

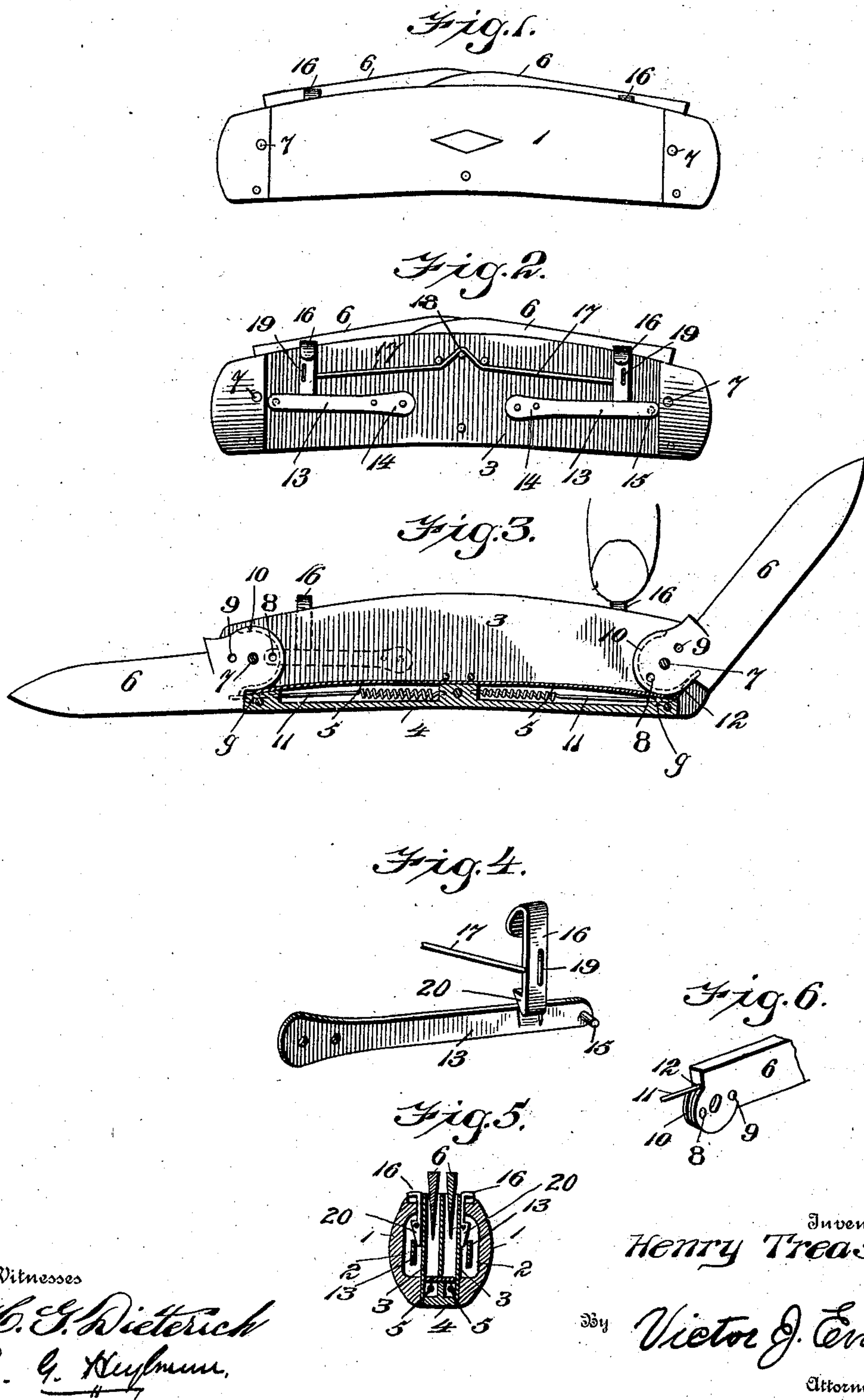
No. 698,080.

Patented Apr. 22, 1902.

H. TREAS.
SELF OPENING POCKET KNIFE.

(Application filed Nov. 12, 1901.)

(No Model.)



UNITED STATES PATENT OFFICE.

HENRY TREAS, OF DELIGHT, ARKANSAS.

SELF-OPENING POCKET-KNIFE.

SPECIFICATION forming part of Letters Patent No. 698,080, dated April 22, 1902.

Application filed November 12, 1901. Serial No. 82,045. (No model.)

To all whom it may concern:

Be it known that I, HENRY TREAS, a citizen of the United States, residing at Delight, in the county of Pike and State of Arkansas, have
5 invented certain new and useful Improvements in Self-Opening Pocket-Knives; and I 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 ap-
20 pertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to self-opening pocket-
15 knives.

The object of the invention is to provide a self-opening pocket-knife of improved construction which will be reliable in action and in which the blades will be automatically
20 locked both in open and closed positions, and thereby guard against accidental opening or closing.

A further object is to provide a self-opening knife of novel construction wherein the
25 operative parts are protected from dust and injury and having the opening buttons or devices in the most convenient position for manipulation.

