

No. 786,898.

PATENTED APR. 11, 1905.

B. HIRSCHFELD.
SAFETY RAZOR.

APPLICATION FILED JULY 7, 1904.

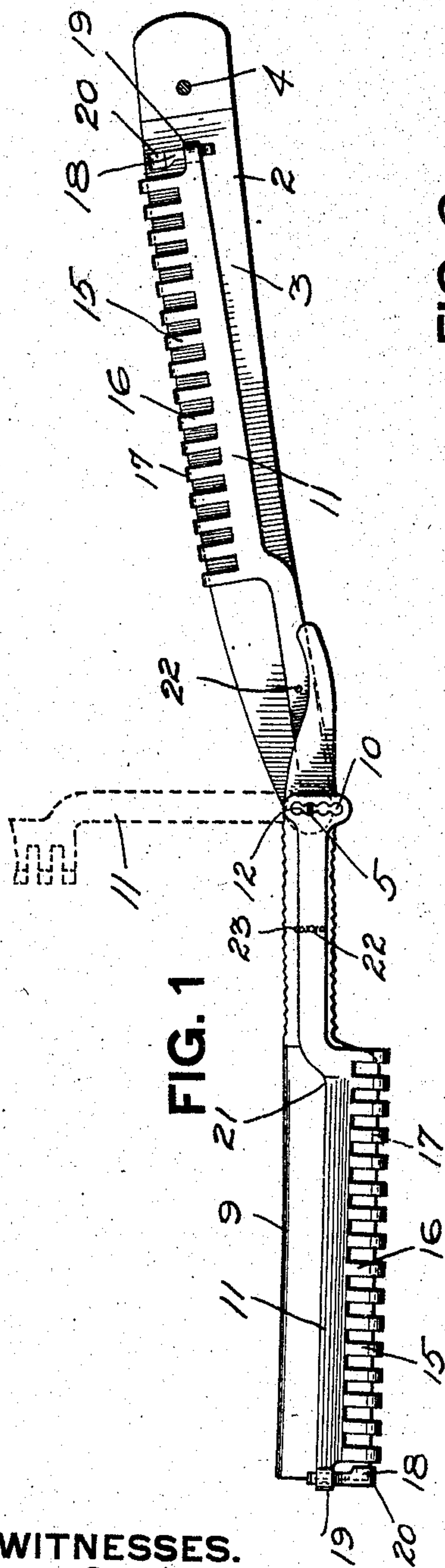


FIG. 1

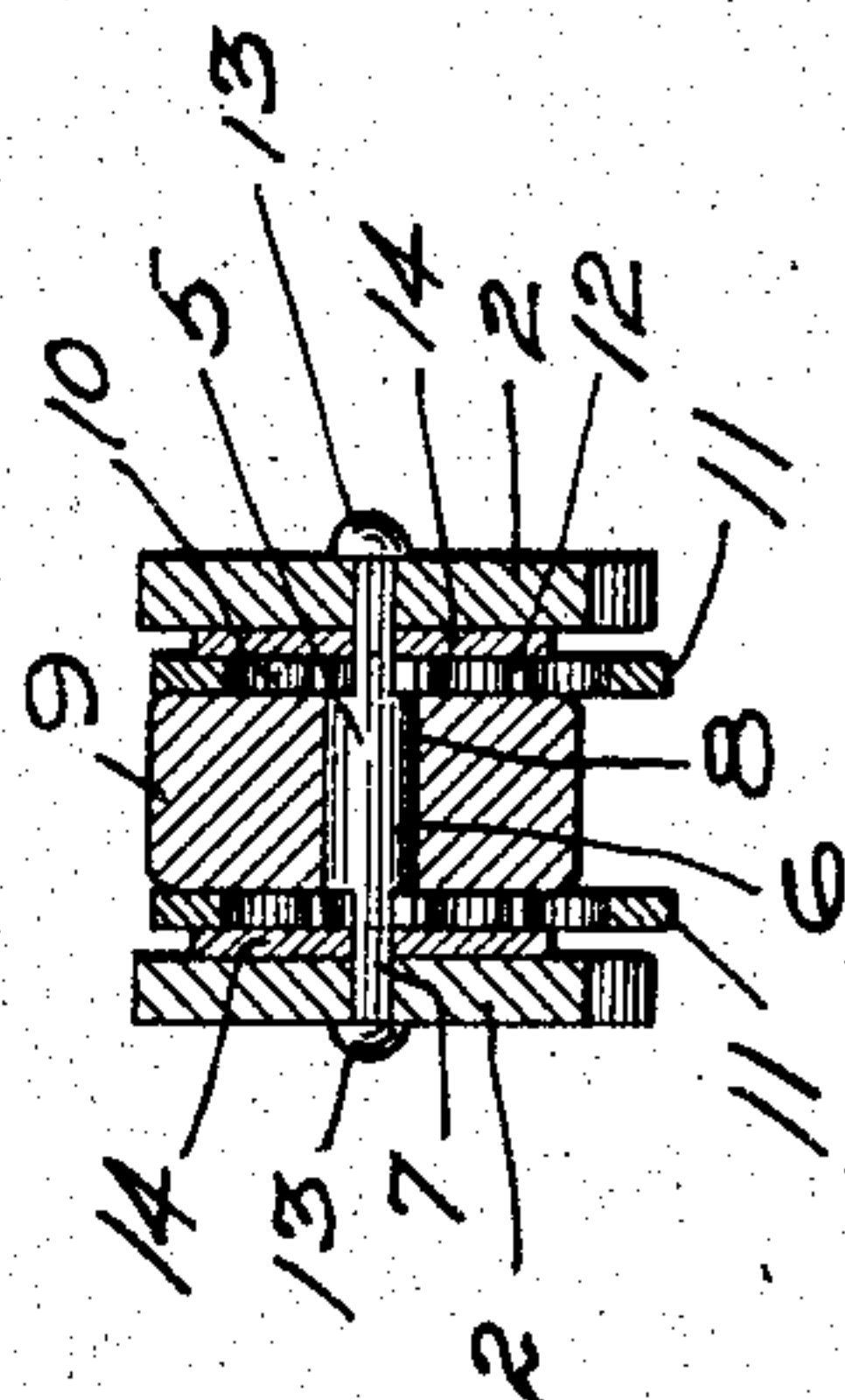


FIG. 3

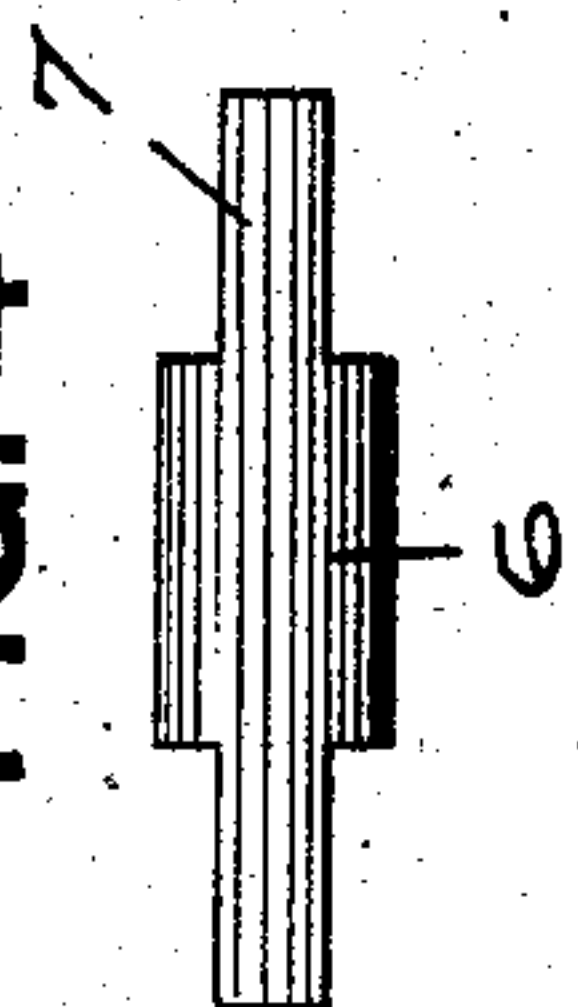


FIG. 4

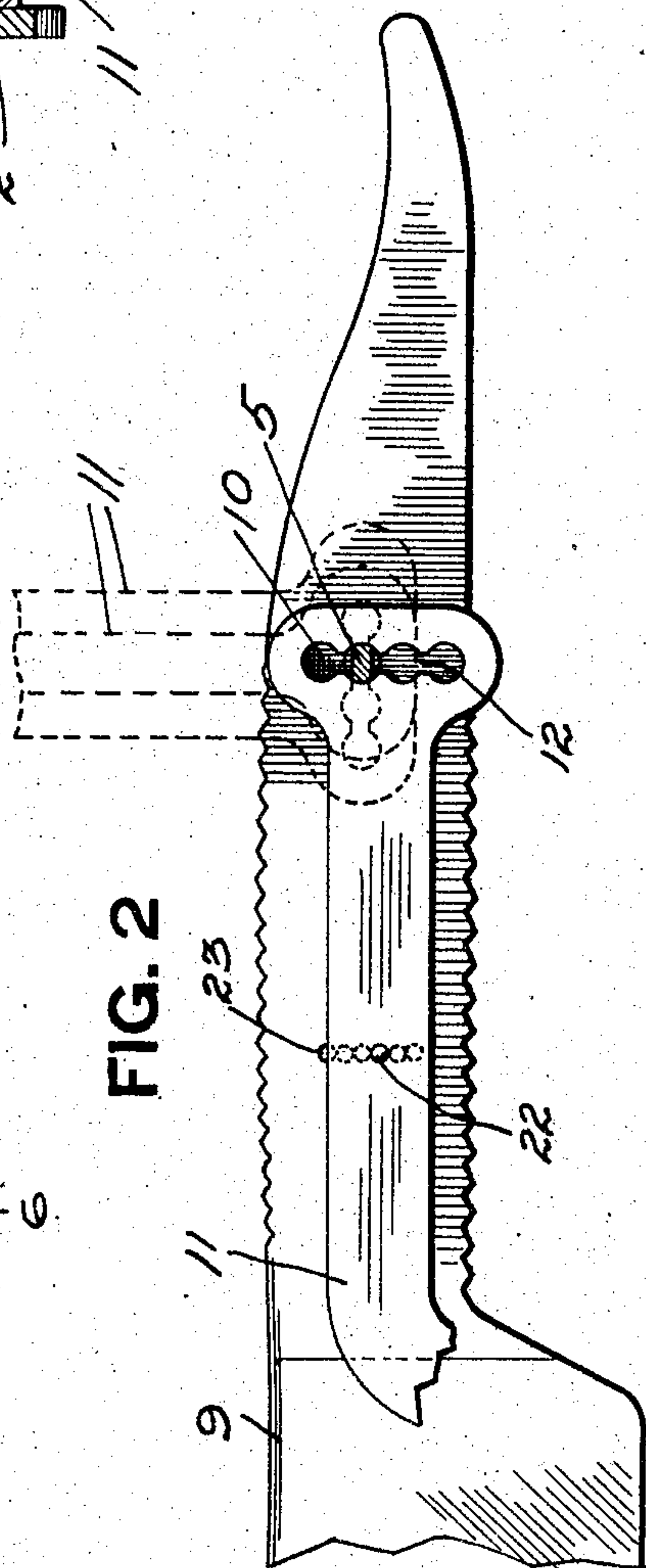


FIG. 2

WITNESSES.

J. R. Keller
Robert C. Zottner

INVENTOR.

Benjamin Hirschfeld
R. Kay Zottner & Hunter
attorneys

UNITED STATES PATENT OFFICE.

BENJAMIN HIRSCHFELD, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO AARON M. ELLIS, OF PITTSBURG, PENNSYLVANIA.

SAFETY-RAZOR.

SPECIFICATION forming part of Letters Patent No. 786,898, dated April 11, 1905.

Application filed July 7, 1904. Serial No. 215,602.

To all whom it may concern:

Be it known that I, BENJAMIN HIRSCHFELD, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Safety-Razors; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to safety-razors, and more especially to that class of razors in which the blade is adapted to fold back, so as to be inclosed by the handle.

