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PATENTED AUG. 29, 1905.

R. J. CHRISTY.
SAFETY RAZOR.

APPLICATION FILED OCT. 29, 1902.

2 SHEETS—SHEET 1.

Fig. 1.

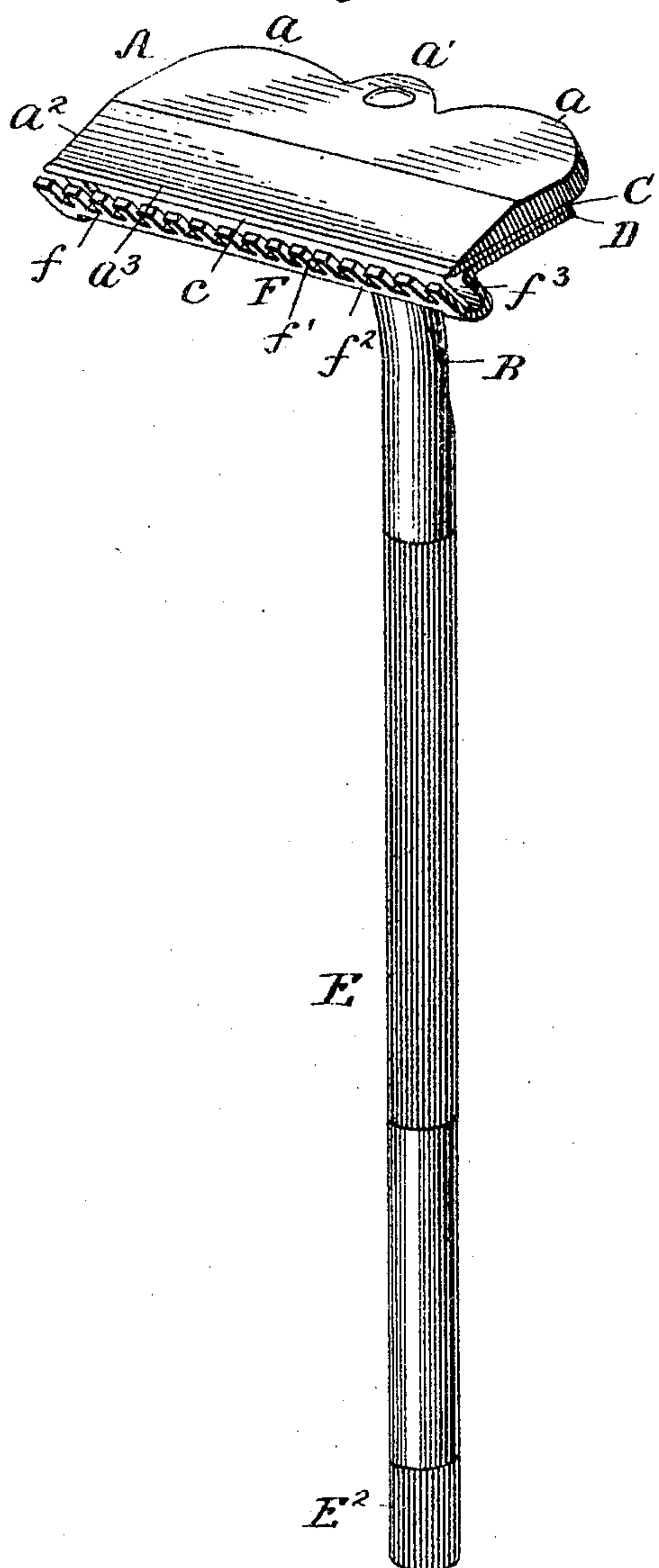
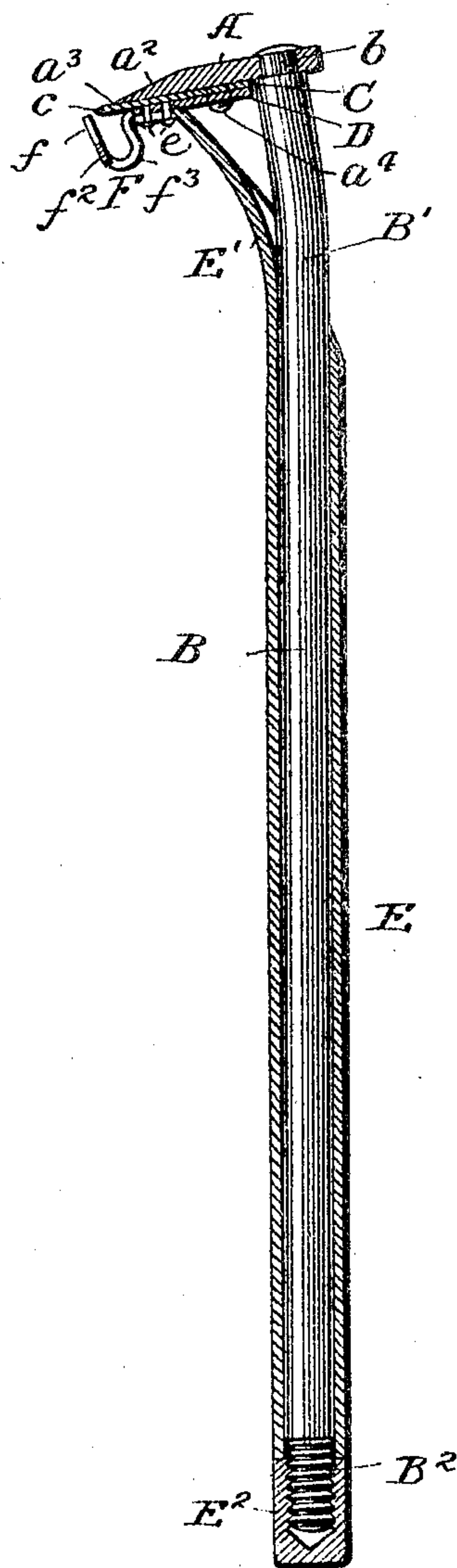


