

No. 778,540.

PATENTED DEC. 27, 1904.

H. HERDER.
SAFETY RAZOR.
APPLICATION FILED DEC. 24, 1903.

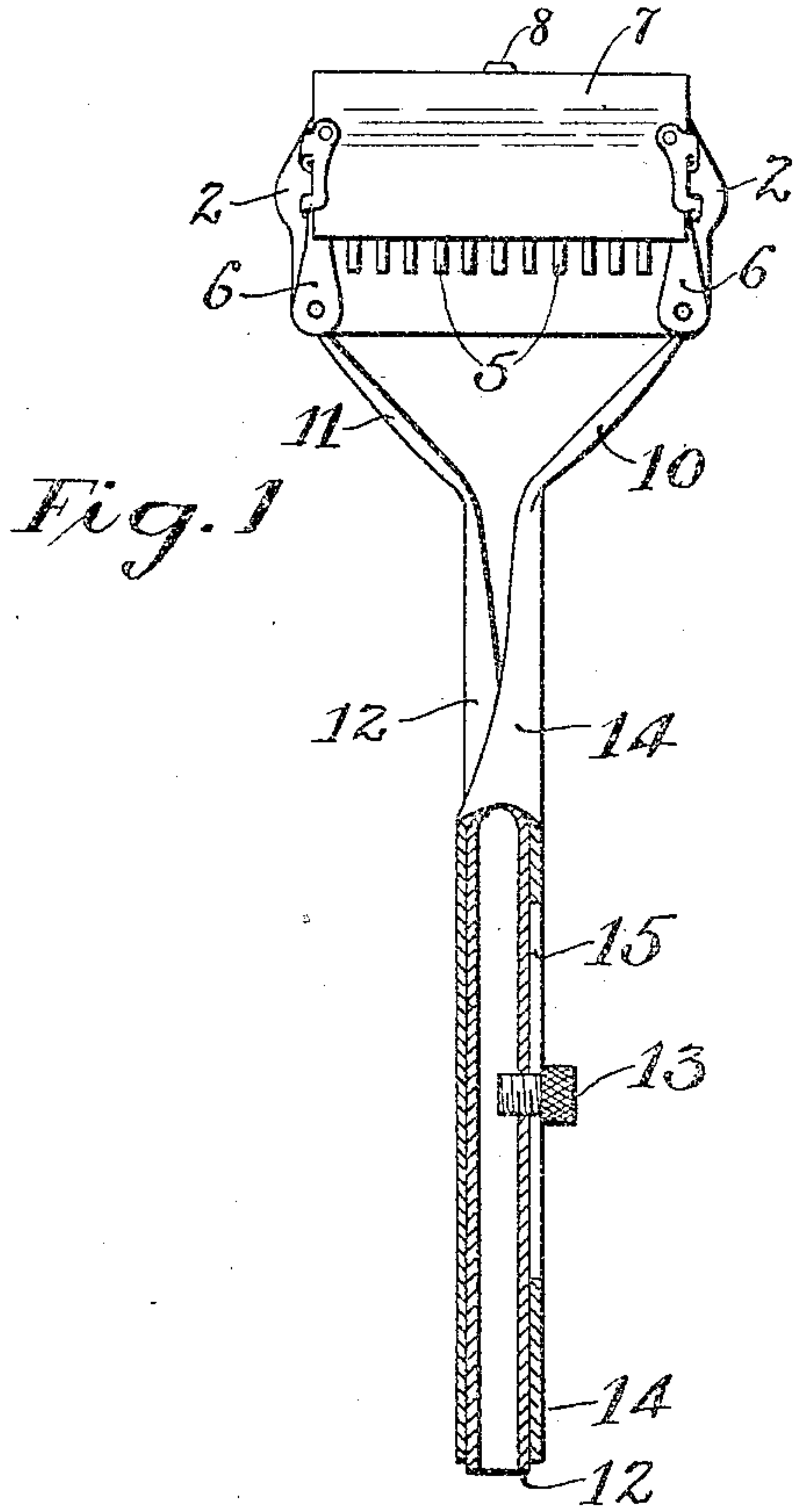


Fig. 1

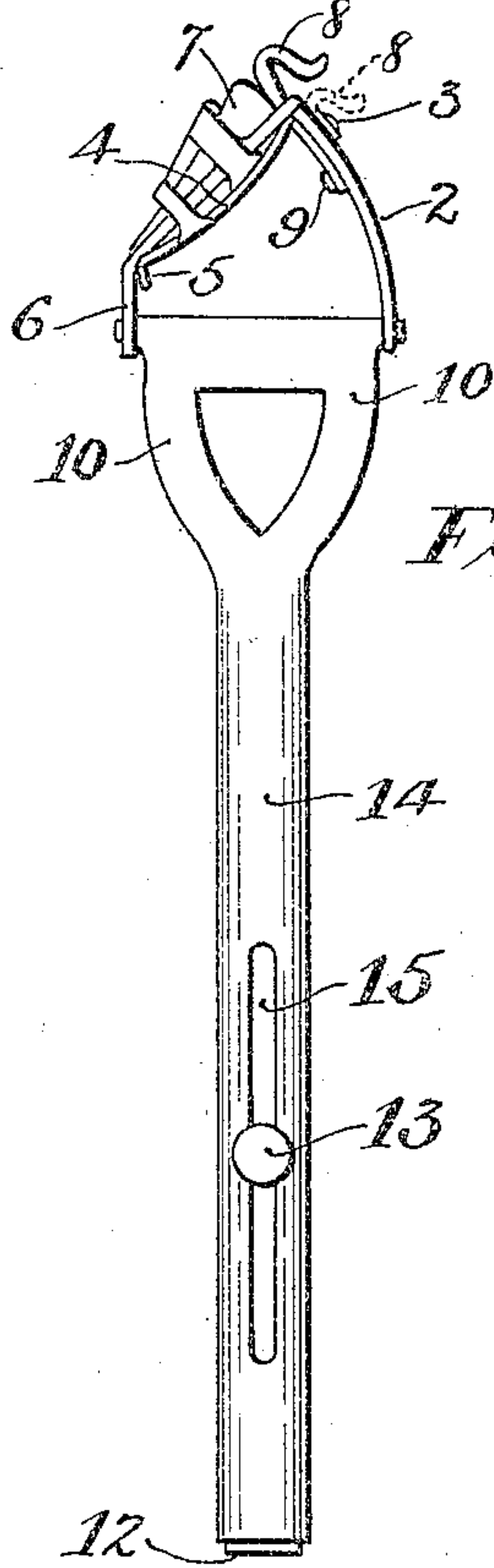


Fig. 2.

Fig. 3.