The object of my invention is to provide a safety-razor of this style in which the razor may be used equally well with or without the guard, the guard being adapted to be inclosed within the handle and to be moved independently of the blade.

A further object of my invention is to provide for an adjustment of the guard or shield, so as to provide for the wear on the blade of the razor in grinding or honing.

To these ends my invention comprises the novel features hereinafter set forth and claimed.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a view of my improved razor with one side of the handle removed, showing one of the guards in position within the handle and the other guard engaging the open blade. Fig. 2 is an enlarged view of the inner portion of the blade and the means for adjusting the guard thereon. Fig. 3 is a cross-section at the pivotal point of the razor, and Fig. 4 is a view of the pin for pivoting the blade and guard to the handle.

Like numerals indicate like parts in each of the figures.

In the drawings the numeral 2 designates a suitable handle formed of bone, metal, or other suitable material, said handle being composed of two parts, with the intervening space 3 for the reception of the blade and the guards. The handle-sections are connected at one end by the rivet 4 and at the opposite end by the pins 5, said pin having an enlarged center cir-

cular portion 6 and the reduced end portions 7, having two flat opposite sides. This pin 5 passes through a circular opening 8 in the razor-blade 9, while the flattened end portions 7 pass through the apertures 10 in the inner end of the shield or guard 11. These apertures 10 are circular in form and communicate with each other by means of passages 12. The flattened end portions 7 also pass through the handle portions 2 of the razor, when said pin is then riveted, as at 13, to hold the parts together, while at the same time the pin 5 is prevented from turning within the handle. Interposed between the guards 11 and the handle portions 2 are the washers 14.