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

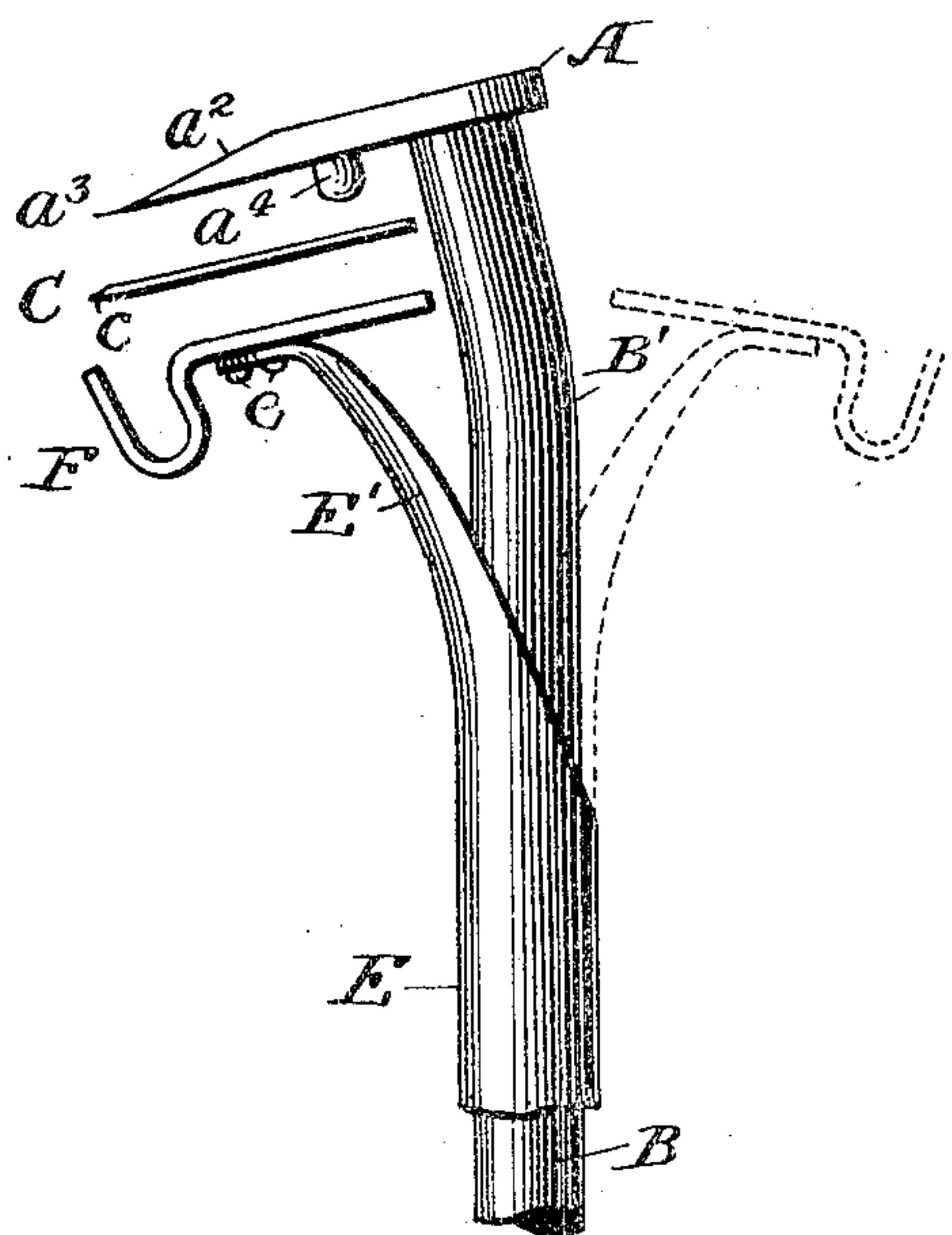


Fig. 5.