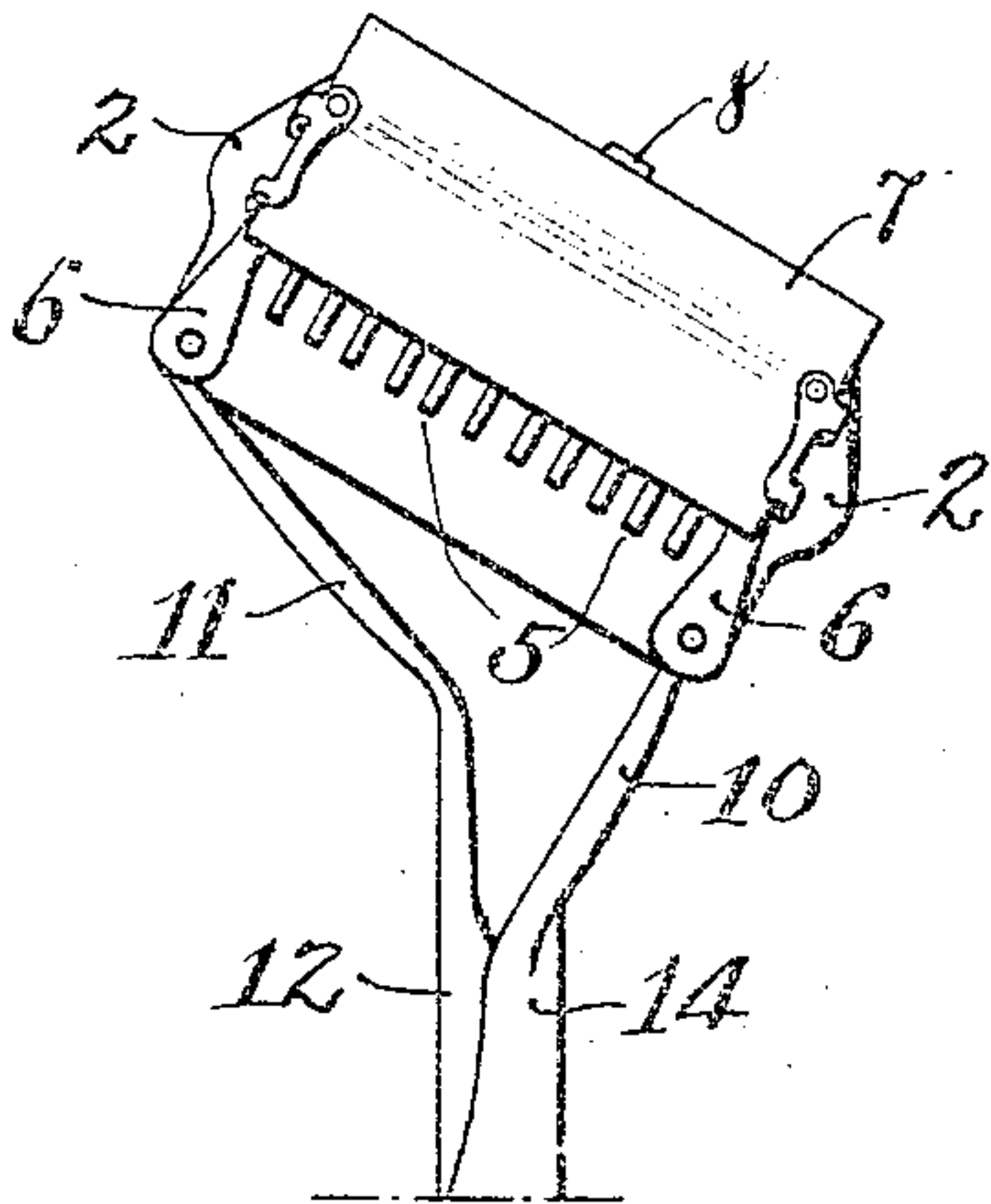
