same direction, but in the relaxed condition of the spring 5 they diverge away from the coil section 61 as shown in Figure 8. In the mounted condition of the spring 5, it is located to extend along one side of the carrier 4 with the coil section 61 engaging against the front side of the cylindrical section 57 which engages the arcuate bearing surface 58. The coil section 61 holds that cylindrical section 57 against the bearing surface 58 and therefore constitutes part of the aforementioned mounting means. The other cylindrical section 57 of the carrier 4 may rest on the upper edge 64 (Figure 4) of an internal wall portion 65 which upstands from the bottom wall 9. As clearly shown in Figure 6, the wall portion 65 and spring coil section 61 are located on respective opposite sides of a knife blade located in the housing 1.

The spring arm 62 has its terminal end portion 66 engaged with a suitable retainer 67 on the housing bottom wall 9 and the other arm 63 has its terminal end portion 68 (Figure 3) engaging beneath the carrier 4, preferably directly beneath the sharpening device 39. The arrangement is such that the spring arms 62 and 63 are tensioned so there is a tendency for their terminal end portions 67 and 68 to move apart. It is preferred as shown that the two arms 62 and 63 extend along respective opposite sides of an internal wall portion 69 which serves to retain those arms 62 and 63 in correct position relative to each other and other parts of the scabbard.

With the foregoing arrangement, the biasing spring 5 pushes the front section 38 of the carrier 4 upwardly to adopt a scabbard unloaded position which is shown in Figures 1 and 7. It is preferred that the reaction portion 34 of the latch device 6 engages with the upper surface 35 of the carrier 4 at a location between the carrier and latch pivot axes 70 and 25 so that upward movement of the carrier 4 causes upward movement of the reaction portion 34 of the latch device 6. The arrangement is preferably such that there is not a significant difference between the degree of movement of the latch device 6 and carrier 4 respectively when moving between the loaded and unloaded conditions of the scabbard (Figures 1 and 8 respectively).

In the unloaded condition of the scabbard, the access opening 2 is defined between the latch device 6 and carrier 4 as shown in Figure 1, but is relatively confined so that when a knife blade 29 is inserted the tip portion 72 of the blade cutting edge 73 (Figure 2) is urged to engage the sharpening device 39. Penetration of the blade 29 into the scabbard passage 26 causes progressive enlargement of the access opening 2 by forcing the latch device 6 and carrier 4 to move apart at their front ends. Since the biasing spring 5 acts on the carrier 4 substantially directly beneath the sharpening device 39, there is adequate sharpening pressure between that device 39 and the knife blade 29 at the commencement of the blade inward movement. Furthermore, the magnitude of that sharpening pressure remains substantially the same

as the knife is moved inwards because of the relatively small degree of movement of the carrier 4 between the unloaded and fully loaded conditions. That small degree of movement also enables a relatively consistent cutting angle to be formed along the cutting edge 73 of the knife blade 29. Figures 10 and 11 show in diagrammatic form the relatively small and substantially equal movements of the latch device 6 and carrier 4.

The particular mounting of the carrier 4 also enables the overall height of the scabbard to be kept to a minimum. In addition, the split nature of the rear end portion of the carrier 4 enables that part of the carrier 4 to act as a guide which provides lateral support to a knife blade 29 inserted into the scabbard passage 26. Furthermore, the manner of mounting is such that the carrier 4 can be readily withdrawn from the housing 1. In that regard, it is only necessary to apply a sufficient force to ramp the coil section 61 of the biasing spring 5 downwards to clear the engaging cylindrical section 57 of the carrier 4. Replacement of the carrier 4 can be effected in a similar manner.

Apart from the functional advantages discussed above, a sharpener and scabbard unit as described has the advantage of relative simplicity. The housing 1 for example can be formed of two parts held together by a single screw, and even that screw can be omitted in smaller versions of the unit. The latch device 6 and the carrier 4 can each be formed of a single moulding and each can be snap engaged with the housing 1. Similarly, the sharpening device 39 can be snap engaged with the carrier 4. Manufacture and assembly of the unit is therefore simplified.

Yet another advantage is the almost universal applicability of the various components of the sharpener and scabbard unit. Scabbard housings 1 of different lengths and/or heights will be required to cope with a wide range of knife blade configurations and sizes, but the same carrier 4 and biasing spring 5 can be used in all such housings. The latch device 6 need only be altered in size for deep blade knives.

A further advantage arises out of the particular spring arrangement described in that it reduces torsional stress on the carrier 4 thereby enabling the carrier 4 to be made of lighter construction than in prior sharpener units of the same general kind. Furthermore, as stated above, the spring 5 enables substantially constant sharpening pressure to be applied to the knife blade 29 over its entire length thereby promoting consistent sharpening right up to the tip 72 of the blade 29.

Assembly of the sharpener and scabbard unit is also simplified by the fact that the carrier 4, biasing spring 5 and latch device 6 are all assembled on the base part 7 of the housing 1 independent of the housing upper part 8.

