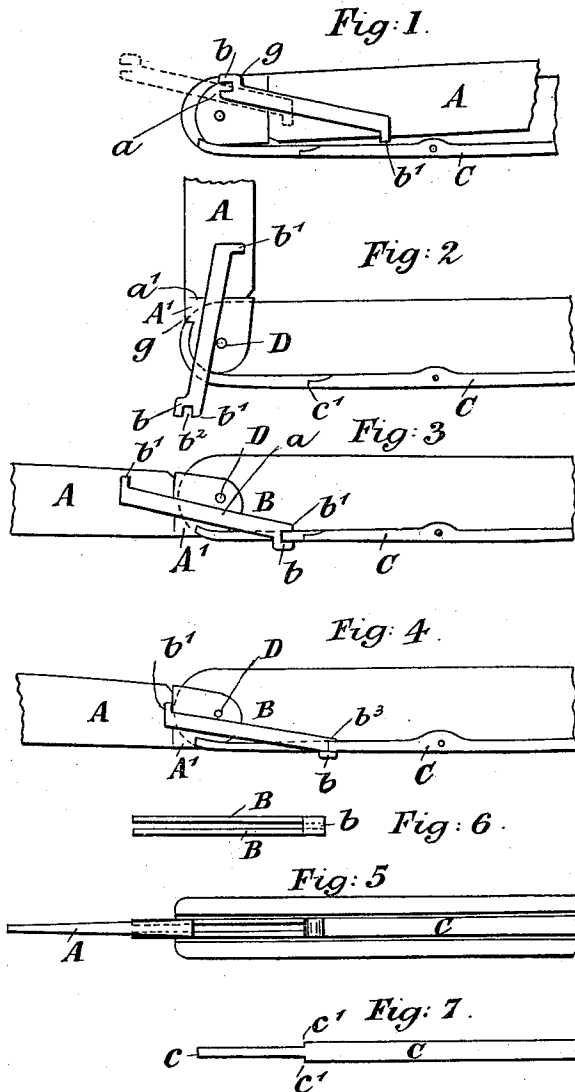


(No Model.)

W. J. MINTER
POCKET KNIFE.

No. 543,943.

Patented Aug. 6, 1895.



WITNESSES,

a. l. Raff.

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INVENTOR,

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UNITED STATES PATENT OFFICE.

WALTER J. MINTER, OF LONDON, ENGLAND, ASSIGNOR OF ONE-HALF TO
JOHN SANDERS, OF SAME PLACE.

POCKET-KNIFE.

SPECIFICATION forming part of Letters Patent No. 543,943, dated August 6, 1895.

Application filed February 9, 1895. Serial No. 537,788. (No model.) Patented in Germany April 12, 1894, No. 78,364; in France August 21, 1894, No. 240,867; in Belgium August 22, 1894, No. 111,518, and in Austria September 4, 1894, No. 44/600.

To all whom it may concern:

Be it known that I, WALTER JOHN MINTER, a subject of the Queen of Great Britain, residing at 8 Elm Road, Stratford, London, in the county of Essex, England, have invented new and useful Improvements in or Connected with Pocket-Knives and Such Like Folding Instruments, (patented in Austria September 4, 1894, No. 44/600; in France August 21, 1894, No. 240,867; in Belgium No. 111,518, dated August 22, 1894, and in Germany, No. 78,364, dated April 12, 1894,) of which the following is a specification.

The object of this invention is to provide pocket-knives and such like folding instruments with means whereby the blade or blades or the implements thereof can be quickly and easily opened and without requiring to touch the blade or blades or implements with the fingers or finger and thumb. Means are also preferably provided for locking the blade or blades or implements in the open position.

The invention will be described with reference to pocket-knives, it being understood, however, that it is applicable to surgical and other instruments which fold up into a recess contained in the handle after the manner of a pocket-knife.

In the accompanying drawings, Figures 1 to 4 are side views of part of a pocket-knife with one of the scales removed, showing the invention fitted to the blade, the different views showing different positions of the parts. Fig. 1 shows the blade in the closed position, and Figs. 2 and 3 show the blade partly open and fully opened, respectively. Fig. 4 shows the blade locked in the open position. Fig. 5 is a back view of Fig. 4, and Figs. 6 and 7 are detached back views of the extension-piece and back spring C.

The same letters of reference are used to indicate the same or corresponding parts where they occur in the different figures.

A knife having only one blade is shown in the drawings; but the invention is not confined to single-bladed knives. An opening device of the kind to be hereinafter described may be fitted to every one of the blades of a two, three, or more bladed knife.