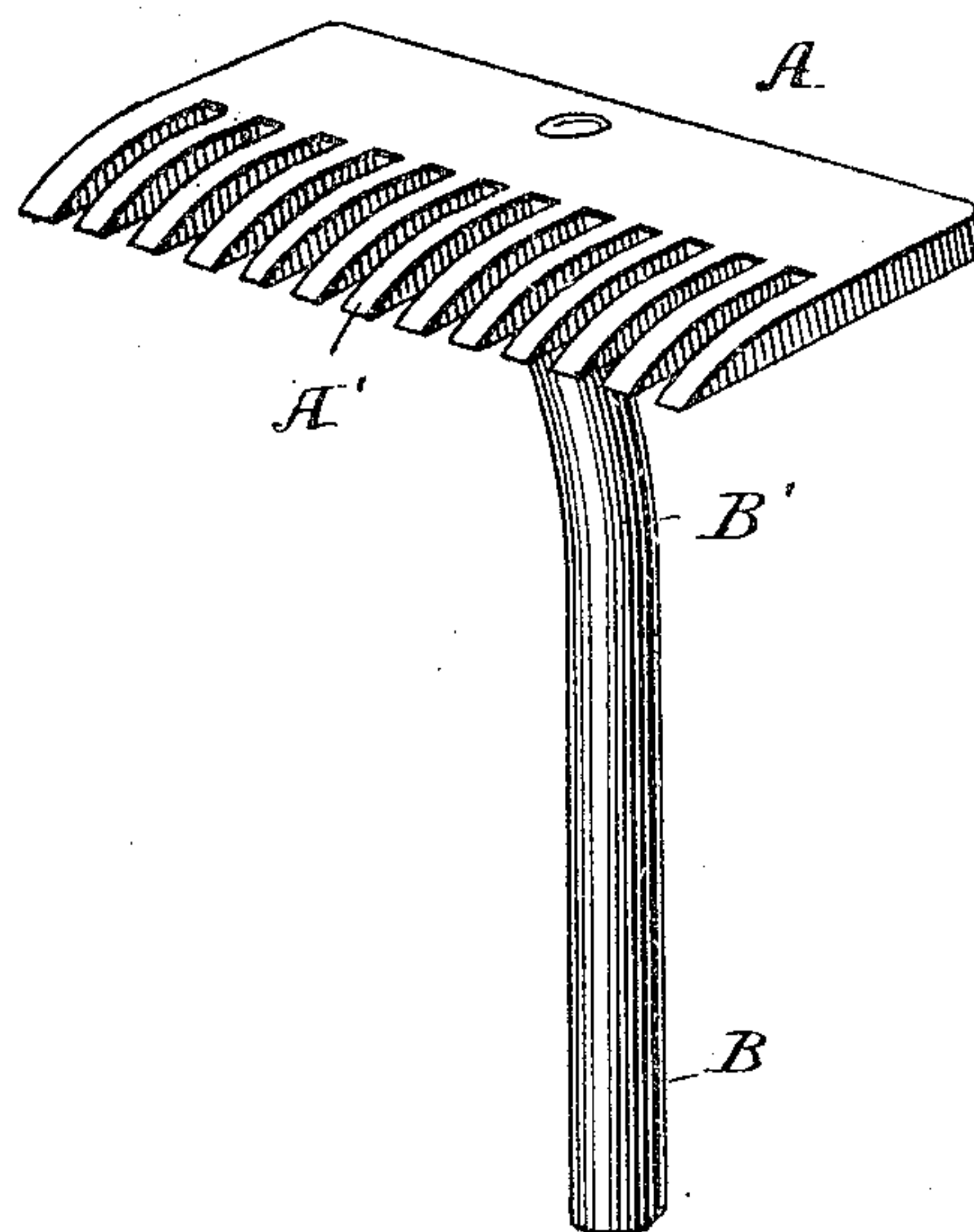


Fig. 4.

