(No Model.)

F. W. KALDENBACH.

POCKET KNIFE.

No. 292,917. Patented Feb. 5, 1884.

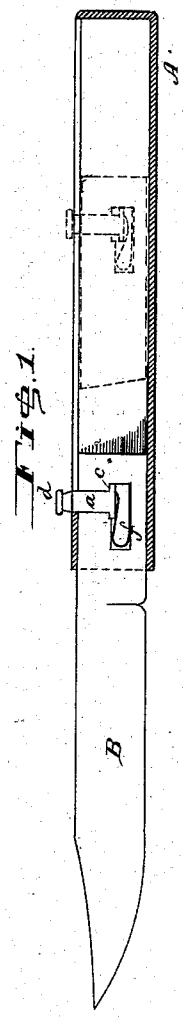


Fig. 1.

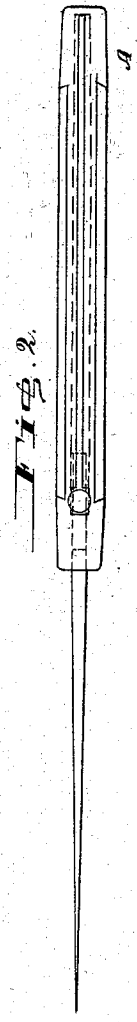


Fig. 2.
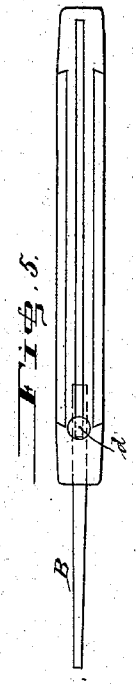


Fig. 5.

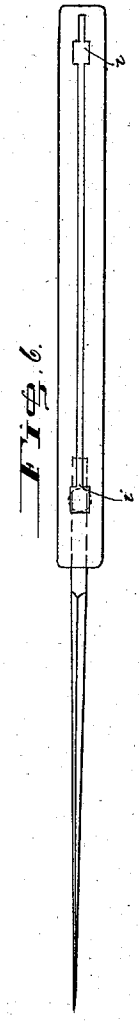


Fig. 6.

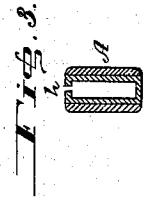


Fig. 3.

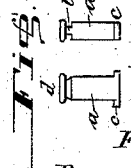


Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

FRIEDRICH WILHELM KALDENBACH, OF SOLINGEN, PRUSSIA, GERMANY, ASSIGNOR TO ALEXANDER COPPEL, OF SAME PLACE.

POCKET-KNIFE.

SPECIFICATION forming part of Letters Patent No. 292,917, dated February 5, 1884.

Application filed August 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH WILHELM KALDENBACH, a subject of the King of Prussia, Germany, residing at the city of Solingen, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Pocket-Knives, of which the following is a specification.

This invention relates to that class of pocket-knives which have sliding blades capable of being withdrawn into the handle and projected therefrom; and it consists in novel means for holding the knife-blade in either a projected or retracted position.

In the drawings, Figure 1 is a longitudinal sectional view of a knife, showing the blade in an open or projected position. Fig. 2 is a back view of the same. Fig. 3 is a cross-section of the handle or sheath. Fig. 4 is a detail view of the locking-pin for the blade. Figs. 5 and 6 are back views of modified forms of handles or sheaths.

The essential feature of the present construction is the push-pin *a*, which has the two offsets or projections *c* and the head *d*, this push-pin being so fitted in a vertical cut or seat made in a rearwardly-extended knife-blade, B, that it can be moved up and down in said seat. This vertical cut intersects with or leads into a second horizontal cut, in which is seated a spring, *f*, having one of its arms or members bearing upon the lower side of the push-pin.

The knife handle or sheath A is provided with a space or recess, which extends throughout its entire length, so that the blade can be drawn into the same.

A slot or elongated opening, *h*, made in the back of the sheath, leads into the space or recess thereof, and in this slit the neck portion *b* of the pin *a* is entered.

The slot *h* can, for the purpose of more certainly insuring a locking of the blade, be provided with enlargements *i*, as is shown in Figs. 5 and 6.

The opening and closing of a knife embodying my improvements is effected in the following manner: The head of the push-pin is grasped and slid to the front end of the sheath, thus carrying with it the knife-blade, and projecting it beyond the sheath; and as soon as the push-pin has reached the enlargement *i* of the guide-slot, the pressure of the spring *f* causes it to be pressed in an outward direction. This will cause the enlargement *i* to be occupied by the angular part of the pin, the neck portion *b* of the latter projecting beyond the sheath, and the offsets *c* preventing the push-pin from being thrown out too far. When the blade is required to be pushed back into the handle, the head *d* is depressed until the neck portion *b* is in line with, or on a level with, the guide-slot *h*, whereupon the blade can be pushed back again. When the blade is in a closed or retracted position, its casual displacement or movement is prevented by means of the spring *f*, which exerts a strong pressure upon the push-pin, and holds the neck portion of the latter in contact with the inner surfaces of the back of the sheath or handle.

If great safety or a very firm retention of the blade is desired, as in the construction shown in Fig. 6, which represents a dirk-knife, it is advisable to provide an enlargement of the guide-slot at its lower end. This enlargement, however, can, in ordinary knives, be omitted altogether, as the friction of the pin *a* on the inner or under side of the surfaces of the back bordering the guide-slot is great enough to prevent a slipping or displacement of the blade when the knife is in use. On the other hand, however, it may be found necessary to provide enlargements of the guide-slot at a point or points between the ends thereof, this being done when the blade is to be held half open.

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

1. The herein-described pocket-knife, consisting of the sheath or handle A, having a slot, *h*, in its back, the sliding blade B, having a vertical opening and horizontal opening intersecting therewith, the spring *f*, seated in the latter, and the push-pin having the body

a, neck *b*, head *d*, and bottom projections, *c*, as and for the purpose set forth.

2. The combination of the sheath or handle A, having a slot, *h*, in its back, provided with one or more enlargements, *i*, with the sliding knife-blade B, having a locking-pin consisting of the body *a*, neck *b*, head *d*, and bottom lugs, *c*, and the spring *f*, bearing upon said pin, as and for the purpose set forth.

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

FRIEDRICH WILHELM KALDENBACH.

Witnesses:
LEOPOLD GEISENHEIMER,
GUSTAV KREMER.