No. 793,793. PATENTED JULY 4, 1905.

O. KAMPFE.

SAFETY SHAVING DEVICE.

APPLICATION FILED NOV. 26, 1904.

Fig. 1

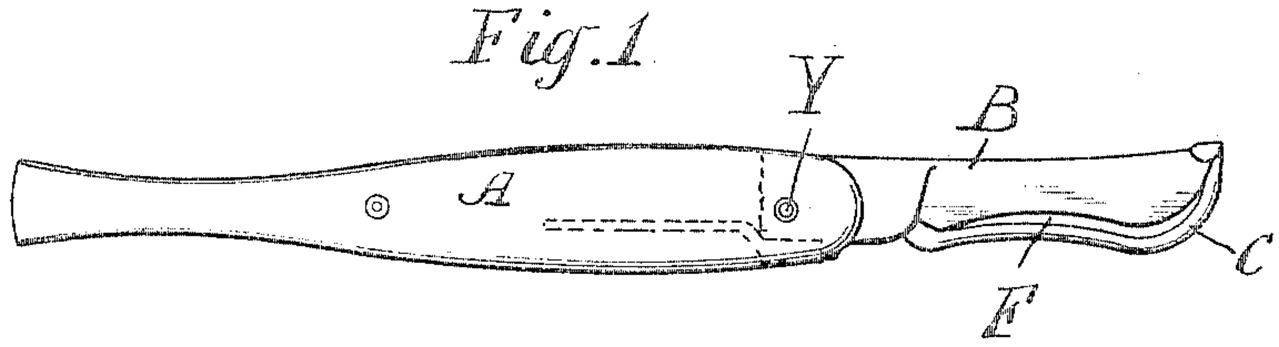


Fig. 2.