Mounting means 3 for the scabbard housing 1 may include a plate-like member 74 which is located within a recess 75 in the underside of the housing bottom wall 9 at a front end portion of that wall 9 (Figures 2 and 3). Retaining means on

that member 74 cooperates with the housing 1 to resist separation of the housing 1 from the member 74. In the example shown, the retaining means includes two lugs 76 and 77 which project upwardly from the plate-like member 74 and are spaced apart in the longitudinal direction of the housing 1 (Figure 2). Each lug 76 and 77 is arranged to extend through a respective opening in the housing bottom wall 9 so as to resist relative longitudinal movement of the housing 1. The rearmost lug 76 may have a sloping rear edge 78 so as to overlie part of the bottom wall 9 and a spring detent 79 at the front of the plate-like member 74 may snap engage with the band 18 of the housing upper part 8. With that arrangement, release of the spring detent 79 is required to allow separation of the housing 1 from the plate-like member 74.

It is a feature of the mounting means 3 described that the spring detent 79 is the only part of the means 3 which is visible when the scabbard housing 1 is in position on the mounting means 3. Also, the same mounting means 3 is usable with a wide range of scabbard housing sizes. The plate-like member 74 can be secured to a support in any appropriate manner.

Claims

1. A knife scabbard including, an elongate housing (1) having a knife receiving passage (26) therein, top and bottom walls (11, 9) of said housing (1) forming upper and lower extremities respectively of said passage (26), a latch device (6) at a front end of said top wall (11) and forming a forward continuation (27) of that wall (11), an access opening (2) for said passage (26) at the front end of said latch device (6), means (24) connecting said latch device (6) to said housing (1) for relative pivotal movement about an axis (25) which extends transverse to said passage (26) and is located adjacent said top wall front end (15), a carrier member (4) positioned between said latch device (6) and said bottom wall (9) and being at least partially located within said passage (26) and extending lengthwise thereof, a sharpening device (39) mounted on said carrier member (4) at a location adjacent said access opening (2) such that it is engageable by a knife blade extending through said opening (2), a pivotal mounting for said carrier member (4) having its axis (70) extending transverse to said passage (26) and biasing means (5) urging said carrier member (4) about the pivot axis (70) thereof to move said sharpening device (39) towards said top wall (11); characterized in that said pivotal axis (70) of the carrier member (4) is located such that it will intersect with a knife blade located in said passage (26), and said pivotal axis (70) is located closer to said top wall (11) than to said bottom wall (9) and is at an end of said carrier member (4) which is spaced inwardly of said passage (26) from said latch device pivot axis (25).

2. A knife scabbard according to claim 1, further characterized in that said latch device (6) includes

as the knife is moved inwards because of the relatively small degree of movement of the carrier 4 between the unloaded and fully loaded conditions. That small degree of movement also enables a relatively consistent cutting angle to be formed along the cutting edge 73 of the knife blade 29. Figures 10 and 11 show in diagrammatic form the relatively small and substantially equal movements of the latch device 6 and carrier 4.

The particular mounting of the carrier 4 also enables the overall height of the scabbard to be kept to a minimum. In addition, the split nature of the rear end portion of the carrier 4 enables that part of the carrier 4 to act as a guide which provides lateral support to a knife blade 29 inserted into the scabbard passage 26. Furthermore, the manner of mounting is such that the carrier 4 can be readily withdrawn from the housing 1. In that regard, it is only necessary to apply a sufficient force to ramp the coil section 61 of the biasing spring 5 downwards to clear the engaging cylindrical section 57 of the carrier 4. Replacement of the carrier 4 can be effected in a similar manner.

Apart from the functional advantages discussed above, a sharpener and scabbard unit as described has the advantage of relative simplicity. The housing 1 for example can be formed of two parts held together by a single screw, and even that screw can be omitted in smaller versions of the unit. The latch device 6 and the carrier 4 can each be formed of a single moulding and each can be snap engaged with the housing 1. Similarly, the sharpening device 39 can be snap engaged with the carrier 4. Manufacture and assembly of the unit is therefore simplified.

Yet another advantage is the almost universal applicability of the various components of the sharpener and scabbard unit. Scabbard housings 1 of different lengths and/or heights will be required to cope with a wide range of knife blade configurations and sizes, but the same carrier 4 and biasing spring 5 can be used in all such housings. The latch device 6 need only be altered in size for deep blade knives.

A further advantage arises out of the particular spring arrangement described in that it reduces torsional stress on the carrier 4 thereby enabling the carrier 4 to be made of lighter construction than in prior sharpener units of the same general kind. Furthermore, as stated above, the spring 5 enables substantially constant sharpening pressure to be applied to the knife blade 29 over its entire length thereby promoting consistent sharpening right up to the tip 72 of the blade 29.

Assembly of the sharpener and scabbard unit is also simplified by the fact that the carrier 4, biasing spring 5 and latch device 6 are all assembled on the base part 7 of the housing 1 independent of the housing upper part 8.

Mounting means 3 for the scabbard housing 1 may include a plate-like member 74 which is located within a recess 75 in the underside of the housing bottom wall 9 at a front end portion of that wall 9 (Figures 2 and 3). Retaining means on

that member 74 cooperates with the housing 1 to resist separation of the housing 1 from the member 74. In the example shown, the retaining means includes two lugs 76 and 77 which project upwardly from the plate-like member 74 and are spaced apart in the longitudinal direction of the housing 1 (Figure 2). Each lug 76 and 77 is arranged to extend through a respective opening in the housing bottom wall 9 so as to resist relative longitudinal movement of the housing 1. The rearmost lug 76 may have a sloping rear edge 78 so as to overlap part of the bottom wall 9 and a spring detent 79 at the front of the plate-like member 74 may snap engage with the band 18 of the housing upper part 8. With that arrangement, release of the spring detent 79 is required to allow separation of the housing 1 from the plate-like member 74.

