

W. E. TRAVERS.
REVOLVING RAZOR.

APPLICATION FILED FEB. 21, 1911.

1,014,187.

Patented Jan. 9, 1912.

Fig. 1.

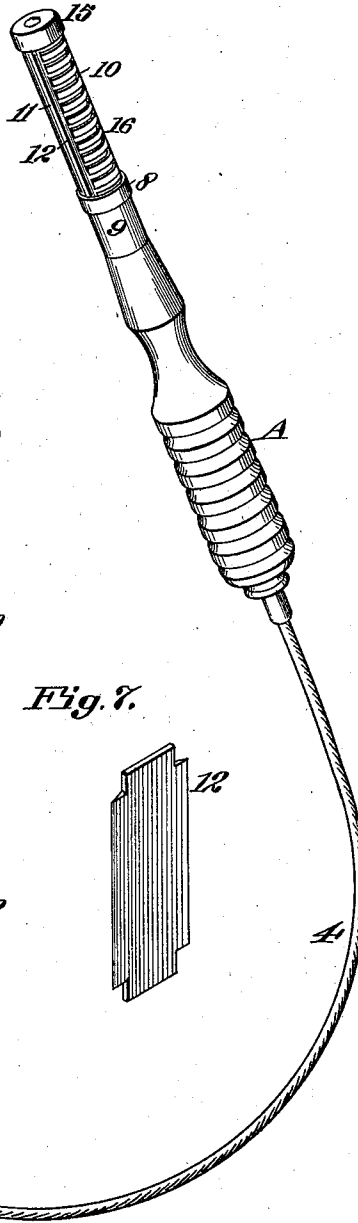


Fig. 2.

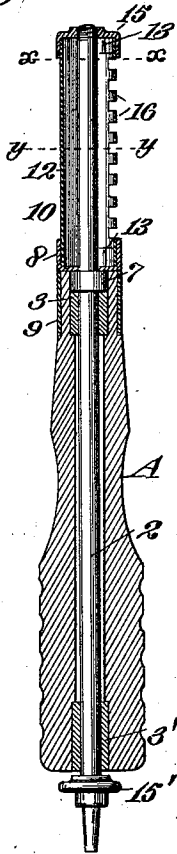


Fig. 3.

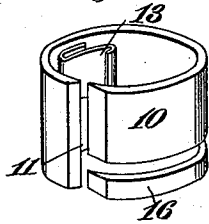


Fig. 4.

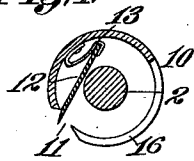


Fig. 7.

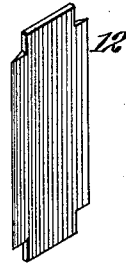


Fig. 5.

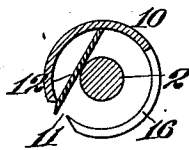
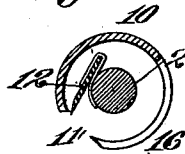


Fig. 6.



Witnesses.

Charles Pickles

R. S. Barnes

Inventor

William E. Travers

By J. H. Strong
att'y

UNITED STATES PATENT OFFICE.

WILLIAM E. TRAVERS, OF OAKLAND, CALIFORNIA, ASSIGNOR OF ONE-FOURTH TO
JAMES D. HAHN, OF OAKLAND, CALIFORNIA.

REVOLVING RAZOR.

1,014,187.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed February 21, 1911. Serial No. 609,976.

To all whom it may concern:

Be it known that I, WILLIAM E. TRAVERS, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Revolving Razors, of which the following is a specification.

This invention relates to a razor, and particularly pertains to a mechanically driven rotary razor of the safety type.

It is the object of this invention to provide a safety razor in which the blade is adapted to be rotated at a high rate of speed, and which is so designed and constructed as to be easily and readily operated.

A further object is to provide a razor of the above character, in which interchangeable razor blades are employed, and which is so arranged that the blade may be quickly attached or removed.

The invention consists of the parts and the combination and construction of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a perspective view of the invention, showing the manner of driving same. Fig. 2 is a vertical section. Fig. 3 is a detail in perspective, showing the blade guard construction. Fig. 4 is a cross section on the line X—X, Fig. 2. Fig. 5 is a cross section on the lines Y—Y, Fig. 2. Fig. 6 is a cross section showing a modified form of mounting the razor blade. Fig. 7 is a perspective view of a blade.

In the drawings, the invention is shown as embodying a tubular handle A, in which is mounted a revoluble shaft 2, which extends longitudinally through the handle A, and is supported therein on bushings 3 and 3'.