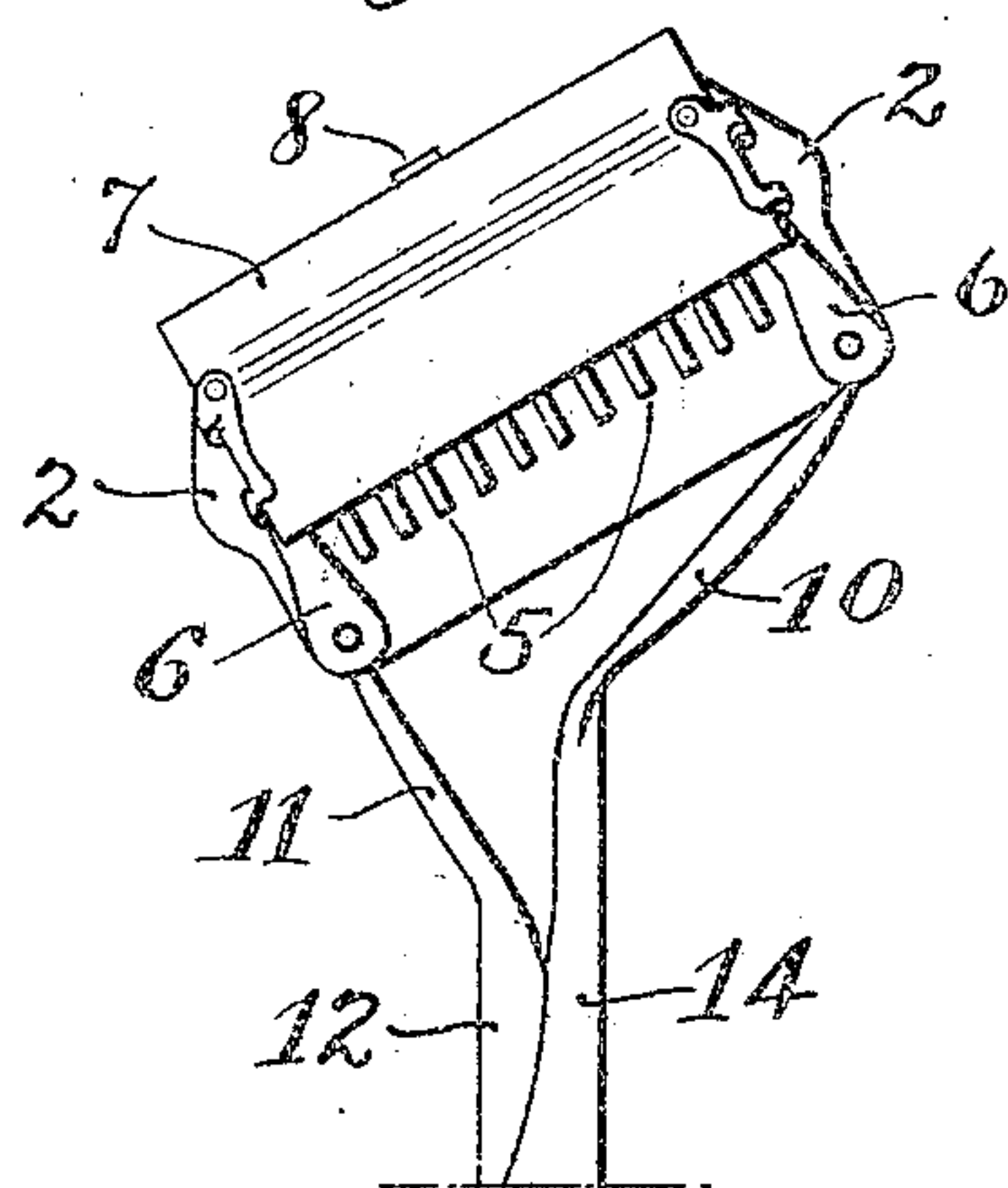