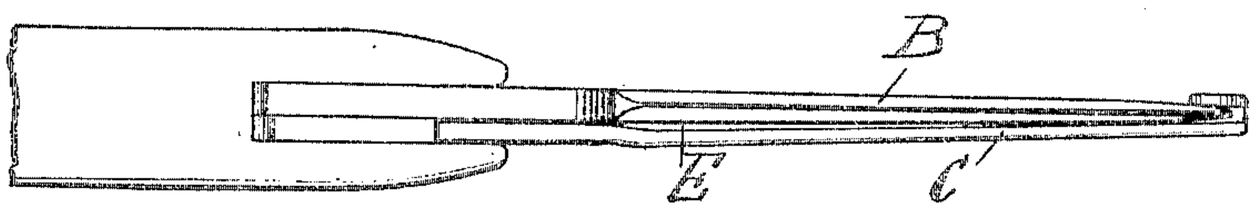


Fig. 3,

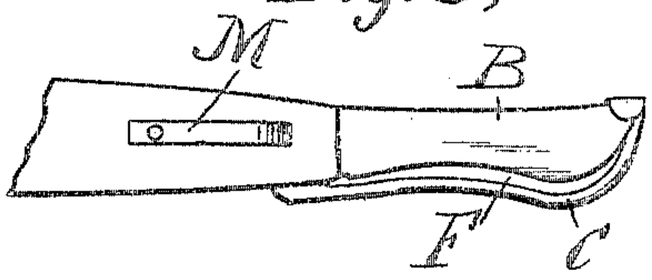


Fig. 5,

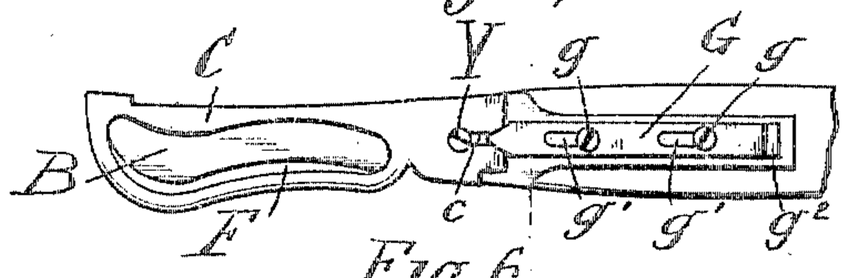


Fig. 6

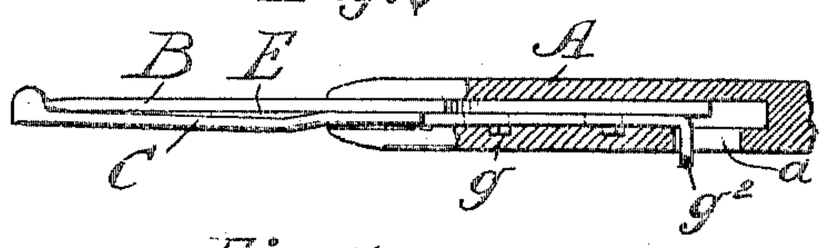


Fig. 4,

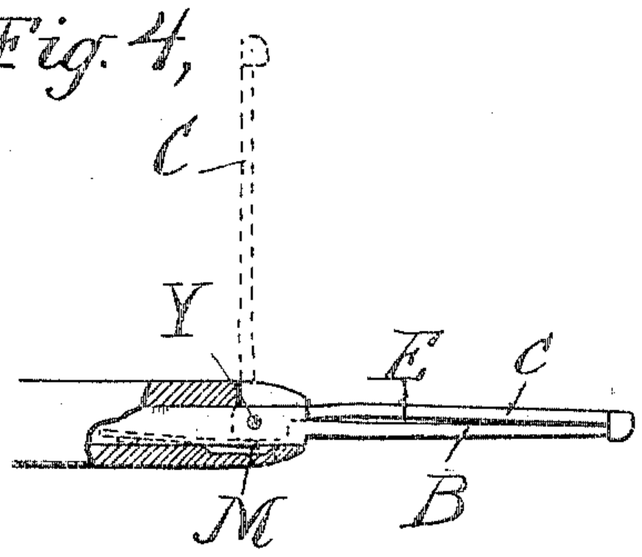


Fig. 7,

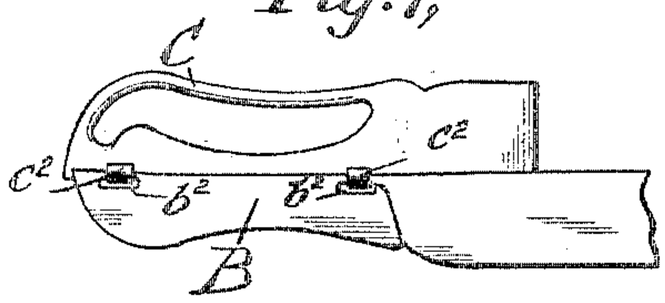


Fig. 8,

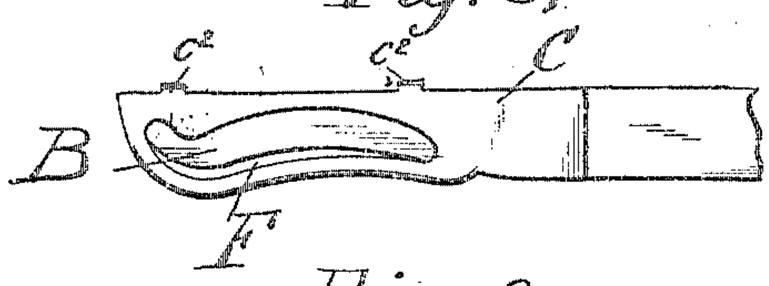
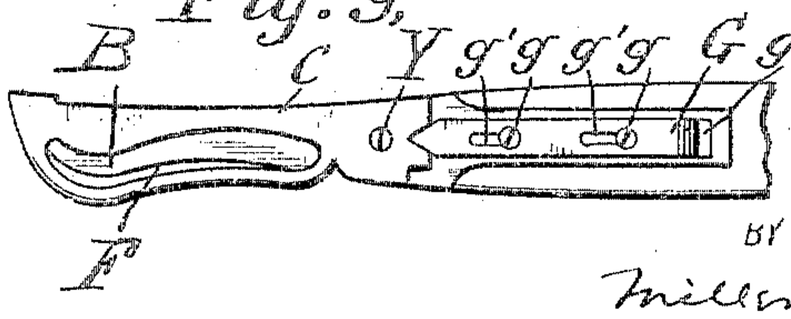


Fig. 9,



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No. 793,793. Patented July 4, 1905.

UNITED STATES PATENT OFFICE.

OTTO KAMPFE, OF NEW YORK, N. Y.

SAFETY SHAVING DEVICE.

SPECIFICATION forming part of Letters Patent No. 793,793, dated July 4, 1905.

Application filed November 26, 1904. Serial No. 234,419.