The outer end of the shaft 2 is connected to a flexible drive shaft 4, which is attached to the rotary shaft 5 of a motor 6. Securely mounted on the shaft 2, adjacent the outer end of the handle A, is a collar 7, having an outwardly and upwardly extending flange 8 formed thereon. The outwardly extending portion of the flange 8 is designed to bear upon a ferrule 9 mounted on the outer end of the handle A. This shaft 2 extends outwardly beyond the collar 7 a distance of approximately two inches.

A cylindrical razor guard 10 is adapted to be placed over the outer end of the shaft 2

with its inner end resting upon the outwardly projecting portion and within the upwardly projecting portion of the flange 8 on the collar 7. This razor guard 10 is slotted longitudinally, at 11, through which the cutting edge of a flat razor blade 12 extends, as shown in Figs. 4, 5 and 6. This blade 12 is designed to be inserted in the razor guard 10, between the inner arcual surface of the guard and the shaft 2, with the rear edge of the blade resting against a yieldable abutment 13 mounted on the razor guard 10.

Means are provided for securing the blade 12 against being accidentally loosened or displaced in the razor guard 10, and to prevent its being thrown outward through the slot 11 by the centrifugal force exerted by the rapid rotation of the razor guard 10 and shaft 2. This is accomplished as follows:— The outer end of the shaft 2 is threaded to receive a cap 15, which, when threaded on the shaft 2, extends over the outer face of the upper end of the razor guard 10. The razor blade 12 extends the length of the razor guard 10 and is retained therein by means of the cap-member 15 and the upwardly projecting flange 8, the spring-member 13 holding the blade in its forward-most position in the guard 10. The edge of the slot 11 opposite the cutting edge of the blade 12 is beveled to form a slight recess adjacent the blade, and portions of the razor guard are cut away on this beveled edge of the slot 11 to form a series of transversely disposed teeth 16.

In operation, the razor blade 12 is inserted within the tubular razor guard 10, the cap 15 being removed for that purpose, the cap 15 being then replaced on the tubular razor guard 10 and shaft 2 to clamp the former upon the latter and secure the blade 12 within the guard 10. The motor 6 is then set in motion to rotate the shaft 2 through the flexible shaft 4, the shaft 2 on being rotated causing the razor guard 10 and the blade 12 to rotate therewith. The razor guard 10 being placed against the face, the razor blade 12 will travel across the surface of the skin in a curved direction; that is to say, approaching the surface of the skin at a downwardly curved slope and leaving it in an outwardly curved direction, thus tending to have a clean cut action. In cases where it is not convenient

to rotate the razor blade by motive power, it may be converted into a hand razor by disconnecting the flexible shaft 4 from the shaft 2 and locking the latter to the handle A, a thumb-screw 15' threaded on the lower end of the shaft 2 being provided for this purpose. In some instances it may be desirable to rotate the razor blade of the guard 10, in which event the blade is attached to the shaft 2, as shown in Fig. 6, and the guard is mounted stationary on the handle A.

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

1. In a razor, a rotatable, cylindrical razor guard, a razor blade detachably mounted therein, a revoluble shaft on which said razor guard is removably mounted, a hand hold through which said revoluble shaft extends, a flexible drive shaft connected to said revoluble shaft, said shaft having a collar with an outwardly projecting tubular flange, and said guard having its inner end fitting said flange and abutting said collar, and means for rotating said flexible shaft to rotate said razor guard and blade.

2. In a razor, the combination of a handle, a shaft extending longitudinally therethrough, means for rotating said shaft, means for retaining said shaft in said handle, a cylindrical member removably attached to said shaft, a detachable razor blade, a yielding spring-pressed abutment fixed to the inner wall of the cylinder having a free end to receive the back of the blade, and means for clamping said blade in said cylinder, said clamping means embodying a cap threaded on the shaft and

having projections adapted to extend over the upper end of said cylinder.

3. In a razor, the combination of a handle, a revoluble shaft extending longitudinally therethrough, means for retaining said shaft in said handle, a cylindrical member removably attached to said shaft, a detachable razor blade, means for clamping said blade in said cylinder, said clamping means binding said cylinder to said shaft, said means embodying a cap threaded on the shaft and having projection adapted to extend over the upper end of said cylinder, and means for rotating said revoluble shaft to rotate said cylinder and razor blade.

4. In a razor, the combination of a handle, a revoluble shaft extending longitudinally therethrough, means for retaining said shaft in said handle, a longitudinally slotted cylindrical member removably attached to said shaft, a razor blade, extending at an angle across the chamber of the cylinder, said cylinder having a spring seat for the back of the blade, means for detachably clamping said blade in said cylinder with its cutting edge extending through the slot therein, a series of transverse slots formed in said cylinder adjacent the longitudinal slot, and means for rotating said revoluble shaft to rotate said cylinder and razor blade.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM E. TRAVERS.

Witnesses:

G. H. STRONG,

CHARLES EDELMAN.