C. H. WHITE & R. A. LETT.

TAKE-DOWN POCKET KNIFE.

APPLICATION FILED AUG. 15, 1910.

994,226. Patented June 6, 1911.

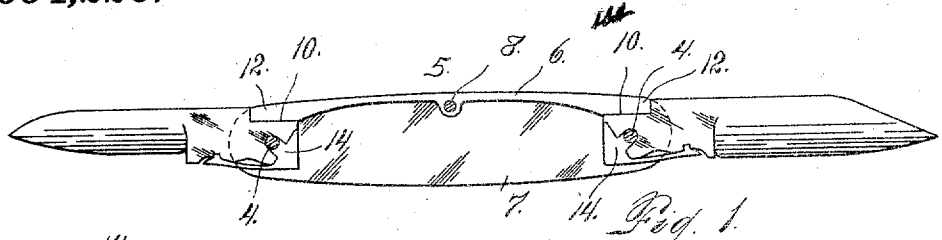


Fig. 1.

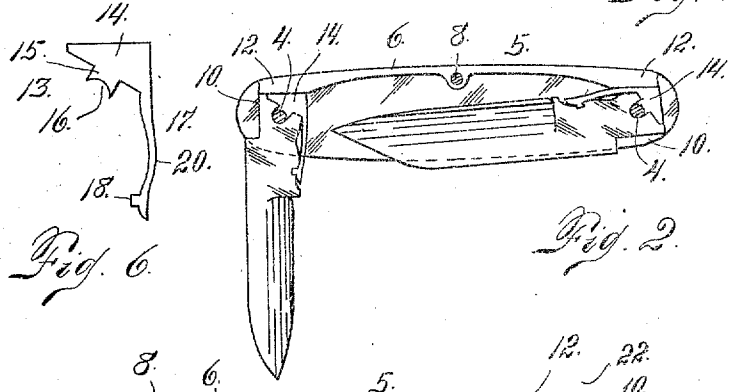


Fig. 6.

Fig. 2.

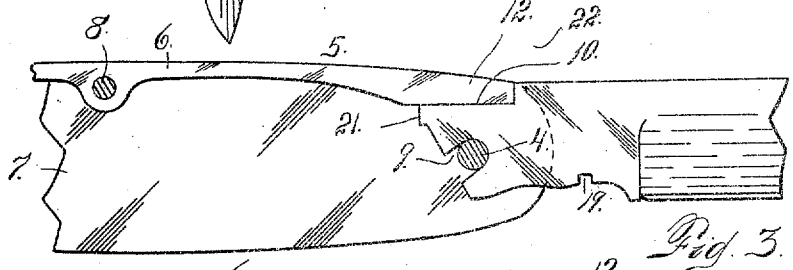


Fig. 3.

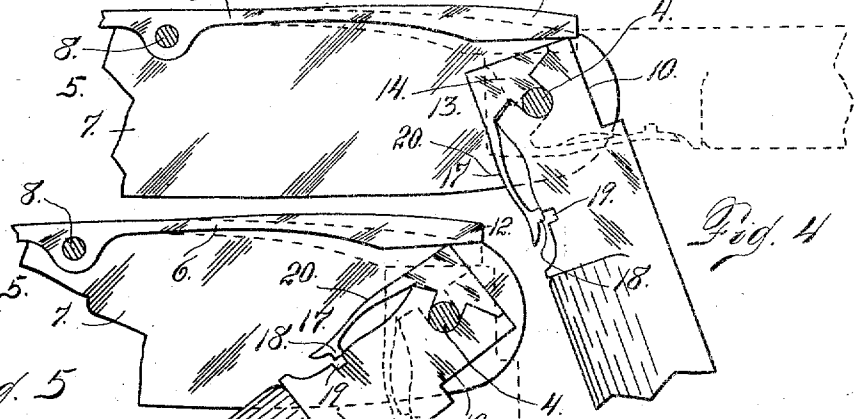


Fig. 4.

Fig. 5

Witnesses

Otto E. Haddick.

C. H. Rossener.

Inventors

Carl H. White

Royal A. Lett.

By O'Brien

Attorney

UNITED STATES PATENT OFFICE.

CARL H. WHITE AND ROYAL A. LETT, OF DENVER, COLORADO, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO THE PIOGRAM SALES COMPANY, OF DENVER, COLORADO, A CORPORATION OF COLORADO.

TAKE-DOWN POCKET-KNIFE.

994,226. Specification of Letters Patent. Patented June 6, 1911.

Application filed August 15, 1910. Serial No. 577,286.

To all whom it may concern:

Be it known that we, CARL H. WHITE and ROYAL A. LETT, citizens of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Take-Down Pocket-Knives; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in take-down pocket knives.

In our improved construction the blade or blades are removable from the handle without removing the pivot pin. For the purpose of securing the blade in place, a sort of dog is employed, which coöperates with the peculiar construction of the shank of the blade to form a bearing entirely surrounding the retaining pivot.