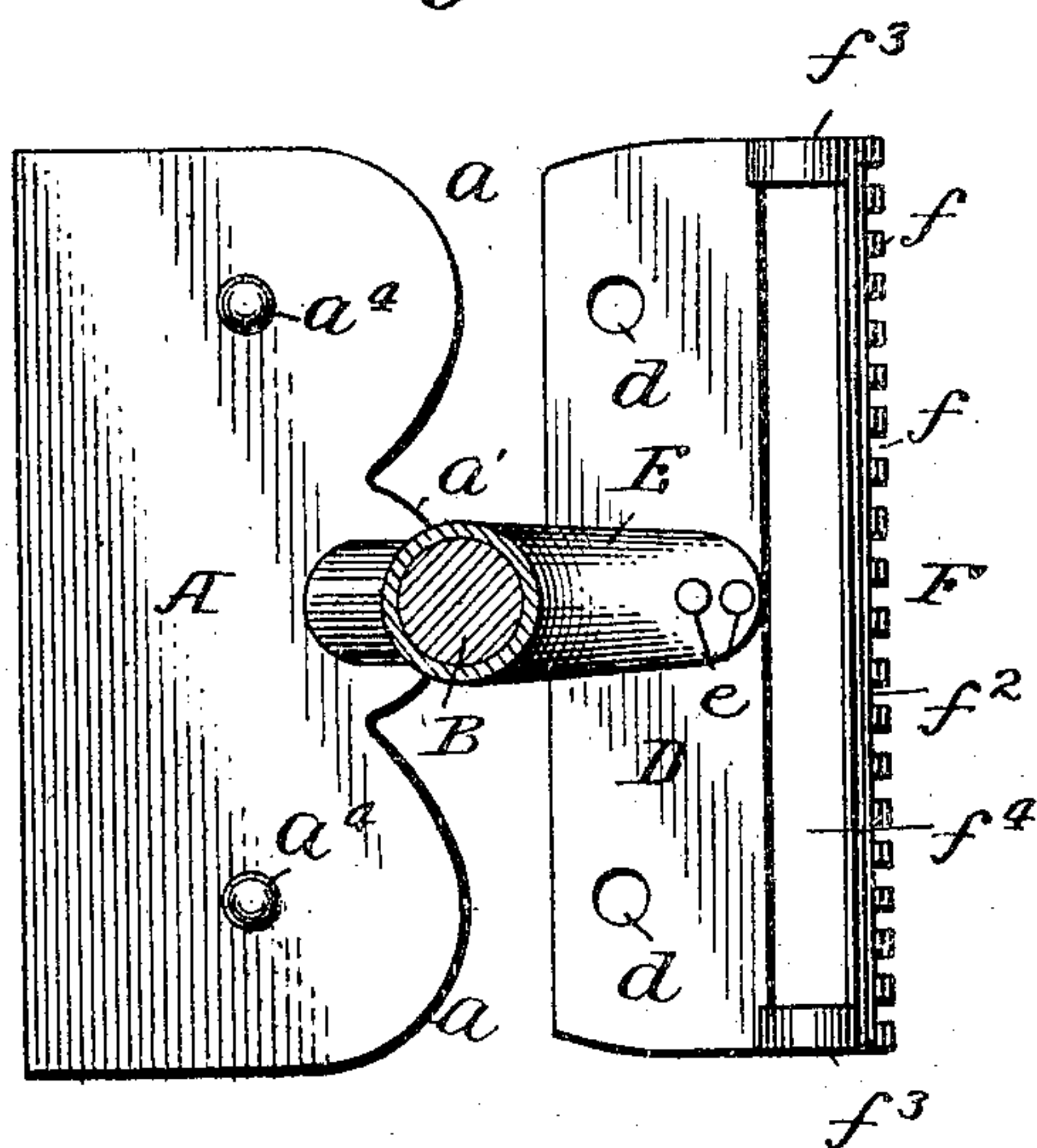