To all whom it may concern:

Be it known that I, OTTO KAMPFE, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented new and useful Improvements in Safety Shaving Devices, of which the following is a specification.

My invention relates to improvements in safety shaving devices, by which I mean devices whose operation is essentially that of shaving as opposed to cutting—such, for example, as incisive cutting—and which further are provided with a guard whose purpose it is to prevent any incision and also to limit the depth or extent of shaving action thereof.

In my application Serial No. 207,997, filed May 14, 1904, I have illustrated and described a number of forms of safety shaving appliances embodying the generic invention of which the constructions set forth in this application constitute one or more species. The improvements set forth in this application may be used either in conjunction with or independently of various forms set forth in the said earlier application.

In the construction shown and described in this application the above-stated purpose of the guard is accomplished by its projecting beyond the cutting edge of the blade, which projection not only manifestly prevents the possibility of any incisive cutting, but also compels the operator to keep the blade almost parallel with the surface upon which the blade rests during a given operation.

The specific devices in which I believe my invention will be most useful are what are popularly known as "corn-knives;" but the the same may be applied to any blade where it is desired to secure the results above stated and which is used as a shaving device as opposed to a cutting device.

My invention will be found of exceptional value wherever it is desirable to make it possible for the user to vary the depth or extent or thickness of the shavings or slices which he is removing without any adjustment of the guard.

In the constructions illustrated in the accompanying drawings this result is accomplished by leaving a space between the upper surface of the blade, and more particularly the upper surface contiguous to its cutting edge, and the lower surface of the guard and having a variation in the extent of this space at a plurality of points along said cutting edge. This result may be heightened or increased by also varying the extent of the projection of the outer edge of the guard beyond the cutting edge of the blade. It may further be increased by leaving a space intermediate the inner edge of the guard and the cutting edge of the blade and varying the extent of this space at a plurality of points along the cutting edge of the blade.

In the accompanying drawings I have shown a number of modifications illustrating a variety of means for securing the guard in operative position with regard to the blade and also for allowing it to be moved away from and entirely clear of both the cutting edge and the upper and lower surfaces thereof.

In the drawings similar letters of reference refer to corresponding parts.

Figure 1 is a side elevation showing the guard behind the blade. Fig. 2 is a front view looking toward the cutting edge of the blade. Fig. 3 is a side elevation of a modification. Fig. 4 is a rear view of the same partially broken away. Figs. 5 and 6 are respectively a side elevation and a rear view of another modification with the casing removed. Figs. 7 and 8 represent still another modification each in side elevation, showing the guard in two different positions. Fig. 9 represents a slight variation from forms shown in Figs. 5 and 6, again with the casing removed.

Of course I have merely shown in these drawings the preferred form of my invention, and it will be readily understood that substantially the same results may be accomplished in a variety of ways without departing from my invention.

Referring now to these drawings and more particularly to Figs 1 and 2, A represents a handle which may be of any suitable shape, size, and material; B, a blade; C, a guard pivotally mounted at a point designated Y to swing away from the blade. The position and movement of this guard may be controlled in any suitable manner—such, for example, as

by a spring. (Indicated by dotted lines in Fig. 1.) As shown, Fig. 2, the guard and blade are so arranged relative to each other as to leave a slight space between the upper surface of the blade and the lower surface of the guard. This space intermediate blade B and guard C is designated by the letter E and, as will be seen, varies in extent at a plurality of points along the cutting edge of the blade. As shown, this is accomplished by bowing the guard intermediate its pivot and the outer end of the blade, which results in the guard from the point at which it is bowed extending outwardly at an incline to the blade and to the outer end thereof. This result may be accomplished in a variety of ways, all that is essential being to produce a variation in the extent of the space in question at a plurality of points intermediate the cutting edge of the blade and the guard. Evidently this variation in space in question will allow the user without any adjustment of the guard to vary the thickness of shavings or slices which he is removing. This effect may be heightened by also varying the extent of the projection of the guard C beyond the cutting edge of the blade B or, in other words, by shaping either the blade or the guard, or both, so as to vary the distance between the cutting edge of the blade and the outer edge of the guard at a plurality of points intermediate the ends of the blade. The same result may still further be increased by also leaving a space F intermediate the cutting edge of the blade B and the inner edge of the guard C and by varying the extent of this space at a plurality of points intermediate the ends of the blade. Of course the shape of the blade and guard may be varied to an almost unlimited extent. It is preferable to have the guard arranged with regard to the blade in such a way that it can be moved when desired to an extent sufficient to leave the cutting edge and the various surfaces of the blade free and clear. This has two advantages—first, to admit of cleansing and wiping, and, second, to allow the use of the blade without interference from the guard. I have already described the method of accomplishing this, (shown in Fig. 1,) where the guard C, controlled by the spring, (shown in dotted lines,) swings upward and rearward away from the blade, so as to leave the entire blade free and clear. I have also shown a number of methods of accomplishing a similar result in my aforementioned application of May 14, 1904, each of which would be applicable to the present invention.