In our improved construction the shank of the blade is provided with a slot which opens at the inner extremity of the blade, the width of the slot being such as to receive the pivot, and the direction of the slot being at an angle to the length of the blade, and consequently at an angle to the direction of the force applied to the blade by the main spring of the handle; and by virtue of this construction the blade will be retained in place when in the wide-open position, without the employment of the coöperating dog heretofore mentioned.

Having briefly outlined our improved construction, we will proceed to describe the same in detail, reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a view of a knife equipped with our improvements, one side of the handle being removed, the rivet pins being shown in cross section and the blades in the wide-open position. Fig. 2 is a similar view with the blades, however, in different positions. Fig. 3 is a fragmentary view of the knife with the parts shown on a larger scale, the retaining dog being omitted, and the blade being shown in the wide-open position. Fig. 4 is a similar view, the blade, however, being shown in two positions, the wide-open position being indicated by dotted lines, and a position approaching the right angle position being shown in full lines. In this view the retaining dog is shown in place, but unlocked, the blade being in position to be removed from the handle. Fig. 5 is a similar view showing the blade in two positions different from those shown in Fig. 4. Fig. 6 is a side elevation of the retaining dog.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the handle of the knife considered in its entirety, the main spring being designated by the numeral 6, and the sides of the handle by the numeral 7. The spring is held in place by a centrally located rivet 8, while each extremity of the handle is equipped with a rivet pin 4, forming the retaining pivot for the blade. The shank of the blade is provided with an open slot 9 extending at an angle to the length of the blade and also at an angle to the face 10 of the shank of the blade, upon which the extremity 12 of the spring bears. When the blade is in the wide-open position, the closed extremity of the slot 9 is uppermost, whereby the pressure of the spring serves to retain the blade in place, since it could only be removed, without changing its position, by pressing the engaging extremity of the main spring outwardly a considerable distance. When, however, it is desired to remove the blade, it is turned to a position forming a considerable angle with the handle, the blade approaching a position forming right angles with the handle (see Fig. 4). When this is done the blade is so arranged that the pressure of the spring upon the shank thereof is in such a direction as to automatically eject the blade from the handle, assuming that the retaining dog is not employed or that it is in the unlocked position.

The retaining dog, which we will designate in its entirety by the numeral 13, is composed of a body part 14 adapted to fit the shank of the blade and give to the latter an approximately rectangular shape. This body part is provided with a projection 15 adapted to enter the slot 9 of the shank of the blade, and is provided with a curved recess 16 shaped to fit the pivot pin 4 of the

blade, thus forming a half bearing for the pin, the other half of the pin bearing being in the slot itself, whose inner extremity is rounded to fit the pin.

Projecting forwardly from the body of the dog is a relatively narrow spring member or tongue 17 having a tooth 18 at its outer extremity adapted to enter a counterpart recess 19 formed in the shank of the blade, forward of the pivot pin bearing. This tongue is normally bowed upwardly as shown at 20 and when in its normal position its tooth 18 rests upon the edge of the blade shank just in the rear of the recess 19. However, by pressing inwardly upon the bowed part of the spring tongue, the latter will be elongated in the direction of the blade sufficiently to cause the tooth 18 to enter the recess 19, whereby the dog will be locked in position upon the blade until the tooth is disengaged from its recess manually. Hence when the tongue is in the locked position it virtually forms a part of the blade shank and the two connected or companion parts of the shank form a complete bearing surrounding the pivot pin of the blade.

In order to insert a blade in the handle, the blade is placed in a position at right angles to the handle as indicated by dotted lines in Fig. 5. It is then moved into the handle extremity, whereby the pin 4 is placed in position within the slot of the shank; a small part 21 of the shank engaging the outer extremity of the spring. The blade is then moved outwardly turning on its pivot until it reaches the wide-open position and the construction will then conform to the illustration in Fig. 3, assuming that one of the handle members is removed. The knife is then laid upon its back, so to speak, or with the edge where the main spring is located lowermost, and the dog is dropped into place. In this event the position of the dog with relation to the blade will be as illustrated in full lines in Figs. 4 and 5. With the knife still in the same position, the blade is closed and as it approaches the closing position the bow-shaped part of the spring tongue 17 will engage the main spring of the handle, which will act on the tongue to cause its bowed portion to spring inwardly toward the shank of the blade, whereby the tongue will be elongated sufficiently to cause its tooth to slip into the recess 19, whereby the dog will be locked in place. Now if it is desired to remove a blade, the same will first be thrown to the wide-open position, after which the outer extremity of the tongue will be forced outwardly from the edge of the shank of the blade until the tooth is disengaged from its recess. The dog will then be loose, but the blade will be retained in place as long as it is in the wide-open position, since the force of the spring acting thereon will be exerted approximately in the direction indicated by the dotted line 22 in Fig. 3. Now if it is desired to remove the blade, the latter will be moved toward the closing position until it reaches approximately the position shown in Fig. 4, being slightly removed from the right angle position. In this event the power of the spring is exerted in a direction lengthwise with the slot or recess 9, and the blade will be automatically ejected by the spring.