Having these objects in view, the invention
30 consists in certain improved features and novel combinations of parts set forth in detail hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is
35 a side view of the knife shown as closed. Fig. 2 is a side view with one of the handle pieces or plates removed and showing the operating devices. Fig. 3 is a longitudinal section showing the blades in open and partially open po-
40 sitions. Fig. 4 is a detail perspective of one of the spring locking and unlocking catches and releasing-slide. Fig. 5 is a cross-section of the knife, showing the relative position of the parts when the knife is closed. Fig. 6 is
45 a perspective detail of the pivoted shank of the knife-blade, the actuating-spring being shown as broken off.

The handle-pieces 1 of the knife are hollowed out at 2 on their interior faces to ac-
50 commodate the operating devices. The metal-plate lining is shown at 3, and 4 designates the back-spring, which is chambered or hol-

lowed out to accommodate the actuating-spring, and 5 represents a spring-metal plate covering the chambers of the back-spring and
55 extending under the shank or heel of the blades. The blades are shown at 6, being pivoted at 7 and provided with two diametrically-disposed apertures 8 and 9, arranged to lie in the longitudinal axis of the knife
60 when the blade is open or closed, and a groove 10, Fig. 6, is formed in the edge of the heel, as indicated.

The numerals 11 designate the actuating retractile springs lying in the chambers of
65 the back-spring 4, each having one end secured to the central portion of the back-spring and the other end connected to the blade at 12 and arranged to lie in the groove
70 10 in the heel of the blade when the blade is closed. To prevent pressure on the arms of the retractile springs and to furnish free action of the springs, a groove *g* is formed in the ends of the back-spring. These springs
75 constantly tend to throw the blades open into the position shown at the left of Fig. 3. For each knife-blade there is provided a spring locking-catch 13, which is secured at 14 to the lining 3 and provided on its free end with a
80 locking-pin 15, engaging through an aperture in the plate 3 and to snap into either aperture 8 or 9, according as the blade is open or closed, and thus lock it either in closed
85 or open position. To withdraw these spring locking-catches from engagement with aper- tures in the heel of the knife-blades, I provide vertically-acting unlocking-slides 16,
normally held raised by a spring 17, fastened intermediate its ends at 18 to the lining-plates
90 3 and their outer ends secured to the unlocking-slides. The unlocking-slides are guided by a vertical slot-and-pin connection 19 and are provided on their lower ends with wedge-
95 blocks 20, which are arranged to engage between the lining and the locking-catch 13 when the slide is pushed downwardly by the
finger or thumb of the user, a finger-piece being provided for that purpose, which lies over the edge of the handle.

When a knife-blade is closed, the pin 15 en-
100 gages in aperture 9, being held therein by the resiliency of the spring locking-catch 13, thereby securing the blade in that position. On depressing the unlocking-slide, as shown

in Fig. 3, the wedge-block enters between the spring 13 and the lining and forces the pin 15 out of engagement with the blade, whereupon the spring 11 retracts and throws the blade open, to be again locked by the entry of pin 15 in aperture 8. To close the blade, depress the slide 16 and push the blade into the handle and again release the slide.

It will be observed that the springs 11 are housed and protected, and the operating devices are incased, so as to be shielded from injury, and the blades are securely locked in both open and closed positions, making the knife safe, and the slides are placed in the most convenient position for manipulation, thus making the knife safe, efficient, and durable, and convenient for use.

The use of the invention is not limited to pocket-knives, as it can be readily applied to toothpicks, ear-spoons, hunting-knives, and in a variety of other connections.

It will be perceived that each blade is actuated independently of the other, so that the invention is equally applicable to knives having but one blade or to knives having two blades pivotally connected to the handle at one end, these changes being so apparent as to fall within the skill and knowledge of any workman in the art.

Having thus fully described my invention, what I claim is—

1. In a self-opening knife, the combination with a handle, and a back-spring having a chamber therein, of a covering for said chamber, a blade pivoted to the handle, a retractile spring located in the chamber of the back rib and anchored thereto and having the other end connected to the heel of the blade, and means for locking the blade.

2. In a self-opening knife, the combination with a handle, of a blade pivoted thereto, a spring locking-catch adapted to engage and

lock the blade, and a spring-actuated unlocking-wedge adapted to engage against the locking-catch and withdraw it from engagement with the blade.

3. In a self-opening knife, the combination with a handle, of a blade pivoted thereto, a spring locking-catch adapted to engage and lock the blade, and a spring-actuated unlocking-slide having a slot and wedge, and a pin in the slot connected to the handle, said slide being disposed at an angle to the length of the locking-catch and the wedge being adapted to wipe against the locking-catch and withdraw it from engagement with the blade.

4. In a self-opening knife, the combination with a handle, of a spring-actuated blade pivoted thereto, provided with apertures in its heel arranged at opposite radial points, a spring carrying a pin on its free end to engage in said apertures and lock the blade in either closed or open positions, and a slidable wedge to engage behind said spring to withdraw the pin from engagement.

5. A self-opening knife comprising a handle, a blade pivoted therein having its heel provided with a locking-aperture, a back-spring, a retractile spring having one end secured to the back-spring and the other end secured to the back of the blade-heel, a spring carrying a pin on its free end to engage in the aperture in the heel of the blade and lock the blade closed, and a slide to engage the spring and withdraw the pin, whereby the retractile spring exerts its force and opens the blade.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY TREAS.

Witnesses:

H. L. KINZY,
P. E. TESSER.