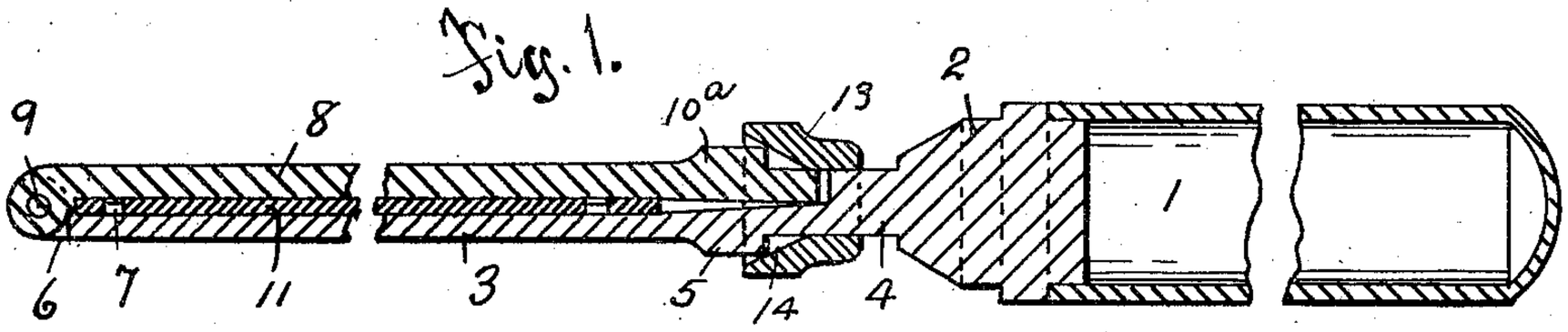
No. 833,767. PATENTED OCT. 23, 1906.

F. H. ARNOLD.

SAFETY RAZOR.

APPLICATION FILED APR. 14, 1906.

Fig. 1.



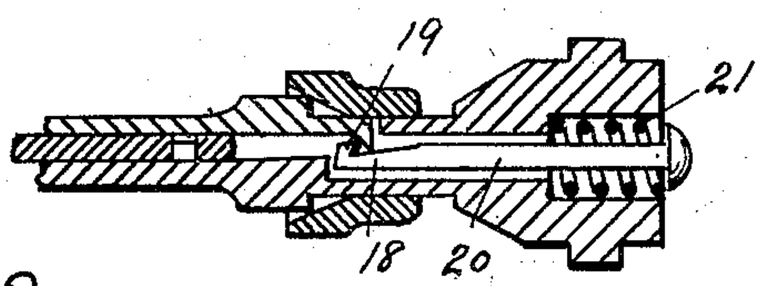


Fig. 7.

Fig. 2.

