

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) POCKET-KNIFE

(71) I, ERNST JOACHIM GERLING, of Brosshauser Strasse 27, 5650 Solingen-Ohligs, Germany, of German nationality, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to a pocket-knife comprising a handle or haft and a knife-blade which can be folded into and unfolded out of the handle or haft.

According to the invention there is provided a pocket-knife comprising a handle or haft formed out of sheet material and a knife-blade pivotally connected to the handle or haft so that the blade can be folded into and unfolded out of the handle or haft, the handle or haft having a back and two spaced-apart sides, with two mutually opposite slits in the sides to form a channel-section cantilever spring to act upon the blade.

The invention will be described by way of examples, with reference to the accompanying drawings: in which,

Figure 1 shows the handle or haft of a pocket-knife in accordance with the invention before bending, that is to say with the two sides of the handle or haft lying in approximately a single plane;

Figure 2 shows the pocket-knife with the handle of Figure 1 cut away;

Figure 3 shows the pocket-knife of Figures 1 and 2 in cross-section;

Figure 4 shows a side view of the pocket-knife of Figures 1 to 3 with the knife-blade open but cut away;

Figure 5 shows a modified pocket-knife in accordance with the invention in side view and before the bending of the sheet material;

Figure 6 shows a pocket-knife in accordance with the invention with portions of the sides of the handle or haft pressed inwards, the said handle or haft being illustrated in cut-away form; and

Figures 7 and 8 show a modified pocket-knife in accordance with the invention with curved slits, in the open and closed conditions.

Each pocket-knife has a box-shaped handle or haft 1, which is produced, in particular, by bending of sheet material and carries one or more knife-blades 2. Slits 3 are provided in the region of the back portion or fold of the handle, which is almost semicircular in shape, the slits being in opposite sides of the handle. These slits may extend in a straight line, as shown in Figures 1, 2, 4, 5 and 6 of the drawings they form at least one cantilever spring 4 of channel section, i.e. with two sides and a base, which secures the respective knife-blade 2 in the closed condition and, if necessary, also in the open condition.

The box-shaped handle 1 may consist of any desired flexible or resilient material, for example strip steel. One or more rivets 8 which hold the sides of the handle together are arranged, particularly in the region of the heel 5 of the knife-blade, where the rivet 8 serves as a pivot for the knife-blade, in such a way that the blade is securely held by the spring 4.

The springs 4 may be provided in any desired number, shape, (subject to their being cantilever springs of channel section), and size, at one or, depending upon the number and arrangement of the knife-blades, at both ends of the pocket-knife and may also, for example, extend along curved lines as can be seen from Figures 7 and 8, as a result of which particularly effective securing of the knife-blade 2 in the open and closed conditions is obtained, since the spring 4 becomes progressively stiffer from its free end to its fixed end as the distance between the slit and the back increases. (Whereas the straight slits in Figures 1, 2 and 4 to 6 are uniformly spaced from the back, they could of course be slanted to obtain a similar progressive increase in the said distance). In Figures 7 and 8 moreover, the numeral 8 designates rivets and the numerals 9 and 10 designate holes. It is also possible, for example, for two springs 4 to be provided side by side. The springs may be wider than the knife-blade.

The slits 3 may either each extend from a position intermediate the handle ends to one

end of the handle, as shown in Figures 1, 2, 5 and 6, or else, as can be seen, for example, from Figures 4, 7 and 8, may be interconnected at the free end of the cantilever spring intermediate the handle ends, i.e. each have their ends intermediate the handle ends, as a result of which reliable and particularly wear-resistant location of the knife-blade, which bears with its heel 5 against the handle, is obtained when the knife is open. If the spring 4 is constructed so as to be wider than the blade, the side of the handle 1 may advantageously be pressed inwards in the vicinity of the point 9', in order to provide the blade with lateral guide. In this and similar cases, a covering 6 of any desired material may be provided, and this also helps to improve the appearance.

As is already known *per se*, it is possible to provide, in the region of the point of the blade when in the closed position, a hoop which forms an additional safeguard against unintentional opening of the knife-blade and/or can be used for carrying the knife.

25 WHAT I CLAIM IS:—

1. A pocket-knife comprising a handle or haft formed out of sheet material and a knife-blade pivotally connected to the handle or haft so that the blade can be folded into and unfolded out of the handle or haft, the handle or haft having a back and two spaced-apart sides, with two mutually opposite slits in the sides to form a channel-section cantilever spring to act upon the blade.

2. A pocket-knife as claimed in Claim 1, wherein the two slits each extend from a position intermediate opposite ends of the handle or haft to one end of the handle or haft.