The blade A is provided with an extension-

piece which consists of two longitudinal side members B, joined by a finger cross-piece *b*, as shown in Fig. 6. The side members B of the said extension-piece fit into recesses or grooves *a*, formed in or on the tang A' of the blade, said recesses or grooves being so made as to admit the side members B and so placed as to allow them to slide longitudinally in said recesses or grooves and to take up the two extreme positions shown in Figs. 1 and 4. The free end of each side member is furnished with a nose-piece or projection *b'*, which is larger than the recess or groove *a*, whereby the extension-piece is prevented from being entirely withdrawn from the said recess or groove. When the blade is closed, the extension-piece may be pushed inward until the finger-piece *b* lies close to and against the shoulder *g* on the back of the blade-tang and flush or nearly flush with the back of the blade. This is the position shown by the full lines in Fig. 1, the dotted lines showing the position into which it may be drawn when it is desired to open the blade.

The end of the back spring C adjacent to the blade A is cut away on each side (see Fig. 7) to provide spaces or recesses to admit the side members B of the extension-piece, which enter therein as and when the blade is being opened, (see Figs. 2, 3, and 4;) or, instead of cutting away the spring additional pieces of suitable metal may be fitted to or placed alongside the same—*i. e.*, between the spring and side plates—in order to form the said spaces or recesses, as required. When the blade is fully opened the side members B of the extension-piece pass from the blade-tang obliquely through the aforesaid spaces in or about the back spring C, the finger cross-piece *b* resting on the back spring and forming a bridge thereover. (See Figs. 3 to 5.)

For the purpose of locking the blade in the open position the extremity of each side member B of the extension-piece is formed with a notch *b²* of sufficient size to take over the shoulder *c'* formed by the upper edge of the uncut-away portion of the back spring C (see Figs. 2, 3, and 7) or to engage with the ends of the substituted pieces placed alongside the spring, as before described. The blade being

in the fully-open position shown in Fig. 3, is locked in that position by drawing down the extension-piece until the notches b^2 thereon engage with the shoulders c' on the back spring C in the manner shown in Fig. 4. In that position the heel b^3 of the notch b^2 abuts against the inner side of the back spring C and prevents the blade being turned on its pivot D.

Instead of making the extension-piece with two side members B, as shown in Fig. 6, it may consist of one side member only, with a notched finger-piece b , as already described, in which case only one corresponding groove in the blade-tang will be required, and the back spring will be cut away or recessed on one side only to correspond. The operation of the device for opening the blade and for locking it open will be the same in this as in the other case.

To open the blade the extension-piece is, by means of the finger-piece b , drawn out of the recess a to the dotted position shown in Fig. 1, or as far as is necessary to give an effective leverage. Pressure on the said extension-piece will then turn the blade on its pivot D into the position shown in Fig. 3. By then drawing the extension-piece farther out of the recess a in the blade-tang the notch or notches b^2 will catch over the contiguous shoulders c' of the back spring and will effectually lock the blade in the open position, as shown in Fig. 4. To close the blade the finger-piece b is pushed toward the blade-tang until the notch or notches b^2 is or are disengaged from the back spring. The parts are then in the position shown in Fig. 3, when the blade may be closed up and the extension-piece afterward slid from the dotted to the full-line position shown in Fig. 1.

A modification of the invention would be to fit the extension-piece in a position at right angles to that shown in the drawings—that is to say, arranged transversely to the blade instead of longitudinally—the bridge finger-piece b then lying across the back of the blade-tang. In this case the extension-piece when drawn out would form a bell-crank instead of a straight lever. This arrangement, however, would not open so easily, and the blade could not be locked in the open position. For these reasons I prefer the arrangement shown in the drawings, hereinbefore described.

It will be obvious that pocket-knives and such like folding surgical or other instru-

ments fitted or provided with this invention can be quickly and easily opened and that the slit or nick usually provided in the blades for the insertion of the thumb-nail can be dispensed with. Moreover, the knife or instrument can be so made that when closed the blades shall be completely within the side plates or scales of the handle and need not project therebeyond, as is now the case, for the purpose of offering a grip for the thumb and finger when opening the blade. Such opening can be effected entirely by the aid of the extension-piece aforedescribed.

From the foregoing description it will be understood that the invention is applicable to all kinds of pocket-knives and such like folding instruments having a back spring which serves to keep the blade or implement in its closed and open positions, and may be applied in the course of manufacture of such knives or instruments or to those at present in use.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A pocket-knife, or such like folding instrument, having an extension piece carried by and longitudinally movable in the tang of each blade of the knife or instrument, for the purpose, substantially, as described.

2. A pocket knife, or such like folding instrument, having an extension piece carried by and longitudinally movable in the tang of each blade or instrument, a shoulder upon the blade for limiting the movement of the extension to a predetermined extent, and a back spring having a recess and shoulder for receiving and holding the extension in a predetermined position.

3. A pocket knife, consisting of the combination of a pivoted blade, having a groove and a shoulder upon each side thereof, a back spring, having a recess and shoulder c , an extension piece having two arms fitting respectively in the grooves, and having at its respective ends a nose piece for abutting against the shoulder on the blade in a predetermined position, and a fork on the other end, adapted to engage with the said shoulder c .

W. J. MINTER.

Witnesses:

B. E. KNIGHT,
T. F. BARNES.