Fig. 4.



WITNESSES:

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SAFETY-RAZOR.

SPECIFICATION forming part of Letters Patent No. 778,540, dated December 27, 1904.

Application filed December 24, 1903. Serial No. 186,485.

To all whom it may concern:

Be it known that I, HERMAN HERDER, a citizen of the United States, residing in the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Safety-Razors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to safety-razors. Such devices consist of a short razor-blade supported directly in a blade-holder in such manner relatively to one side of the blade edge that the latter cannot bear against the skin to cut it, while being free to contact with the beard, and such blade and its holder are usually mounted in a handle portion to enable the device to be conveniently held in the hand and applied to the face of the operator.

As is well known, the effectiveness of any kind of a razor to shear the beard without a painful pulling effect is due to a manual holding of the blade at a longitudinal incline. In all safety-razors the short blade employed in such devices must be supported in a holder or casing which is usually fastened rigidly to a handle and substantially at right angles thereto, and although it has been suggested to pivot a curved arm on the holder or casing and rigidly fasten the upper end of the handle to this arm that method of securing an inclination of holder to handle is inadequate to properly support the blade-holder during use or to fixedly maintain it at any degree of inclination relatively to the handle. The pivoting means must to be effective form a part of the handle and not of the blade-holder. It must also be movable relatively to the handle in addition to being pivotally connected to the blade-holder and must also independently support the opposite ends of the blade-holder.

The single object of my invention in safety-razors is to effect an adjustable longitudinal incline of the blade relatively to the handle in order that such razors may be used as effectively and without pulling on the beard as the ordinary razor manually operated directly. To that end my invention consists, broadly, in the combination, with a blade-

holder for a safety-razor blade, of a divided handle constructed with a single grasping portion, but with a pair of oppositely-disposed and independently-movable forked arms, with pivot connections directly between said arms and the opposite ends of the blade-holder, whereby said arms are movable relatively to each other and to the grasping portion of the handle and whereby the opposite forks of the handle independently support and control the inclination of each side of the blade-holder, operating to adjustably change the angle of the blade to the handle.

In the drawings illustrating an embodiment of that principle of construction constituting my invention, Figure 1 is a front elevation; Fig. 2, a side elevation; and Figs. 3 and 4 are each a front elevation with the lower part of the handle broken away, showing the operation of adjusting the blade-holder with its blade at an incline.

It is obvious that various forms of combining means between the blade or the blade-holder and the operating-handle to effect an adjustable change of the blade to any incline relatively to the handle may be devised, and hence involve my invention. I have shown in the drawings and will now describe a simple and effective form of device embodying means involving that principle.