It is a feature of the mounting means 3 described that the spring detent 79 is the only part of the means 3 which is visible when the scabbard housing 1 is in position on the mounting means 3. Also, the same mounting means 3 is usable with a wide range of scabbard housing sizes. The plate-like member 74 can be secured to a support in any appropriate manner.

Claims

1. A knife scabbard including, an elongate housing (1) having a knife receiving passage (26) therein, top and bottom walls (11, 9) of said housing (1) forming upper and lower extremities respectively of said passage (26), a latch device (6) at a front end of said top wall (11) and forming a forward continuation (27) of that wall (11), an access opening (2) for said passage (26) at the front end of said latch device (6), means (24) connecting said latch device (6) to said housing (1) for relative pivotal movement about an axis (25) which extends transverse to said passage (26) and is located adjacent said top wall front end (15), a carrier member (4) positioned between said latch device (6) and said bottom wall (9) and being at least partially located within said passage (26) and extending lengthwise thereof, a sharpening device (39) mounted on said carrier member (4) at a location adjacent said access opening (2) such that it is engageable by a knife blade extending through said opening (2), a pivotal mounting for said carrier member (4) having its axis (70) extending transverse to said passage (26) and biasing means (5) urging said carrier member (4) about the pivot axis (70) thereof to move said sharpening device (39) towards said top wall (11); characterized in that said pivotal axis (70) of the carrier member (4) is located such that it will intersect with a knife blade located in said passage (26), and said pivotal axis (70) is located closer to said top wall (11) than to said bottom wall (9) and is at an end of said carrier member (4) which is spaced inwardly of said passage (26) from said latch device pivot axis (25).
2. A knife scabbard according to claim 1, further characterized in that said latch device (6) includes



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a reaction portion (34) which extends into said passage (26) away from the pivot axis (25) of said latch device (6) and said reaction portion (34) is engageable with an upper surface (35) of said carrier member (4) at a position between the two said pivot axes (25, 70).

3. A knife scabbard according to claim 2, wherein a guide groove (31) is provided beneath said top wall continuation (27) for slidably receiving an upper edge portion of a knife blade and thereby providing lateral support for said blade.

4. A knife scabbard according to claim 3, wherein said guide groove (31) intersects the pivot axis (25) of said latch device (6).

5. A knife scabbard according to claim 2, 3 or 4, wherein said reaction portion (34) is divided into two laterally spaced parts (36) each of which is adapted to be located on a respective side of a knife blade positioned within said passage (26).

6. A knife scabbard according to any one of claims 1—5, wherein said latch device (6) has two laterally spaced side walls (28) which extend forwardly of said top wall front end (15), and portion of said carrier member (4) which includes said sharpening device (39) is receivable between said side walls (28).

7. A knife scabbard according to any one of claims 1—6, wherein said biasing means (5) comprises a spring which acts between said carrier member (4) and said housing (1), and a portion (61) of said spring (5) forms part of said pivotal mounting and is arranged to releasably retain said carrier member (4) in assembly with said housing (1).

8. A knife scabbard according to claim 7, wherein said spring portion (61) comprises a coiled portion of the spring (5) which acts against an end portion (56) of said carrier member (4) to resiliently retain that end portion (56) in pivotal engagement with a curved bearing surface (58) which forms part of said pivotal mounting and is an integral part of said housing top wall (11).

9. A knife scabbard according to claim 8, wherein said end portion (56) includes a cylindrical part (57) which is coaxial with the pivotal axis (70) of said carrier member (4), and said bearing surface (58) and spring coiled portion (61) engage said cylindrical part (57) on respective opposite sides thereof.

10. A knife scabbard according to claim 8 or claim 9, wherein said bearing surface (58) and said spring coiled portion (61) are located on one side of a median plane (71) of said passage (26) so that they are located beside a broad surface of a knife blade positioned with said passage (26).

11. A knife scabbard according to any one of claims 7 to 10, wherein said spring (5) includes two arms (62, 63) extending generally forwardly of said spring portion (61), a terminal end portion (66) of one said arm (62) engages with an abutment (67) connected to said bottom wall (9), a terminal end portion (68) of the other said arm (63) engages said carrier member (4) at a position adjacent said sharpening device (39), and said spring (5) is biased so that said arms (62, 63) tend

to move apart about a fulcrum formed by said spring portion (61).

12. A knife scabbard according to claim 11, wherein said spring arms (62, 63) extend on respective opposite sides of an internal wall portion (69) of said housing (1) and that wall portion (69) serves to retain the spring arms (62, 63) in correct position relative to each other and to other parts of said scabbard.

13. A knife scabbard according to any one of claims 1 to 12, wherein said latch means (6) includes stop means (32) which is engageable with a handle of a knife to limit penetration of said knife into said passage (26).