The two guards 11 are preferably employed, as it enables the guards to be adjusted for use in either hand. These guards, as illustrated, are arranged on opposite sides of the blade and are constructed of suitable spring metal with the toothed or corrugated portion 15, the teeth 16 of said corrugated portion having their ends turned, as at 17. At the outer end of the corrugated portion 15 of the guard is the clip 18, which is adapted to move in the seat 19 in the end of the guard, the outer end of said clip being turned inwardly, as at 20, so as to engage the blade of the razor when the guard is adjusted for use. The clip 18 is formed of spring metal and fits snugly within the seat 19, so that a certain amount of resistance is offered to the movement of said clip in said seat. Where the corrugated portion 15 of the guard is united with the main body portion, as at 21, there is a slight shoulder formed on said guard, which causes the corrugated portion 15 to conform to the shape of the blade of the razor, which ordinarily has a slight curve from its upper edge to the cutting edge. This enables the guard to fit snugly over the razor-blade.

As hereinbefore stated, the pin 5 has its flattened end portions 7 passing through the projections 10 in the inner end of the guard. This provides for the adjustment of the guard where the razor has become worn by grinding or honing. By this construction the guard may be adjusted evenly for its entire length, for by throwing the guard at right angles to

the blade or handle, as indicated in dotted lines in Fig. 1, the connecting-passages 12 between the apertures 10 are brought into position to slip past the flattened end portions 7 of the pin 5, so that said guard may be moved to bring the pin 5 into engagement with one of the other apertures 10, so as to change the position of the guard with reference to the blade, when the guard is again thrown down into position to engage the blade. In order to more securely retain the guard in place when in position for use, the guard is provided with a slight projection 22, which is adapted to swing into and engage the seats or depressions 23, formed in the razor-blade. This will prevent the guard from slipping when in use.

As stated, preferably two guards are employed, and, as indicated in Fig. 1, the guard not in use is folded back within the handle, the hooked portions 17 of the teeth of said guard engaging the edge of one of the handle portions. In the same manner when the razor is not in use the other guard engages the edges of the other handle portion while the blade is inclosed between the guards. In this way when the razor is not in use it is to all appearances like the ordinary razor of this character, and in case it is not desired to use the guards the razor-blade may be operated entirely independent of the guards, and when it is desired to use the guards it is simply necessary to withdraw one of the guards and adjust in any position which may be taken very quickly, and the projection 22 on the guard engages the proper depression 23, while at the same time the clip 18 is adjusted so as to engage the cutting edge of the razor. In this manner the guard is held securely in position. In case the party using the razor does not shave equally well with one hand the guard in use may be folded back into the handle and the other guard brought out, so as to suit the convenience of the party using the razor. By the form of the adjustment illustrated of the guard the guard is adjusted equally for its entire length, so that as the blade of the razor is worn down the guard may be adjusted to suit.

When the parts of the razor are folded within the handle, the razor may be inserted in a case of the ordinary size. No extra parts are required, while at the same time the person owning such a razor has a razor which may be used equally well with or without the safety device.

What I claim is—

1. In a safety-razor, the combination with the handle, of a blade pivoted therein, a swinging guard mounted in said handle on the same pivotal point as said blade, and

means for adjusting said guard equally throughout its length with reference to said blade.

2. In a safety-razor, the combination with a suitable handle, of a blade pivoted therein, a swinging guard mounted therein, said guard having teeth adapted to engage the edge of the razor-handle.

3. In a safety-razor, the combination with a suitable handle, of a blade pivoted therein, a swinging guard having apertures formed therein, said apertures being connected by contracted passages, the pivotal pin upon which said blade and guard are mounted having a flattened end portion with which the apertures in said guard engage.

4. In a safety-razor, the combination with a suitable handle, of a blade pivoted therein, a swinging guard, and pivotal pin having a circular portion engaging the said razor-blade and a flattened end portion adapted to engage the apertures formed in said guard, said apertures having contracted passages connecting same.

5. In a safety-razor, the combination with a suitable handle, of a blade pivoted therein, a swinging guard mounted in said handle and a spring-clip in said guard adapted to engage the cutting edge of said blade.

6. In a safety-razor, the combination with a suitable handle, of a blade pivoted therein, a swinging guard mounted in said handle, said guard having a seat formed in its outer end and a spring-clip engaging said seat and adapted to engage the cutting edge of said blade.

7. In a safety-razor, the combination of a suitable handle, of a blade pivoted therein, a swinging guard mounted therein, a pivotal pin supporting said blade and guard having a flattened end portion adapted to engage apertures formed in said guard, said apertures having contracted passage-ways connecting the same, said guard having a projection thereon adapted to engage one of a series of depressions formed in said blade.

8. In a safety-razor, the combination with a suitable handle, of a blade mounted therein, two swinging guards mounted in said handle on opposite sides of said blade adapted to enter said handle from the opposite side at which said blade enters said handle and having teeth adapted to engage the edges of said handle.

In testimony whereof I, the said BENJAMIN HIRSCHFELD, have hereunto set my hand.

BENJAMIN HIRSCHFELD.

Witnesses:

ROBT. D. TOTTEEN,
ROBERT C. TOTTEEN.