The blade holder and guard are shown as consisting of the rear plate 2, curved upward and connected by rivets 3 3 at the top edge to the front plate 4. The latter has a lower straight-toothed edge 5, constituting the blade-edge guard. The front plate 4 has depending ends 6, by which it is fastened to an operating-handle. On its vertical sides said plate has guide-bars to direct the razor-blade 7 to a proper position on the plate, and it is locked thereon in that position by means of a swinging bolt 6, pivotally mounted on end at 9 on the rear plate 2. Other blade-holders with a guard edge may be substituted for that shown and described. Ordinarily the blade-holder described has been fixedly fastened to a solid handle having four outwardly-projecting arms, two of them indicated at 10 10 in side view in Fig. 2 and the other two indicated at 11 11 in front view in Fig. 1. In such a device the

blade-holder is fixed at right angles to the handle. In the embodiment which I have shown of a device involving the principle of my invention I have employed a handle having such
 5 arms supporting the blade holder and guard; but in order to make the blade-holder movable on the handle to adjust it to any incline relatively thereto the handle is made in two tubular parts 12 and 14, one of them, 12, sliding
 10 sleeve-like within the other, 14, and, if desired, they may be locked together at any angle of adjustment, for which purpose the outer tubular part 14, being slotted at 15, Fig. 2, may be fastened with a set-screw 13, passing through the slot and entering a screw-hole
 15 in the inner tubular part 12.

In Figs. 3 and 4 are shown the blade-holder adjusted to its opposite inclines. Holding the device by the handle the blade-holder can be
 20 moved into any such incline by grasping it by the fingers, the frictional contact of the sleeve-like parts of the handles on each other being ordinarily sufficient to maintain it at such adjusted incline; but instead of so moving the blade-holder by the fingers directly
 25 the outer tubular part 14 of the holder may be moved up and down within the inner tubular part 12 by means of the projecting set-screw 13, which may then be tightened to
 30 hold the parts at such adjustment.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a safety-razor the combination with a
 35 safety-blade and with means constituting a holder therefor as well as a guard for its knife-edge, of an operating-handle provided with a pair of oppositely-disposed forked arms independently movable relatively to each other
 40 and to the handle proper, with pivot connections between each of said arms and the blade-holder adapted to adjustably shift the blade-holder longitudinally to an incline relatively to the grasping portion of the operating-handle.

45 2. In a safety-razor, the combination with a blade-holder, of a divided handle therefor having a single grasping portion, each division of the handle being independently movable and provided with a pair of forked arms disposed
 50 opposite to each other in parallel planes, and

with means to pivotally mount the blade-holder longitudinally between said arms and laterally between the forks of each of said arms.

3. In a safety-razor the combination with a
 55 razor-blade holder consisting of two opposite inclined walls, one of which is provided with guiding-supports for the blade and also with a guard edge, and the other of which is provided with a locking device operating to main-
 60 tain a razor-blade in suitable relation to the front wall, a detachable razor-blade adapted to be so held in said holder, and an operating-handle consisting of two tubular parts arranged sleeve-like one within the other, the
 65 upper end of each tubular portion having projecting arms, those of one tube being connected to the front and rear walls of the blade-holder at one end thereof, and those of the other tube being connected to the opposite
 70 front and rear walls of the blade-holder.

4. In a safety-razor the combination with a
 razor-blade holder consisting of two opposite inclined walls, one of which is provided with
 75 guiding-supports for the blade and also with a guard edge, and the other of which is provided with a locking device operating to maintain a razor-blade in suitable relation to the
 front wall, a detachable razor-blade adapted to be so held in said holder, and an operating-
 80 handle consisting of two tubular parts arranged sleeve-like one within the other, the upper end of each tubular portion having projecting arms, those of one tube being connected to the front and rear walls of the blade-
 85 holder at one end thereof, and those of the other tube being connected to the opposite front and rear walls of the blade-holder; the periphery of the outer of said tubes being longitudinally slotted, and a set-screw passing
 90 through said slot with its screw end entering the periphery of the inner tube of the operating-handle.

In testimony whereof I have hereunto affixed my signature this 11th day of December, 95
 A. D. 1903.

HERMAN HERDER.

Witnesses:

ELMER E. SCHWARTZ,
 ALBERT ZELFELDER.