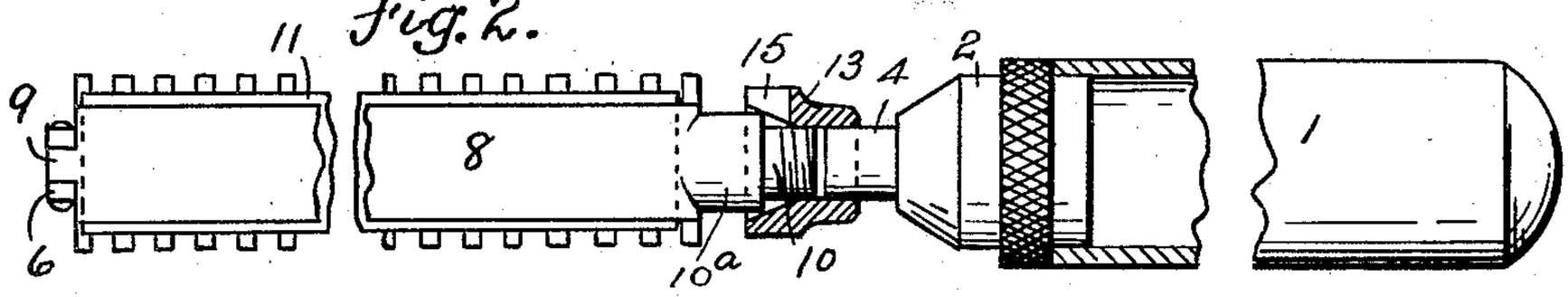


Fig. 3

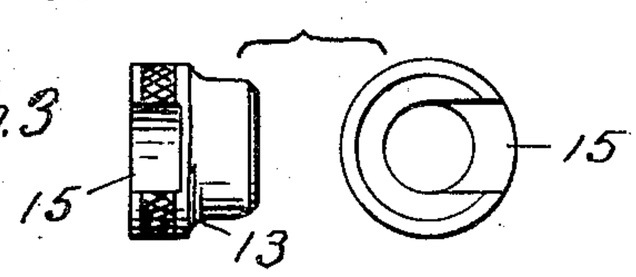


Fig. 4.

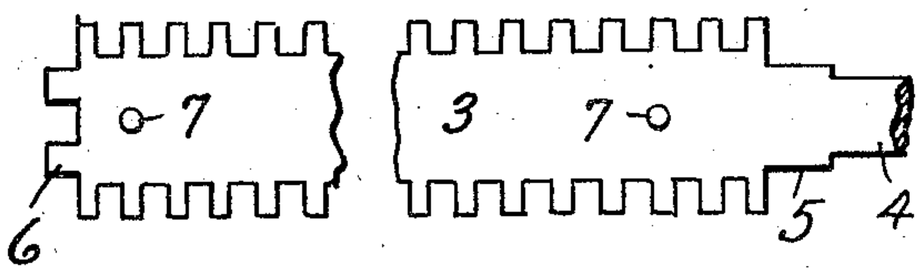
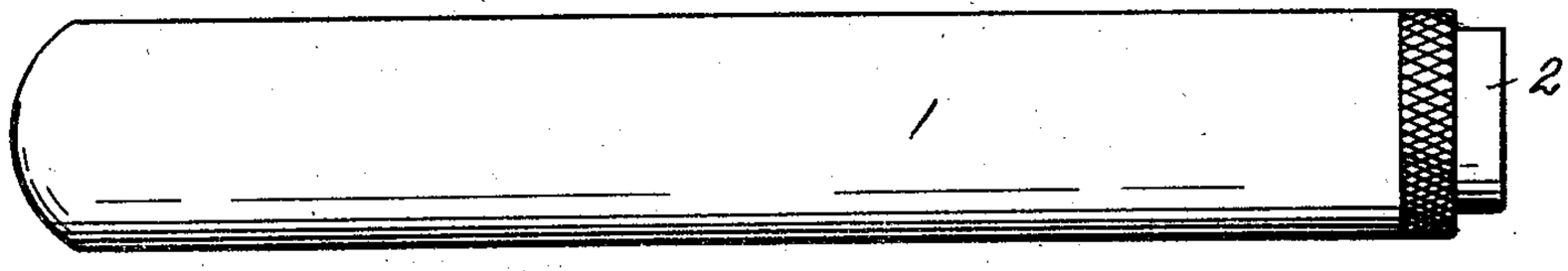


Fig. 5.

Fig. 6.



Frederick H. Arnold, Inventor

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UNITED STATES PATENT OFFICE.

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SAFETY-RAZOR.

No. 833,767. Specification of Letters Patent. Patented Oct. 23, 1906.

Application filed April 14, 1906. Serial No. 311,640.

To all whom it may concern:

Be it known that I, FREDERICK H. ARNOLD, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to improvements in safety-razors; and the object of my invention is to provide a safety-razor which will permit the placing of the blade in position and its removal therefrom quickly and accurately.

A further object is to supply a safety-razor that may be incased in a comparatively small tubular casing and carried with ease in the pocket.

This invention is intended more particularly as an improvement on the devices shown in my pending applications, Serial Nos. 275,514, 290,701, and 299,278.

The invention consists principally of a tubular casing adapted to house the entire device similar to that shown in the application, Serial No. 299,278, above referred to; but in my present device the clamping of the plates between which the blade is held is not accomplished by the handle, as in the case above referred to.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of my complete device. Fig. 2 is a plan view thereof, partly in section. Fig. 3 shows the clamping-sleeve in detail. Fig. 4 is a detail view of the guard-plate, and Fig. 5 is a detail view of the blade. Fig. 6 shows the device closed. Fig. 7 is a modified form of my device.