14. A knife scabbard according to claim 1, wherein the carrier member (4) is positioned between the forward continuation (27) and the bottom wall (9) and extends lengthwise into the passage (26), mounting means for said carrier member (4) is positioned within the passage (26) in spaced relation to said latch device pivot (25), with an end portion (56) of said carrier member (4) cooperating with said mounting means to allow pivotal movement of said carrier member (4) relative to said housing (1) about the axis (70) which passes through said end portion (56), the pivotal axis (70) of said carrier member (4) is located closer to said top wall (11) than said bottom wall (9), said end portion (56) comprises two laterally spaced parts which are arranged so that a knife blade can be received between them and thereby intersect said pivotal axis (70) of the carrier member (4), portion (61) of said biasing spring (5) forms part of said mounting means and is arranged such that said end portion (56) snap engages with said mounting means and is removable therefrom, a further portion (68) of said spring (5) engages said carrier member (4) at a location adjacent said sharpening device (39) so as to urge said carrier member (4) about the pivot axis (70) thereof to move said sharpening device (39) towards said top wall (11), and a reaction portion (34) of said latch device (6) extends into said passage (26) and is engageable with an upper surface (35) of said carrier member (4) at a position between the two said pivot axes (25, 70).

15. A knife scabbard according to claim 14, wherein said housing (1) is composed of two parts (7, 8), one said part (7) includes said bottom wall (9) and the other part (8) includes said top wall (11), a rear end wall (10) is formed integral with said bottom wall (9), and two laterally spaced side walls (12) are formed integral with said top wall (11).

16. A knife scabbard according to claim 15, wherein said two housing parts (7, 8) are retained against separation by coaction between said top and rear walls (11, 10) and coaction between a wall portion (14) upstanding from said bottom wall (9) at the front end thereof and a strap section (16) which extends forwardly from each said side wall (12) and across the front of said wall portion (14).

17. A knife scabbard according to claim 16, wherein further retainer means for said housing



parts (7, 8) comprises a screw (20) coacting with both said top and bottom walls (11, 9) at a location between the front and rear ends thereof.

18. A knife scabbard according to any one of claims 14 to 17, wherein said connecting means for the latch device (6) includes two pedestals (23) extending upwardly from said bottom wall (9) in laterally spaced relationship so as to receive a knife blade between them, and cylindrical axle portions (24) of said latch device (6) each of which rotatably locates within a hole at an upper end of a respective one of said pedestals (23).

19. A knife scabbard according to any one of claims 14 to 18, wherein the first said portion (61) of said biasing spring (5) engages one said end portion part (56) of the carrier member (4) and resiliently urges that part (56) against an arcuate bearing surface (58) formed integral with said top wall (11), and the other said end portion part (56) is supported by an internal wall portion (65) upstanding from said bottom wall (9) and located so that a knife blade positioned in said passage (26) will have said internal wall portion (65) on one side and said biasing spring first portion (61) and said bearing surface (58) on the other side thereof.

Patentansprüche

1. Messerscheide mit einem länglichen Gehäuse (1) mit einem Messeraufnahmebereich (26) in diesem, mit oberen und Bodenwänden (11, 9) des Gehäuses (1), die obere bzw. untere Abschlüsse des Messeraufnahmebereichs (26) bilden, mit einer Sperrvorrichtung (6) an einem vorderen Ende der oberen Wand (11) und unter Ausbildung einer Fortsetzung (27) dieser Wand (11) nach vorne, mit einer Zugangsöffnung (2) für den Messeraufnahmebereich (26) an dem vorderen Ende der Sperrvorrichtung (6), mit einer Vorrichtung (24), die die Sperrvorrichtung (6) mit dem Gehäuse (1) für eine relative Schwenkbewegung um eine Achse (25) verbindet, die sich quer zu dem Messeraufnahmebereich (26) erstreckt und die angrenzend an das Oberwand-Vorderende (15) angeordnet ist, mit einem Trägerteil (4), das zwischen der Sperrvorrichtung (6) und der Bodenwand (8) angeordnet und mindestens teilweise in dem Messeraufnahmebereich (26) und sich längs hierzu erstreckend angeordnet ist, mit einer Schärfvorrichtung (39), die auf dem Trägerteil (4) an einer Stelle angrenzend an die Zugangsöffnung (2) derart angeordnet ist, daß sie mit einem Messerblatt, das sich durch die Öffnung (2) erstreckt, in Eingriff gerät, mit einem Schwenklager für das Trägerteil (4) mit einer Achse (70), die sich quer zu dem Messeraufnahmebereich (26) erstreckt und mit einer Vorspannvorrichtung (5), die das Trägerteil (4) um die Schwenkachse (70) des Schwenklagers drückt oder zieht, um die Schärfvorrichtung (39) zu der oberen Wand (11) zu bewegen, dadurch gekennzeichnet, daß die Schwenkachse (70) des Trägerteils (4) derart angeordnet ist, daß sie sich mit einem in dem Messeraufnahmebereich (26) befindlichen

Messerblatt schneidet, und daß die Schwenkachse (70) näher an der oberen Wand (11) als an der Bodenwand (9) und an einem Ende des Trägerteils (4) angeordnet ist, das im Abstand von der Sperrvorrichtung-Schwenkachse (25) zu dem Messeraufnahmebereich (26) einwärts angeordnet ist.