3. A pocket-knife as claimed in Claim 1, wherein the ends of each of the two slits are intermediate opposite ends of the handle or haft.

4. A pocket-knife as claimed in any one of Claims 1 to 3, wherein each of the slits is straight.

5. A pocket-knife as claimed in any one of Claims 1 to 3, wherein each of the slits is curved.

6. A pocket-knife as claimed in any one of Claims 1 to 5, wherein the distance between each slit and the back increases progressively along the spring from a free end to a fixed end of the spring.

7. A pocket-knife as claimed in any one of Claims 1 to 4, wherein the distance between each slit and the fold is substantially uniform along the spring from a free end to a fixed end of the spring.

8. A pocket-knife as claimed in any preceding claim wherein portions of the sides of the handle or haft have been pressed inwardly, to provide the blade with a lateral guide.

9. A pocket-knife as claimed in any preceding claim wherein the free end of the spring engages a heel of the knife-blade when the knife-blade is in the fully folded position.

10. A pocket-knife as claimed in any preceding claim wherein the sheet material is steel.

11. A pocket-knife as claimed in any preceding claim wherein the knife-blade is pivoted to the handle or haft by means of a rivet.

12. A pocket-knife as claimed in any preceding claim wherein there is a second such knife-blade and a second such spring.

13. A pocket-knife substantially as described with reference to Figures 1 to 4 of the accompanying drawings.

14. A pocket-knife substantially as described with reference to Figure 5 of the accompanying drawings.

15. A pocket-knife substantially as described with reference to Figure 6 of the accompanying drawings.

16. A pocket-knife substantially as described with reference to Figures 7 and 8 of the accompanying drawings.

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end of the handle, as shown in Figures 1, 2, 5 and 6, or else, as can be seen, for example, from Figures 4, 7 and 8, may be interconnected at the free end of the cantilever spring intermediate the handle ends, i.e. each have their ends intermediate the handle ends, as a result of which reliable and particularly wear-resistant location of the knife-blade, which bears with its heel 5 against the handle, is obtained when the knife is open. If the spring 4 is constructed so as to be wider than the blade, the side of the handle 1 may advantageously be pressed inwards in the vicinity of the point 9', in order to provide the blade with lateral guide. In this and similar cases, a covering 6 of any desired material may be provided, and this also helps to improve the appearance.

As is already known *per se*, it is possible to provide, in the region of the point of the blade when in the closed position, a hoop which forms an additional safeguard against unintentional opening of the knife-blade and/or can be used for carrying the knife.

25 WHAT I CLAIM IS:—

1. A pocket-knife comprising a handle or haft formed out of sheet material and a knife-blade pivotally connected to the handle or haft so that the blade can be folded into and unfolded out of the handle or haft, the handle or haft having a back and two spaced-apart sides, with two mutually opposite slits in the sides to form a channel-section cantilever spring to act upon the blade.

2. A pocket-knife as claimed in Claim 1, wherein the two slits each extend from a position intermediate opposite ends of the handle or haft to one end of the handle or haft.

3. A pocket-knife as claimed in Claim 1, wherein the ends of each of the two slits are intermediate opposite ends of the handle or haft.

4. A pocket-knife as claimed in any one of Claims 1 to 3, wherein each of the slits is straight.

5. A pocket-knife as claimed in any one of Claims 1 to 3, wherein each of the slits is curved.

6. A pocket-knife as claimed in any one of Claims 1 to 5, wherein the distance between each slit and the back increases progressively along the spring from a free end to a fixed end of the spring. 50

7. A pocket-knife as claimed in any one of Claims 1 to 4, wherein the distance between each slit and the fold is substantially uniform along the spring from a free end to a fixed end of the spring. 55

8. A pocket-knife as claimed in any preceding claim wherein portions of the sides of the handle or haft have been pressed inwardly, to provide the blade with a lateral guide. 60

9. A pocket-knife as claimed in any preceding claim wherein the free end of the spring engages a heel of the knife-blade when the knife-blade is in the fully folded position. 65

10. A pocket-knife as claimed in any preceding claim wherein the sheet material is steel.

11. A pocket-knife as claimed in any preceding claim wherein the knife-blade is pivoted to the handle or haft by means of a rivet. 70

12. A pocket-knife as claimed in any preceding claim wherein there is a second such knife-blade and a second such spring. 75

13. A pocket-knife substantially as described with reference to Figures 1 to 4 of the accompanying drawings.

14. A pocket-knife substantially as described with reference to Figure 5 of the accompanying drawings. 80

15. A pocket-knife substantially as described with reference to Figure 6 of the accompanying drawings.

16. A pocket-knife substantially as described with reference to Figures 7 and 8 of the accompanying drawings. 85

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