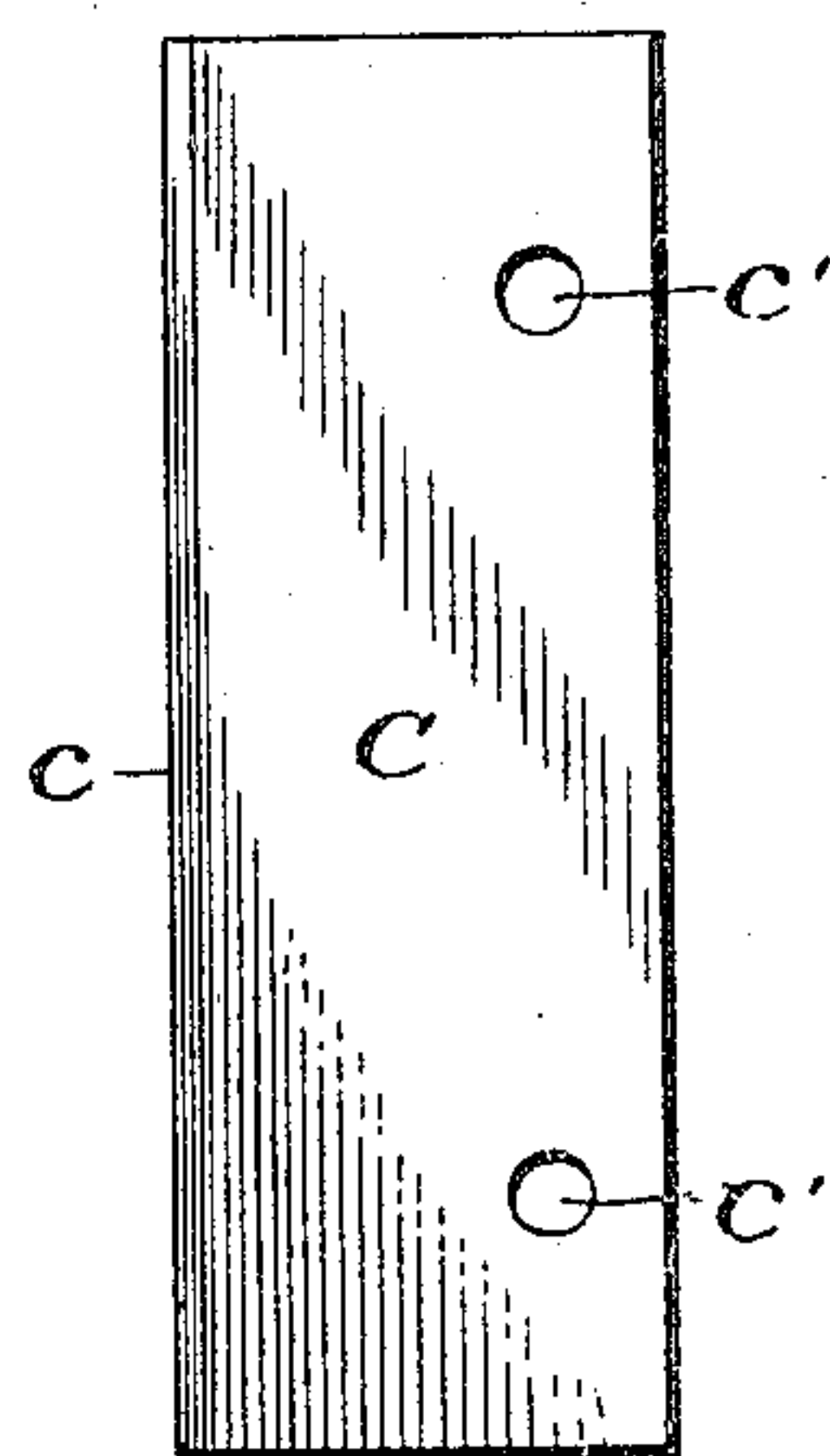