The numeral 1 designates a tubular casing. The numeral 2 designates a cone-shaped plug adapted to fit into the open end of said casing. This plug is reversible, as both its ends are adapted to engage the casing.

The numeral 3 designates the guard-plate. This plate is formed integral with the plug 2 and is joined thereto by a stem 4, a portion of which is half-round, which portion is screw-threaded. An enlargement 5 of this stem is formed where it joins the body of the plate. The outer end of this plate is formed with a hinge member 6. This plate is also provided with a plurality of central lugs 7 for the purpose of positioning the blade.

The numeral 8 designates the backing-plate. This plate is formed with a hinge member 9, by means of which it is hinged to the outer end of the guard-plate at 6. The inner end of this plate is formed with a half-round screw-threaded stem 10 and an enlargement 10^a where it joins the body of the plate, so that when the plates are brought together both the stem portions and their enlargements will produce cylindrical members of different diameters.

The numeral 11 designates the blade, which I have shown provided with a double cutting edge and having a plurality of perforations 12, adapted to engage the lugs 7 and be held in position thereby.

The numeral 13 designates the clamping-sleeve. This sleeve is cone-shaped internally at its outer end 14 and is formed with a slot 15 of a width approximating the width of the half-round stem portion 10.

When it is desired to place a blade in the holder, the backing-plate is swung upward on its hinge, the blade is placed in engagement with the lugs of the guard-plate, and the backing-plate is closed, the sleeve 13 being turned to allow the end 10 of the stem to enter the slot 15. The sleeve is then screwed up, its internal conical wall bearing against the outer edge of the enlarged portions of the stems and effectually clamping the plates together.

When it is desired to remove the blade, the sleeve is unscrewed until the shorter stem member 10 has been uncovered by the slot 15, and when brought to the point where they register the backing-plate may be raised, the slot allowing the stem 10 to pass through it.

When it is desired to house the plates, the plug 2 is withdrawn from the casing and the casing slipped over the plates, engaging the plug from the opposite end, thus affording a convenient pocket-package.

In Fig. 7 I have shown a modified form of my device. In this construction the guard-plate is provided with a trigger device 18 and the backing-plate with a catch 19, adapted to engage said trigger. This trigger is formed on the end of a plunger 20, which passes through the plug and enters the stem 4. A coiled spring 21 is placed in said plug surrounding said plunger and tends to keep the trigger in normal engagement with the catch. With this construction the clamping-sleeve is first drawn back until the stem of the

backing-plate is uncovered, and the plunger 20 is then operated by pressing the thumb against the head thereof, which action will release the trigger, and the backing-plate will be free to open. If desired, a suitable spring may be provided to raise said plate when so released similar to the action of a watch-case.

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

1. A safety-razor comprising a perforated blade, a pair of clamping-plates hinged at their outer ends one of which is formed with lugs for positioning said blade, half-round screw-threaded stems of varied diameter formed on the inner ends of said plates, one of which is shorter than the other, a slotted internally-screw-threaded sleeve adapted to engage said stem members to compress said plates, a plug formed on the end of said longer stem member and a tubular casing adapted to engage either end of said plug.

2. In a safety-razor a backing-plate formed with a hinge member at its outer end and a half-round screw-threaded stem at its inner end, a guard-plate formed with a corresponding hinge member at its outer end and a corresponding stem at its inner end, a plug formed on the end of said stem, positioning-lugs formed on said plate, a perforated blade adapted to engage said lugs, a slotted internally-tapered clamping-sleeve located on said stem adapted to engage and compress said plates, and a tubular casing adapted to engage either end of said plug.

3. In a safety-razor, a backing-plate formed with a hinge member at its outer end, a half-round screw-threaded stem at its inner end and a depending catch; a guard-plate formed with a corresponding hinge member at its outer end and a corresponding stem at its inner end; a hollow plug formed on the end of said stem and a trigger device located in said plug and stem adapted to engage said catch, positioning-lugs formed on said plate, a perforated blade adapted to engage said lugs, a slotted internally-tapered clamping-sleeve located on said stem adapted to engage and compress said plates, and a tubular casing adapted to engage either end of said plug.

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

FREDERICK H. ARNOLD.

Witnesses:

ED. A. KELLY,

J. O'R. KELLY.