

Oct. 17, 1933.

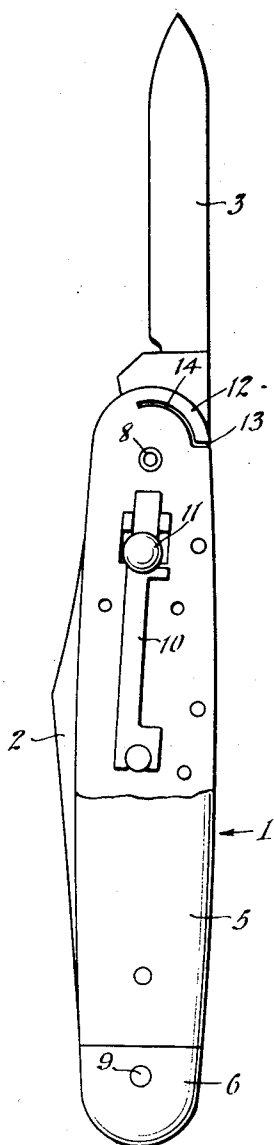
J. L. SCHRADE

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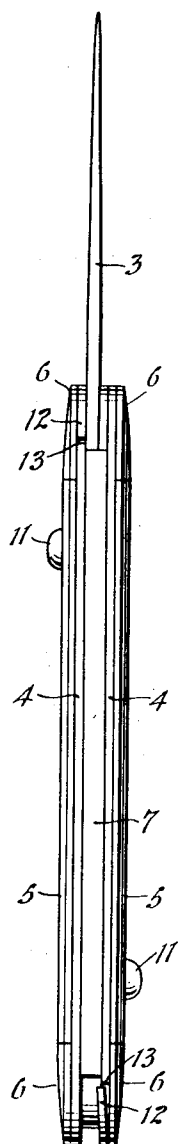
POCKET KNIFE

Filed June 27, 1932

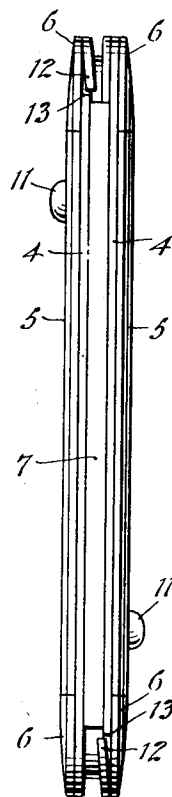
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES

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## UNITED STATES PATENT OFFICE

1,931,360

## POCKET KNIFE

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corporation of New York

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3 Claims. (Cl. 30—10)

The present invention relates to pocket knives having means for locking the blades in open and closed positions and a spring for causing a closed blade to fly open when released from its locking means, such knives being generally known as safety push button knives, an example of which is disclosed in United States Letters Patent No. 1,857,725 issued to me on the 6th day of June, 1916.

In such knives the blades are rather loosely mounted in order that the relatively light spring may throw them open to the fullest extent when the locking device is released by means of a push button; the said locking devices not only holding the blades closed against the tension of the opening spring but also holding them rigid when fully opened, and unlike ordinary pocket knives, there is no frictional engagement between the shank of the blades and the back of the knife, yieldingly resisting the opening and closing movement, and the movement of the blades to opened and closed position is unrestrained; the locking device serving only to lock them in closed and open position.

As the blades are freely movable about their pivots it frequently happens that when thrown open by the opening spring the shoulder of the shank will strike the end of the knife back with force enough to cause the blade to recoil before the locking device can engage it to lock it in open position, and this tendency to recoil is present to a greater extent with the smaller or lighter blades than with the heavier blades.

An object of the invention therefore is to provide a friction device located in the path of movement of the shank of the blade so as to be engaged thereby and exert a frictional resistance to the opening movement at or about the point where the blade approaches the limit of its opening movement, to prevent its recoil and to facilitate the engagement of the locking device therewith. A further object is to provide such a brake in which the frictional resistance to the movement of the blade will be gradually increased as the blade approaches the limit of its opening movement.

To the above ends the present invention may be said to consist of a pocket knife of the character described provided with a friction brake to engage the shank of the blade on its opening movement; and further, of the devices and combinations of devices which will be hereinafter described and claimed.

The invention is shown in the accompanying drawing in which a relatively large two bladed

knife is shown, Figure 1 showing in side elevation the knife with one of the blades open, and having a portion of the handle broken away to show underlying parts;

Fig. 2 is a rear elevation with one of the blades fully opened as in Figure 1; and

Fig. 3 is a rear elevation with both blades closed.

The knife comprises a handle 1, and in the present instance is provided with two blades, 2 and 3, the blade 2 being very much larger and heavier than the blade 3. The handle, as usual in such constructions, is provided with two frame plates 4 arranged in parallel relation and extending from end to end, and may have the usual outer coverings 5 and bolster caps 6. The usual back 7 terminating near each end to form stops against which the shoulders of the shanks of the blades strike at the end of the opening movement and closing the space occupied by the blades, completes the back of the knife.

The blades are mounted to have a relatively free swinging movement about the pivots 8 and 9, and as before explained, they are not restrained in their movement in any way by the back, as they are in the ordinary pocket knife. The blades may therefore be opened by a relatively light spring (not shown), and they are held in closed and open position by a locking or latching mechanism, one for each blade, a portion of which is shown at 10 in Figure 1, such locking or latching mechanism embodying a push button 11, all of which may be as shown in my patent previously referred to.

In order to prevent the recoil of a blade when thrown open there is provided a friction or brake device 12 which in the illustrated embodiment comprises a spring member formed as a part of one of the side plates 4 by cutting into the side plate near one end as at 13, and extending thence in a curved direction as at 14, and bending the free end of the member 12 thus formed, slightly towards the center of the knife, and into the path of movement of the shank of the blade, as shown in Fig. 3. As thus formed, when the blade swings open the shank of the blade will be engaged by the spring member 12 and because of its free end being bent laterally the friction developed will be increased as the blade approaches the limit of its opening movement, thus holding the blade open, resisting the recoil action and facilitating the engagement of the locking device with the shank of the blade.

While I have shown and described a two-bladed knife, one a relatively large heavy blade

and the other a relatively small light blade, it is perfectly obvious that the invention relates to single-bladed knives as well, and as the heavier blades do not have the tendency to recoil to the same extent as the lighter blades, the brake device need not be employed with the larger blades even though I have illustrated the end of the knife carrying the larger blade as being equipped with the brake device as well as the end where the smaller blade is located.

It is to be understood also, that my invention is not limited to a brake device such as I have shown and described, but will include any brake device which will secure the results which I have sought, as I believe that such a device for the purpose has never heretofore been produced.

I claim:

1. In a pocket knife comprising a spring open-

ing blade, a friction brake extending into the path of movement of and engaging the shank of the blade with increasing force as the blade approaches the limit of its opening movement.

2. In a pocket knife comprising a spring opening blade, a spring brake member located at or near the shank of the blade in position to contact therewith and exert braking pressure thereon when the blade is moving to open position but out of engagement with the blade when the blade is closed.

3. In a pocket knife comprising a spring opening blade, a friction brake comprising a spring member cut from one end of one of the frame members and having its free end bent laterally in the path of movement of the shank of the blade.

JACOB LOUIS SCHRADER.

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