Fig. 6.



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UNITED STATES PATENT OFFICE.

RUSS J. CHRISTY, OF FREMONT, OHIO.

SAFETY-RAZOR.

No. 798,129.

Specification of Letters Patent.

Patented Aug. 29, 1905.

Application filed October 29, 1902. Serial No. 129,290.

To all whom it may concern:

Be it known that I, RUSS J. CHRISTY, a citizen of the United States, residing at Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

My invention relates to safety-razors, and has for its object to provide an improved and simplified construction that can be cheaply made and is adapted to produce improved results in practical use and is not liable to get out of order or derangement; and to these ends my invention consists in the various features of construction and arrangement of parts, having the general mode of operation substantially as hereinafter more particularly pointed out.

Referring to the accompanying drawings, wherein I have illustrated the preferred embodiment of my invention, Figure 1 is a perspective view of the safety-razor complete. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a detail view showing the parts separated. Fig. 4 is a transverse section looking toward the razor proper, showing the parts displayed. Fig. 5 is a perspective of a modification. Fig. 6 is a plan view of the knife.

Referring to the drawings, A represents what I have termed the "rigid supporting-plate" of the razor, which in the present instance is made in a general outline corresponding to a conventional hoe, in that the upper edge is curved, as at a a' , and the lower edge is preferably beveled or tapered, as at a^2 , so as to form a relatively thin edge a^3 . This supporting-plate is provided with a handle which may be of any desired shape or configuration, but which in the present instance is shown in the form of a rod B, its end being reduced, as at b , so as to fit an opening in the supporting-plate and be attached thereto in any suitable way, as by upsetting the end of the rod or being screw-threaded or otherwise securely attached to the supporting-plate. This rod is preferably bent, as at B' , to a greater or less extent, so that the portion adjacent the supporting-plate shall be practically at right angles to the inner face thereof, and the main handle shall be at an acute angle thereto, as this arrangement of the handle is better adapted to bring the cutter, hereinafter described, in proper relation to the face in use. This handle B may be of any desired length to suit, and while I have shown it round

in cross-section it may be of any configuration desired, although there are advantages in making it round, as will hereinafter appear.

The cutting-blade is mounted upon the supporting-plate and may be secured thereto in various ways, and in the present instance I have shown the supporting-plate provided with a plurality of lugs a^4 , the heads of which are preferably rounded and which are either formed integral with the supporting-plate or secured thereto in any desired way. The blade C may be of different shapes and configurations; but I prefer to make the blades of a sheet or plate of steel of substantially uniform cross-section or thickness, so that they can be readily cut, stamped, or otherwise formed from sheet-steel and can therefore be made exceedingly cheap and can be readily sharpened and kept sharpened at other cutting edge. I have shown this cutting edge c as being beveled on both sides, and this is the preferred form of cutting edge; but the blade may be beveled on one side only; but however it is shaped, the blade itself being of substantial uniform thickness, it can be readily maintained in the sharp condition with little or no wear or destruction of its cutting edge. The blade is also so constructed as to be quickly and accurately disposed in proper relation upon the supporting-plate, so as to be in operative condition, and in the present instance the blade is provided with openings c' , adapted to fit accurately over the studs or projections a^4 of the plate, and thus maintain the cutting edge of the blade in proper relation with the other parts of the device. Instead of the studs and holes any other equivalent securing and holding devices may be used; but those described have been found to be most satisfactory.