Figs. 3 and 4 illustrate an arrangement by which the guard C is swung on the pivot Y in a lateral direction to the position indicated by the dotted lines, which again entirely removes it from the blade. It is controlled by a spring M, which is arranged opposite the guard to engage with the continuation of the shank thereof extending beyond the pivot Y.

In the construction shown in Figs. 5 and 6 the guard C is capable either of being entirely removed from the blade and handle or merely being swung back and clear from the blade, substantially as shown in form Fig. 4. In this construction the guard C in its inner end is provided with a slot *c*, having at its inner end a circular opening adapted to fit the shank of the pivot Y and at its outer end a V-shaped opening adapted to fit and be engaged by the inner end of a locking device or a slide G. This locking device may be of any suitable construction, provided it will engage with the inner end of the guard C, so as to lock or hold the same in operative position with regard to the blade. It is shown as comprising a strip of metal or other suitable material guided by a couple of studs *g g*, shown as being small screws fitted in slots *g' g'*. At its outer end it is shown as bent out substantially at right angles, so as to project through an aperture or slot *a* through the casing or handle A to form a projection or finger-piece g^2 for convenience in manipulation. Whenever the locking device G is drawn backward or upward, the guard C is unlocked and may be swung upward and rearward or entirely removed by merely pulling the slot *c* over the shank of the pivot Y. If it is not desired entirely to remove the guard C, substantially the same construction may be used as shown in Fig. 9, excepting that the slot *c* is done away with. In this construction the guard C is pivoted at the point Y and will swing upward and rearward substantially in the manner shown in Fig. 1, but instead of being controlled by a spring will be locked and held in operative position with regard to the blade by the locking device G in the same manner as in the construction shown in Figs. 5 and 6.

In Figs. 7 and 8 the guard C is shown hinged to the upper part or back of the blade B by two hinges or loops c^2 c^2, engaging with apertures b^2 b^2, arranged in the upper part of the back of the blade. Of course the guard may be hinged in any other suitable manner to allow it to swing entirely clear from the cutting edge and sides of the blade B. It will be noticed that in all the modifications shown herein a guard which is bowed at a point intermediate the ends of the blade proper can be used and can readily be either entirely removed or swung clear of the cutting edge and side surfaces of the blade to leave the same free for cleaning, wiping, or any surgical operation. Any other relative arrangement of the guard and blade which will produce the same result with a bowed guard may be employed.

What I claim as new is—

1. In a safety shaving device, the combination with a blade of a guard arranged with relation thereto to leave a space intermediate the contiguous surfaces of said blade and

guard and varying in extent at a plurality of points along the cutting edge of the blade.

2. In a safety shaving device, the combination with a blade of a guard arranged with relation thereto to leave a space intermediate the contiguous surfaces of said blade and guard and bowed at a point intermediate the ends of the blade to vary the extent of said space at a plurality of points along the cutting edge of the blade.

3. In a safety shaving device, the combination with a blade of a guard arranged with relation thereto to leave a space intermediate the contiguous surfaces of said blade and guard and varying in extent at a plurality of points along the cutting edge of the blade, said guard being adapted to be moved at will to leave the cutting edge and the side surfaces of the blade entirely free and clear.

4. In a safety shaving device, the combination with a blade of a guard arranged with relation thereto to leave a space intermediate the contiguous surfaces of said blade and guard and bowed at a point intermediate the ends of the blade to vary the extent of said space at a plurality of points along the cutting edge of the blade—said guard being adapted to be moved at will to leave the cutting edge and the side surfaces of the blade entirely free and clear.

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

OTTO KAMPFE.

Witnesses:
JOHN G. HONEY,
J. M. RIEMANN.