

(No Model.)

D. A. STILES.
POCKET KNIFE.

No. 526,167.

Patented Sept. 18, 1894.

Fig. 7.

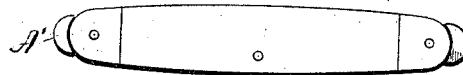


Fig. 8

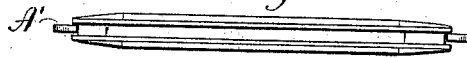


Fig. 1.

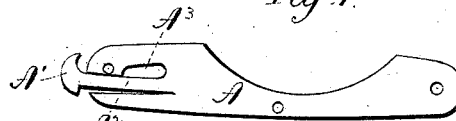


Fig. 2

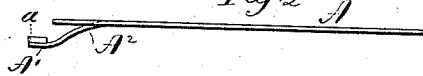


Fig. 3

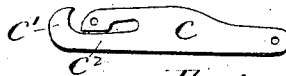


Fig. 4

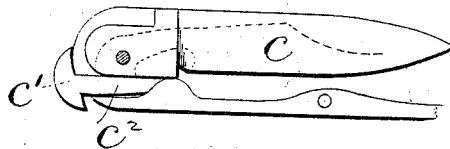
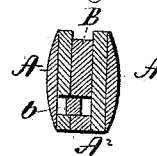


Fig. 6



Witnesses.

J. H. Shumway.
William D. Kebley.

Dorcas A. Stiles,
Inventor.
By Atty.
Earle Seymour

UNITED STATES PATENT OFFICE.

DORAS A. STILES, OF DURHAM, CONNECTICUT.

POCKET-KNIFE.

SPECIFICATION forming part of Letters Patent No. 526,167, dated September 18, 1894.

Application filed January 15, 1894. Serial No. 496,935. (No model.)

To all whom it may concern:

Be it known that I, DORAS A. STILES, of Durham, in the county of Middlesex and State of Connecticut, have invented a new Improvement in Pocket-Knives; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a detached view in side elevation of a knife-lining adapted to form a secondary spring containing my invention; Fig. 2, a plan view thereof; Fig. 3, a detached view in side elevation of an independent secondary knife-spring containing my invention; Fig. 4, a plan view thereof; Fig. 5, an enlarged broken view in inside elevation showing the position of an independent secondary spring constructed in accordance with my invention, in a knife; Fig. 6, a view in transverse section of a knife having its linings utilized as secondary springs; Fig. 7, a view in side elevation of a knife of the type to which my invention relates; Fig. 8, a plan view thereof.

My invention relates to an improvement in that class of pocket-knives in which the knife-blades are automatically ejected into position for being firmly grasped by the fingers preparatory to fully opening them, whereby the finger-nails are spared. A knife of this type is shown and described in United States Patent No. 401,093, granted April 9, 1889. Such knives are provided with an auxiliary or secondary spring for each blade, each of the said springs having a finger-piece arranged to project beyond the adjacent end of the knife, and normally standing under the heel of the knife-blade with which it co-operates, for holding the blade in its closed position, and manually retracted for disengagement from the heel of the blade, to permit the partial ejection of the same by the knife-spring, by means of the fingers which are used to move the finger-piece laterally to the longitudinal plane of the knife. As heretofore constructed, knives of the type described have been objectionable on account of the sticking of the finger-pieces, and their refusal on that account to spring back under the heels of the knife-blades for locking them in their closed

positions, the sticking of the finger-pieces being due to the friction between their edges and the adjacent edges of the auxiliary or secondary springs with which they are integrally formed.

The object of my invention is to avoid the objection above recited, and to produce a knife of the character described in which the finger-pieces will not stick, but will invariably return freely to their closed positions.

With this object in view, my invention consists in an automatic knife, constructed with a secondary or auxiliary spring, having a finger-piece formed integral with one of its ends, and formed with a clearance space located adjacent to the inner end of the finger-piece to reduce the friction of the operation of the same.

In carrying out my invention I may utilize either or both of the knife-linings in the construction of the secondary springs, or I may employ independent springs for the purpose.

As shown in Figs. 1 and 2 of the drawings, I have converted an ordinary knife-lining A, into a secondary spring, by constructing it at one of its ends with an integral finger-piece, comprising a head A' and an inwardly set tongue A², which normally extends inward under the heel B of the knife-blade B', as seen in Fig. 6, for holding the blade in its closed position, and which is retracted from under the heel of the knife by drawing it outward by means of its head A' into the space b, seen in said Fig. 6. In order to reduce the friction of the operation of the tongue A² of the finger-piece, I form at the base of the tongue, a clearance space A³, which so far reduces the friction upon the edges of the tongue, that its spring power will always be sufficient to operate it freely in recovering its normal position, in which it stands under the heel of the knife-blade. Without this clearance space the tongue is liable to stick, and cause great annoyance in the operation of the knife.

As shown in Figs. 3 and 4 of the drawings, the secondary spring C, consists of an independent piece of sheet-metal, which is riveted into the knife. It is provided at one end with an integrally formed finger-piece comprising a head C', and an inwardly set tongue C² for the free operation of which the spring is con-

structed with a clearance slot C², located adjacent to the base of the tongue, and reducing the friction of the lateral operation thereof to such an extent that its spring power is always
5 sufficient to accomplish its recovery after it has been drawn outward and retracted for the automatic ejection of the knife-blade. Without this slot the finger-piece is of uncertain operation, and hampers the use of the
10 knife. In Fig. 5 of the drawings I have shown the position of such a secondary spring as just described, within a knife.

Figs. 7 and 8 of the drawings show the projection of the heads of the finger-pieces beyond the ends of a knife of the type described.

15 It is apparent that in carrying out my invention the particular form of the secondary spring and its finger-piece may be changed, and I would therefore have it understood that
20 I do not limit myself to the exact construction shown and described, but hold myself at liberty to make such changes as fairly fall within the spirit and scope of my invention; but whatever form the secondary spring takes,

a clearance slot will always be formed at the
25 base of the tongue of its finger-piece substantially in the manner illustrated.

Having fully described my invention, what I claim as new, and desire to secure by Letters
30 Patent, is—

An auxiliary or secondary spring for knives of the character described, having formed integral with one of its ends a finger-piece comprising a head, and an inwardly set tongue, and having a clearance space formed at the
35 base of the said tongue, and along one of its edges to reduce the friction of its operation, and so that it will invariably spring back into its locking position when released, substantially as described.

40 In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

DORAS A. STILES.

Witnesses:

F. L. WELLMAN,
L. M. LEACH.