In order to hold the blade in position, I provide what I term a "securing-plate" D, and this plate is provided with openings d , corresponding to the studs or projections a^4 , and is adapted to fit over the inside face of the blade and to clamp the blade between the supporting-plate and the securing-plate. This securing-plate may be mounted in different ways and held in position by different means; but in the present case I have shown the securing-plate as mounted upon a sleeve E, which is adapted to slide and rotate upon the handle B, and in order that the securing-plate may be readily brought into and out of proper position the forward end of the sleeve is preferably cut away and bent outwardly from the

handle, as at E', and it is connected to the securing-plate in any suitable way, as by rivets *e*. It is of course desirable to secure the sleeve and handle together in proper relation, so as to perform the function of holding the blade in proper position, and it is also desirable to have the sleeve arranged so that it can readily be moved out of position to permit the removal of the blade for the purpose of sterilizing the same or substituting another blade or for any other purpose, and when the securing-plate is mounted on the sleeve in the manner described not only can the sleeve slide on the handle, but it can be rotated in relation thereto, so that the securing-plate may be brought into the position shown in dotted lines in Fig. 3 and in full lines in Fig. 4, and then the blade can be readily adjusted or removed, as desired. When, however, the blade is to be clamped in operative position, the sleeve can slide on the handle B and be secured in operative position by any suitable means, as by the head E², fitting on the screw-threaded portion B² of the handle.

While the device thus far described makes a complete operative razor, it is desirable to provide the razor with what I have termed a "comb," which not only serves the ordinary functions of a comb, but also serves as a safety-guard for the cutting-blade. While this comb may be variously constructed and arranged, I prefer to attach it to the securing-plate and, in fact, prefer to make it as an integral portion of the securing-plate, and I have shown the plate D as being extended to form the comb F, which is provided with the teeth *f* and the intervening spaces *f'* on its edge. While it is not new, broadly speaking, to provide a safety device for razors, I have found that it is very material to properly locate this safety device with respect to the cutting edge, and I have arranged the comb or safety device so that it is adjacent the face of the cutting-blade which is away from the part on which the blade operates. In other words, it is on the face of the blade and supporting-plate from which the handle extends. By thus bringing the teeth F so that their ends are in close relation to the cutting edge *c* of the blade and a little in advance of said edge the teeth serve the functions of an ordinary comb in straightening the hair or beard and leaving it in the best condition to be operated upon by the blade as the hair or beard passes through the spaces between the teeth of the comb and are in the best position to be operated upon by the cutting edge of the blade in contradistinction to being depressed or pushed down by the safety devices ordinarily used. This is an important and distinguishing characteristic of the construction and arrangement of the comb or safety device, and while I have shown what I consider to be the best manner of mounting and constructing the same my

invention in this respect is not limited to the details described. The teeth of the comb are preferably made integral with what may be termed the "back" *f*² of the comb, and this is supported on the securing-plate by arms *f*³, leaving an opening between the back of the comb and the securing-plate, as at *f*⁴, and this not only tends to make the parts light, but provides a place for the reception of the lather in the cutting operation. The supporting-plate instead of being made practically solid, as shown in Figs. 1 to 4, may also be recessed, as indicated in Fig. 5, so that it is practically provided with teeth A', and otherwise being practically the same as in the first instance.