2. Messerscheide nach Anspruch 1, dadurch gekennzeichnet, daß die Sperrvorrichtung (6) einen Reaktionsbereich (34) aufweist, der sich in den Messeraufnahmebereich (26) weg von der Schwenkachse (25) der Sperrvorrichtung (6) erstreckt, und daß der Reaktionsbereich (34) mit der oberen Oberfläche (35) des Trägerteils (4) an einer Stellung zwischen den beiden Schwenkachsen (25, 70) in Eingriff oder in Anlage bringbar ist.

3. Messerscheide nach Anspruch 2, dadurch gekennzeichnet, daß eine Führungsnut (31) unterhalb der Fortsetzung (27) der Oberwand vorgesehen ist, in welcher ein oberer Kantenbereich eines Messerblatts gleitbeweglich aufnehmbar ist und mit welcher eine seitliche Abstützung für das Blatt geschaffen werden kann.

4. Messerscheide nach Anspruch 3, dadurch gekennzeichnet, daß die Führungsnut (31) die Schwenkachse (25) der Sperrvorrichtung (6) schneidet.

5. Messerscheide nach einem der Ansprüche 2, 3 oder 4, dadurch gekennzeichnet, daß der Reaktionsbereich (34) in zwei seitliche voneinander beabstandete Bereiche (36) geteilt ist, von denen jeder so ausgelegt ist, daß er sich auf der betreffenden Seite eines in dem Messeraufnahmebereich (26) angeordneten Messerblattes befindet.

6. Messerscheide nach einem der Ansprüche 1 bis 6, dadurch gekennzeichnet, daß die Sperrvorrichtung (6) zwei seitlich voneinander beabstandete Seitenwände (28) aufweist, die sich von dem Oberwand-Vorderende (15) nach vorne erstrecken, und daß ein Bereich des Trägerteils (4), der die Schärfvorrichtung (39) aufweist, zwischen den Seitenwänden (28) aufnehmbar ist.

7. Messerscheide nach einem der Ansprüche 1 bis 6, dadurch gekennzeichnet, daß die Vorspannvorrichtung (5) eine Feder aufweist, die zwischen dem Trägerteil (4) und dem Gehäuse (1) wirkt, und daß ein Bereich (61) der Feder (5) einen Teil des Schwenklagers bildet und so angeordnet ist, daß das Trägerteil (4) lösbar montiert in dem Gehäuse (1) gehalten wird.

8. Messerscheide nach Anspruch 7, dadurch gekennzeichnet, daß der Federbereich (61) einen spiraligen Bereich der Feder (5) aufweist, der gegen einen Endbereich (56) des Trägerteils (4) wirkt, um den Endbereich (56) in einer schwenkbeweglichen Anlage an einer gekrümmten Tragoberfläche (58) elastisch zu halten, die einen Teil des Schwenklagers bildet und einstückig mit der Gehäuseoberwand (11) ausgebildet ist.

9. Messerscheide nach Anspruch 8, dadurch gekennzeichnet, daß der Endbereich (56) einen zylindrischen Teil (57) aufweist, der koaxial mit der Schwenkachse (70) des Trägerteils (4) ist, und



daß die Tragoberfläche (58) und der Spiralfederbereich (61) an dem zylindrischen Teil (57) auf gegenüberliegenden Seiten desselben anliegen.

10. Messerscheide nach Anspruch 8 oder 9, dadurch gekennzeichnet, daß die Tragoberfläche (58) und der Spiralfederbereich (61) auf einer Seite einer Mittenebene (71) des Messeraufnahmebereichs (26) derart angeordnet sind, daß sie sich neben einer breiten Fläche eines Messerblatts befinden, daß in dem Messeraufnahmebereich (26) ist.

11. Messerscheide nach einem der Ansprüche 7 bis 10, dadurch gekennzeichnet, daß die Feder (5) zwei Arme (62, 63), die sich von dem Federbereich (61) im wesentlichen nach vorne erstrecken, aufweist, daß ein Abschlußbereich (66) eines Arms (62) an einem Auflager (67) anliegt, das mit der Bodenwand (9) verbunden ist, daß ein Abschlußbereich (68) des anderen Arms (63) an dem Trägerteil (4) an einer Stelle anliegt, die der Schärfvorrichtung (39) benachbart ist, und daß die Feder (5) so vorgespannt ist, daß die Arme (62, 63) dazu neigen, sich um einen Drehpunkt auseinanderzubewegen, der durch den Federbereich (61) gebildet wird.

12. Messerscheide nach Anspruch 11, dadurch gekennzeichnet, daß die Federarme (62, 63) sich auf je gegenüberliegenden Seiten eines inneren Wandbereichs (69) des Gehäuses (1) erstrecken und daß der Wandbereich (69) dazu dient, die Federarme (62, 63) in der richtigen Stellung relativ zueinander und zu den anderen Teilen der Scheide zu halten.

13. Messerscheide nach einem der Ansprüche 1 bis 12, dadurch gekennzeichnet, daß die Sperrvorrichtung (6) eine Anschlagvorrichtung (32) aufweist, die mit dem Handgriff eines Messers in Anlage geraten kann, um das Eindringen des Messers in den Messeraufnahmebereich (26) zu begrenzen.