Having thus described our invention what we claim is:

1. A knife composed of a handle, a main spring, the handle being equipped with a pivot pin in the end thereof, a blade having a slot at the extremity of the shank, open to receive the pivot pin, the recess being elongated in the direction of a line forming an angle with the length of the blade, and a locking dog having a projection adapted to enter the recess of the blade and forming in conjunction with the latter a bearing for the pin, the said dog having a forwardly projecting spring arm provided with a tooth at its outer extremity adapted to enter a recess formed in the blade, the spring arm being normally bowed to prevent its tooth from entering the recess, but adapted when pressure is applied to its bowed portion inwardly toward the blade, to be elongated sufficiently to cause its tooth to enter the recess of the blade, whereby the dog is locked in place.

2. A knife composed of a handle, a main spring, a blade having an open slot in its shank, to receive the pivot pin carried by the handle, the length of the slot being inclined to the length of the blade, and a cooperating locking dog applied to the shank and having a projection entering the slot of the shank and coöperating with the latter to form a bearing for the pivot pin, the dog having a forwardly projecting spring arm provided with a tooth adapted to enter a recess formed in the blade when the spring arm is placed under tension, substantially as described.

3. A knife composed of a handle having a main spring and a pivot pin fast in the handle, a blade having an open slot for the pivot pin extending in a direction inclined to the length of the blade, and a locking dog applied to the pivoted extremity of the blade and having a projection entering the bearing slot of the blade, the dog also having a forwardly projecting spring arm provided with a tooth adapted to enter the recess formed in the blade when the spring arm is placed under tension, substantially as described.

4. A knife composed of a handle having a main spring and a pivot pin, a blade having an open slot adapted to receive the pivot pin, the slot extending in a direction

inclined to the length of the blade, whereby when the blade is in the wide-open position the action of the spring serves to retain the blade in place, and a locking dog applied to the pivoted extremity of the blade and having a projection adapted to enter the slot of the latter, the dog also having a forwardly projecting spring tongue provided with a tooth adapted to be forced into a counterpart recess formed in the blade when the spring tongue is placed under tension, substantially as described.

5. A knife composed of a handle having a main spring and a pivot pin for the blade, and a blade provided with a slot and with a detachable dog coöperating with the blade to form a bearing for the pivot pin, the dog having a spring arm provided with a tooth adapted to interlock with the slot formed in the blade when the said arm is placed under tension, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

CARL H. WHITE.
ROYAL A. LETT.

Witnesses:
A. J. O'BRIEN,
F. E. BOWEN.

Correction in Letters Patent No. 994,226.

It is hereby certified that the name of the assignee in Letters Patent No. 994,226, granted June 6, 1911, upon the application of Carl H. White and Royal A. Lett, of Denver, Colorado, for an improvement in "Take-Down Pocket-Knives," was erroneously written and printed as "The Piogram Sales Company" whereas said name should have been written and printed *The Piogran Sales Company;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 1st day of August, A. D., 1911.

[SEAL.]

E. B. MOORE,
Commissioner of Patents.

inclined to the length of the blade, whereby when the blade is in the wide-open position the action of the spring serves to retain the blade in place, and a locking dog applied to the pivoted extremity of the blade and having a projection adapted to enter the slot of the latter, the dog also having a forwardly projecting spring tongue provided with a tooth adapted to be forced into a counterpart recess formed in the blade when the spring tongue is placed under tension, substantially as described.

5. A knife composed of a handle having a main spring and a pivot pin for the blade, and a blade provided with a slot and with a detachable dog coöperating with the blade to form a bearing for the pivot pin, the dog having a spring arm provided with a tooth adapted to interlock with the slot formed in the blade when the said arm is placed under tension, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

CARL H. WHITE.
ROYAL A. LETT.

Witnesses:
A. J. O'BRIEN,
F. E. BOWEN.

Correction in Letters Patent No. 994,226.

It is hereby certified that the name of the assignee in Letters Patent No. 994,226, granted June 6, 1911, upon the application of Carl H. White and Royal A. Lett, of Denver, Colorado, for an improvement in "Take-Down Pocket-Knives," was erroneously written and printed as "The Piogram Sales Company" whereas said name should have been written and printed *The Piogran Sales Company;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 1st day of August, A. D., 1911.

[SEAL.]

E. B. MOORE,
Commissioner of Patents.

Correction in Letters Patent No. 994,226.

It is hereby certified that the name of the assignee in Letters Patent No. 994,226, granted June 6, 1911, upon the application of Carl H. White and Royal A. Lett, of Denver, Colorado, for an improvement in "Take-Down Pocket-Knives," was erroneously written and printed as "The Piogram Sales Company" whereas said name should have been written and printed *The Piogran Sales Company;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 1st day of August, A. D., 1911.

[SEAL.]

E. B. MOORE,

Commissioner of Patents.