Such being the general description of the embodiment of the invention shown, its operation will be generally understood from what has already been shown, and it will be seen that the whole constitutes a simple and effective device which can be cheaply made and which can be readily adjusted in operative or inoperative position, permitting thorough cleansing of the parts after use or the substitution of different blades or the removal and replacement of the blade, as in sharpening the same. Thus assuming the parts to be in the position indicated in Fig. 4 the blade can be readily removed or replaced on the supporting-plate and when placed thereon is in proper adjustment for operation. Then by turning the sleeve and moving it longitudinally on the handle the securing-plate is brought into position registering with the other parts by means of the studs or projections and being secured and held in position by some suitable means, as the head E², and in doing this the comb is also adjusted in its proper relation to the cutting edge of the blade. As before intimated, in use the soap or other material can pass freely through the opening *f*⁴ of the comb and will be supported and maintained by the comb and the adjacent parts, so that it is not liable to drop, and afterward the parts may be detached for cleaning. Furthermore, by my construction the blade is rigidly supported practically throughout both its sides or surfaces instead of being supported by clamps or clips at its ends, as is common in this class of devices. This construction is important in that it permits the use of very thin blades, whether they are of uniform cross-section or otherwise. Furthermore, it will be seen that my construction provides clamping-plates having parallel adjacent faces from which the blade is removable sidewise with the cutting edge in front and that, as shown, the blade is entirely in front of the handle.

Having thus fully described one embodiment of my invention, without limiting myself to the precise details shown and described, which may be varied by those skilled in the art without departing from the principles thereof, what I claim is—

1. A safety-razor having clamping-plates with parallel adjacent surfaces and a thin blade arranged to be held between them and removable therefrom sidewise with the cutting edge in front, substantially as described.

2. A safety-razor having clamping-plates adjustable with relation to each other and a thin blade arranged to be held between them and removable therefrom sidewise with the cutting edge in front, substantially as described.

3. A safety-razor having clamping-plates with parallel adjacent faces and a thin blade wholly in front of the handle and removable from the plates sidewise with the cutting edge in front, substantially as described.

4. A safety-razor having adjustable clamping-plates and a thin blade of less width than the clamping-plates and removable sidewise with the cutting edge in front, substantially as described.

5. A safety-razor having adjustable clamping-plates with devices for holding the blade in positive relation between the plates, and a thin blade removable sidewise with the cutting edge in front, substantially as described.

6. A safety-razor having adjustable clamping-plates with parallel opposing surfaces and having devices for holding the blade in positive relation between the plates, and a thin blade removable sidewise with the cutting edge in front, substantially as described.

7. A safety-razor comprising a supporting-plate, a handle connected thereto, a blade, devices for determining the relations between the blade and supporting-plate, a securing-plate, a sleeve mounted on the handle and capable of longitudinal and rotative movement thereon, and means for securing the parts in operative position, substantially as described.

8. A safety-razor comprising a supporting-plate, a handle connected thereto, a blade, a securing-plate, a comb connected to the securing-plate, and a sleeve mounted on the handle and supporting the securing-plate and comb, substantially as described.

9. A safety-razor comprising clamping-plates having parallel adjacent surfaces, a han-

dle secured to the upper edge of one of the clamping-plates and extending at substantially right angles therefrom, a thin blade removable sidewise with the cutting edge in front and devices for securing the blade between the plates in front of the handle, substantially as described.

10. A safety-razor comprising a supporting-plate, a handle connected to said plate, a blade, a securing-plate, a sleeve carrying said plate and mounted to move longitudinally and rotatably on the handle, and a head adjustably connected to said handle to secure the parts together, substantially as described.

11. A safety-razor comprising a supporting-plate, a blade mounted thereon, a securing-plate, means for adjusting the securing-plate with relation to the supporting-plate, and a comb, the teeth of which project in front of the cutting edge of the blade, the comb being mounted on the securing-plate, substantially as described.

12. A safety-razor comprising a supporting-plate, a blade, a handle connected to the said plate, a securing-plate, a comb mounted on the securing-plate and providing an opening between the comb-teeth and securing-plate, and means for supporting the securing-plate and comb, substantially as described.

13. A safety-razor having a clamp with separate upper and lower clamping-plates movable toward and from each other, an adjustable clamping device for said plates, and a thin blade arranged to be held between them, said blade being free to slip out sidewise when the clamp is loosened.

14. A safety-razor having upper and lower clamping-plates and a screw-clamp, a cutting-blade of less width than the clamping-plates and wholly in front of the stem of the screw-clamp and removable sidewise.

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

RUSS J. CHRISTY.

Witnesses:

JOHN T. GARVER,
BIRT S. GARVER.