14. Messerscheide nach Anspruch 1, dadurch gekennzeichnet, daß das Trägerteil (4) zwischen der Fortsetzung (27) nach vorne und der Bodenwand (9) angeordnet ist und sich in Längsrichtung in dem Messeraufnahmebereich (26) erstreckt, daß die Lagervorrichtung für das Trägerteil (4) in dem Messeraufnahmebereich (26) von dem Schwenklager (25) der Sperrvorrichtung beabstandet angeordnet ist, wobei ein Endbereich (56) des Trägerteils (4) mit der Lagervorrichtung zusammenarbeitet, um eine Schwenkbewegung des Trägerteils (4) relativ zu dem Gehäuse (1) um die Achse (70), die sich durch den Endbereich (56) erstreckt, zu erlauben, daß die Schwenkachse (70) des Trägerteils (4) näher an der oberen Wand (11) als an der Bodenwand (9) angeordnet ist, daß der Endbereich (56) zwei seitlich voneinander beabstandete Teile aufweist, die so angeordnet sind, daß ein Messerblatt zwischen ihnen aufgenommen werden kann und dadurch die Schwenkachse (70) des Trägerteils (4) schneidet, daß der Bereich (61) der Vorspannfeder (5) einen Teil der Lagervorrichtung bildet und derart angeordnet ist, daß der Endbereich (56) an der Lagervorrichtung einschnappen kann und von dieser entfernt

bar ist, daß ein weiterer Bereich (68) der Feder (5) an einer Stelle des Trägerteils (4) benachbart zu der Schärfvorrichtung (39) derart anliegt, daß das Trägerteil (4) um seine Schwenkachse (70) gedrückt bzw. gezogen wird, um die Schärfvorrichtung (39) zu der oberen Wand (11) zu bewegen, und daß ein Reaktionsbereich (34) der Sperrvorrichtung (6) sich in den Messeraufnahmebereich (26) erstreckt und mit einer oberen Oberfläche (35) des Trägerteils (4) an einer Stelle zwischen den beiden Schwenkachsen (25, 70) in Anlage geraten kann.

15. Messerscheide nach Anspruch 14, dadurch gekennzeichnet, daß das Gehäuse (1) aus zwei Teilen (7, 8) zusammengesetzt ist, wobei ein Teil (7) die Bodenwand (9) und der andere Teil (8) die obere Wand (11) aufweist, daß eine hintere Endwand (10) einstückig mit der Bodenwand (9) ausgebildet ist und daß zwei seitlich voneinander beabstandete Seitenwände (12) einstückig mit der oberen Wand (11) ausgebildet sind.

16. Messerscheide nach Anspruch 15, dadurch gekennzeichnet, daß die zwei Gehäuseteile (7, 8) durch Zusammenwirken zwischen der oberen und der hinteren Wand (11, 10) und durch Zusammenwirken zwischen einem Wandbereich (14), der sich von der Bodenwand (9) an deren vorderem Ende nach oben erstreckt, und einem Riemenbereich (16), der sich von jeder Seitenwand (12) und über die Front des Wandbereichs (14) erstreckt, gegen Trennung aneinandergehalten werden.

17. Messerscheide nach Anspruch 16, dadurch gekennzeichnet, daß ferner eine Haltevorrichtung für die Gehäuseteile (7, 8) eine Schraube (20) aufweist, die zwischen der oberen und der Bodenwand (11, 9) an einer Stelle zwischen dem vorderen und dem hinteren Ende dieser Wände wirkt.

18. Messerscheide nach einem der Ansprüche 14 bis 17, dadurch gekennzeichnet, daß die Verbindungsvorrichtung für die Sperrvorrichtung (6) zwei Sockel (23), die sich von der Bodenwand (9) in seitlich voneinander beabstandetem Verhältnis derart nach oben erstrecken, daß sie ein Messerblatt zwischen sich aufnehmen können, und ferner zylindrische Achsenbereiche (24) der Trägervorrichtung (6) aufweist, die je drehbeweglich in einem Loch an einem oberen Ende des jeweiligen Sockels (23) angeordnet sind.

19. Messerscheide nach einem der Ansprüche 14 bis 18, dadurch gekennzeichnet, daß der erste Bereich (61) der Vorspannfeder (5) an einem der Endbereichsteile (56) des Trägerteils (4) anliegt und elastisch diesen Teil (56) gegen eine bogenförmige Tragoberfläche (58) drückt, die einstückig mit der oberen Wand (11) ausgebildet ist, und daß der andere Endbereichsteil (56) durch einen inneren Wandbereich (65), der sich von der Bodenwand (9) nach oben erstreckt, abgestützt ist, wobei die Anordnung so ist, daß ein Messerblatt, das sich in dem Messeraufnahmebereich (26) befindet, den inneren Wandbereich (65) auf der einen Seite und den ersten Bereich der Vorspannfeder und die Tragoberfläche (58) auf der anderen Seite hat.



Revendications

1. Etui de couteau comportant une enveloppe allongée (1) ayant un conduit (26) pour recevoir un couteau dans celui-ci, des parois supérieure et inférieure (11, 9) de ladite enveloppe (1) formant respectivement des extrémités supérieure et inférieure dudit conduit (26), un dispositif de verrouillage (6) situé à une extrémité avant de ladite paroi supérieure (11) et formant un prolongement (27) vers l'avant de cette paroi (11), une ouverture d'accès (2) pour ledit conduit (26) à l'extrémité avant dudit dispositif de verrouillage (6), des moyens (24) reliant ledit dispositif de verrouillage (6) à ladite enveloppe (1) pour un mouvement de pivotement relatif autour d'un axe (25) qui s'étend transversalement par rapport audit conduit (26) et est situé au voisinage de ladite extrémité avant de paroi supérieure (11), un élément support (4) disposé entre ledit dispositif de verrouillage (6) et ladite paroi inférieure (9) et étant au moins partiellement situé dans ledit conduit (26) et s'étendant le long de celui-ci, un dispositif d'affûtage (39) monté sur ledit élément support (4) en un lieu au voisinage de ladite ouverture d'accès (2) tel qu'il peut être pénétré par une lame de couteau traversant ladite ouverture (2), un montage à pivotement pour ledit élément support (4) ayant son axe (70) s'étendant transversalement par rapport audit conduit (26) et des moyens de sollicitation (5) repoussant ledit élément support (4) autour de l'axe de pivotement (70) de celui-ci pour déplacer ledit dispositif d'affûtage (39) en direction de ladite paroi supérieure (11), caractérisé en ce que ledit axe de pivotement (70) de l'élément support (4) est situé de telle sorte qu'il coupe une lame de couteau placée dans ledit conduit (26), et ledit axe de pivotement (70) est situé plus près de ladite paroi supérieure (11) que de ladite paroi inférieure (9) et se trouve à une extrémité dudit élément support (4) qui est espacée, en direction de l'intérieur dudit conduit (26), dudit axe de pivotement (25) du dispositif de verrouillage.

2. Etui de couteau selon la revendication 1, caractérisé en ce que ledit dispositif de verrouillage (6) comporte un élément de réaction (34) qui s'étend dans ledit conduit (26) en s'éloignant de l'axe de pivotement (25) dudit dispositif de verrouillage (6) et ledit élément de réaction (34) attaque une surface supérieure (35) dudit élément support (4) en une position située entre lesdits deux axes de pivotement (25, 70).

3. Etui de couteau selon la revendication 2, caractérisé en ce qu'il comporte une rainure de guidage (31) sous ledit prolongement de la paroi supérieure (27) pour recevoir par glissement une partie du bord supérieur d'une lame de couteau et réaliser ainsi un support latéral pour ladite lame.

4. Etui de couteau selon la revendication 3, caractérisé en ce que ladite rainure de guidage (31) coupe l'axe de pivotement (25) dudit dispositif de verrouillage (6).

5. Etui de couteau selon les revendications 2, 3 ou 4, caractérisé en ce que ledit élément de réaction (34) est divisé en deux parties espacées laté-

ralement (36), chacune étant destinée à être située sur un côté respectif lame de couteau positionnée dans ledit conduit (26).

6. Etui de couteau selon l'une quelconque des revendications 1 à 5, caractérisé en ce que ledit dispositif de verrouillage (6) comporte deux parois latéralement espacées (28) qui s'étendent vers l'avant de ladite extrémité avant (15) de la paroi supérieure et une partie dudit élément support (4) qui comporte ledit dispositif d'affûtage (39) peut être située entre lesdites parois latérales (28).

7. Etui de couteau selon l'une quelconque des revendications 1 à 6, caractérisé en ce que lesdits moyens de sollicitation (5) comportent un ressort qui agit entre ledit élément support (4) et ladite enveloppe (1), et une partie (61) dudit ressort (5) forme une partie dudit montage à pivotement et est disposée pour maintenir, de manière détachable, l'assemblage dudit élément support (4) et de ladite enveloppe (1).

8. Etui de couteau selon la revendication 7, caractérisé en ce que ladite partie de ressort (61) comporte une partie bobinée du ressort (5) qui agit en sens opposé d'une partie d'extrémité (56) dudit élément support (4) pour maintenir, de manière élastique, cette partie d'extrémité (56) en engagement à pivotement avec une surface portante courbe (58) qui forme une partie dudit montage à pivotement et constitue une seule pièce avec ladite paroi supérieure d'enveloppe (11).

9. Etui de couteau selon la revendication 8, caractérisé en ce que ladite partie d'extrémité (56) comporte un élément cylindrique (57) qui est disposé coaxialement avec l'axe de pivotement (70) dudit élément support (4), et lesdites surface portante (58) et partie bobinée de ressort (61) attaquent ladite partie cylindrique (57) sur ses côtés opposés respectifs.

10. Etui de couteau selon la revendication 8 ou 9, caractérisé en ce que ladite surface portante (58) et ladite partie bobinée de ressort (61) sont situées d'un côté d'un plan médian (71) dudit conduit (26) de sorte qu'elles sont situées à côté d'une surface large d'une lame de couteau positionnée dans ledit conduit (26).

11. Etui de couteau selon l'une quelconque des revendications 7 à 10, caractérisé en ce que ledit ressort (5) comporte deux bras (62, 63) s'étendant généralement vers l'avant de ladite partie de ressort (61), une partie d'extrémité terminale (66) de l'un desdits bras (62) attaquant une butée (67) reliée à ladite paroi inférieure (9), une partie d'extrémité terminale (68) dudit autre bras (63) attaquant ledit élément support (4) en un point voisin dudit dispositif d'affûtage (39), et ledit ressort (5) est bandé de sorte que lesdits bras (62, 63) tendent à s'écarter autour d'un axe formé par ladite partie de ressort (61).

12. Etui de couteau selon la revendication 11, caractérisé en ce que lesdits bras ressort (62, 63) s'étendent sur les côtés opposés respectifs d'une partie de paroi interne (69) de ladite enveloppe (1) et en ce que cette partie de paroi (69) sert à retenir



les bras de ressort (62, 63) en position correcte relative l'un par rapport à l'autre et par rapport aux autres parties dudit étui.

13. Etui de couteau selon l'une quelconque des revendications 1 à 12, caractérisé en ce que lesdits moyens de verrouillage (6) comportent des moyens de blocage (32) qui peuvent attaquer une poignée d'un couteau pour limiter la pénétration dudit couteau dans ledit conduit (26).

14. Etui de couteau selon la revendication 1, caractérisé en ce que l'élément support (4) est placé entre le prolongement vers l'avant (27) et la paroi inférieure (9) et s'étend le long du conduit (26), des moyens de montage pour ledit élément support (4) sont placés dans le conduit (26), à distance dudit axe de pivotement (25) du dispositif de verrouillage avec une partie d'extrémité (56) dudit élément support (4) coopérant avec lesdits moyens de montage pour permettre un mouvement de pivotement dudit élément support (4) par rapport à ladite enveloppe (1) autour de l'axe (70) qui traverse ladite partie d'extrémité (56), l'axe de pivotement (70) dudit élément support (4) étant situé plus près de ladite paroi supérieure (11) que de ladite paroi inférieure (9), ladite partie d'extrémité (56) comportant deux parties espacées latéralement qui sont disposées de sorte qu'une lame de couteau peut être introduite entre elles et ainsi couper ledit axe de pivotement (70) de l'élément support (4), une partie (61) dudit ressort de sollicitation (5) formant une partie desdits moyens de montage et étant disposée de manière telle que ladite partie d'extrémité (56) vient encliqueter lesdits moyens de montage et peut être détachée de ceux-ci, une autre partie (68) dudit ressort (5) attaquant ledit élément support (4) en un lieu voisin dudit dispositif d'affûtage (39) de manière à repousser ledit élément support (4) autour de l'axe de pivotement (70) de celui-ci pour déplacer ledit dispositif d'affûtage (39) en direction de ladite paroi supérieure (11), et un élément de réaction (34) dudit dispositif de verrouillage (6) s'étend dans ledit conduit (26) et peut attaquer une surface supérieure (35) dudit élément support (4) en une position située entre lesdits deux axes de pivotement (25, 70).

15. Etui de couteau selon la revendication 14, caractérisé en ce que ladite enveloppe (1) est composée de deux parties (7, 8), l'une des deux parties (7) comportant ladite paroi inférieure (9) et

l'autre partie (8) comportant ladite paroi supérieure (11), et une paroi d'extrémité arrière (10) est formée en une seule pièce avec ladite paroi inférieure (9), et deux parois latérales (12) espacées latéralement sont formées en une seule partie avec ladite paroi supérieure (11).

16. Etui de couteau selon la revendication 15, caractérisé en ce que les deux parties d'enveloppe (7, 8) sont maintenues assemblées par une coopération entre lesdites parois supérieures et arrière (11, 10) et une coopération entre une partie de paroi (14) se dressant vers le haut à partir de ladite paroi inférieure de base (9) à l'extrémité avant de celle-ci et un élément de fixation (16) qui s'étend vers l'avant à partir de chaque paroi latérale (12) et en travers de l'avant de ladite partie de paroi (14).

17. Etui de couteau selon la revendication 16, caractérisé en ce qu'il comporte en plus des moyens de maintien pour lesdites parties d'enveloppe (7, 8) comportant une vis (20) coopérant à la fois avec lesdites parois supérieure et inférieure (11, 9) en un emplacement situé entre les extrémités avant et arrière de celles-ci.

18. Etui de couteau selon l'une quelconque des revendications 14 à 17, caractérisé en ce que lesdits moyens de connexion du dispositif de verrouillage (6) comportent deux supports (23) s'étendant verticalement à partir de ladite paroi inférieure (9), espacés l'un par rapport à l'autre, de manière à recevoir une lame de couteau entre eux, et des parties d'essieu cylindrique (24) dudit dispositif de verrouillage (6) chacun d'eux étant positionné à rotation dans un trou à une extrémité supérieure de l'un desdits supports (23).

19. Etui de couteau selon l'une quelconque des revendications 14 à 18, caractérisé en ce que ladite première partie (61) dudit ressort de sollicitation (5) attaque l'une desdites parties d'extrémité (56) de l'élément support (4) et repousse, d'une manière élastique, cette partie (56) contre une surface portante courbe (58) formée en une seule pièce avec ladite paroi supérieure (11), et ladite autre partie d'extrémité (56) est supportée par une partie de paroi interne (65) dressée verticalement à partir de ladite paroi inférieure (9) et située de manière telle qu'une lame de couteau placée dans ledit conduit (26) aura ladite partie de paroi interne (65) d'un côté et ladite première partie (61) de ressort de bandage et ladite surface portante (58) de l'autre côté.



* C L M S *