

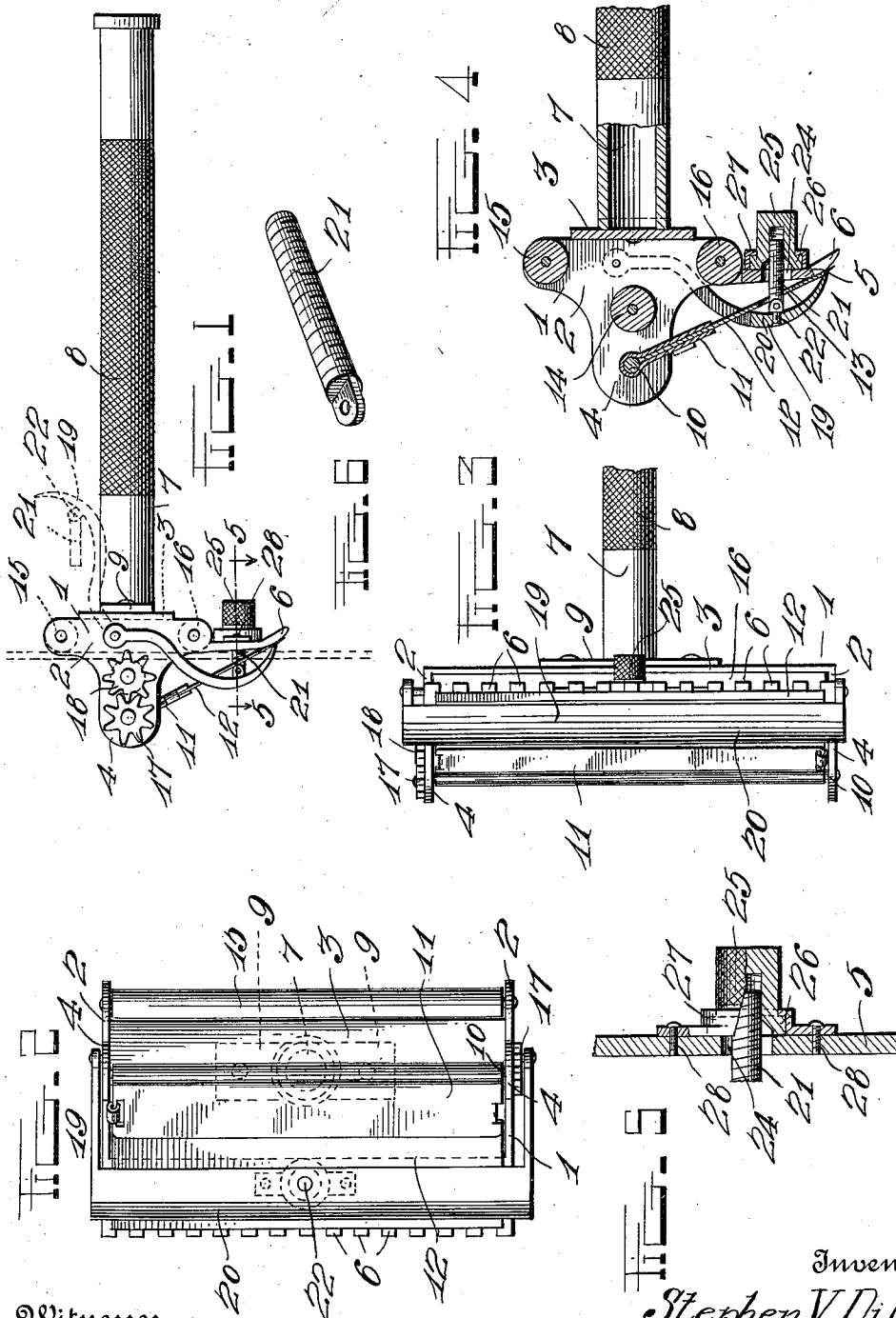
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SAFETY RAZOR.

APPLICATION FILED JAN. 30, 1911.

1,023,364.

Patented Apr. 16, 1912.



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UNITED STATES PATENT OFFICE.

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SAFETY-RAZOR.

1,023,364.

Specification of Letters Patent.

Patented Apr. 16, 1912.

Application filed January 30, 1911. Serial No. 605,571.

To all whom it may concern:

Be it known that I, STEPHEN V. DILLON, a citizen of the United States, residing at Butler, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Razors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in safety razors.

One object of the invention is to provide a safety razor having an improved construction and arrangement of blade adjusting mechanism whereby the blade may be adjusted for shaving more or less closely.

Another object is to provide a blade adjusting mechanism which may be readily swung to an out-of-the-way position to permit the stopping of the blade.

In the accompanying drawings Figure 1 is a side view of a safety razor constructed in accordance with my invention. Fig. 2 is a bottom plan view thereof; and, Fig. 3 is an end view. Fig. 4 is a central vertical longitudinal section. Fig. 5 is a detail horizontal section on the line 5-5 of Fig. 1. Fig. 6 is a detail perspective view of the bolt for the blade adjusting mechanism.

Referring more particularly to the drawings 1 denotes the blade holding frame of the razor, said frame comprising side plates 2 connected together at their rear edges by a transversely disposed handle attaching plate 3 and having on their front edges forwardly extending bearing lugs 4. The lower ends of the side plates 2 are connected together by an integral guard plate 5 having on its lower edge a series of rearwardly curved comb teeth 6.

To the rear plate 3 is secured a rearwardly projecting handle 7 which is preferably in the form of a cylindrical tube and is provided on a portion of its length with a checkered surface 8 whereby a firm grip may be obtained thereon. The inner end of the handle has formed thereon attaching lugs 9 which are riveted or otherwise secured to the rear plate 3 of the frame 1. Revolvably mounted within the bearing lugs 4 of the side plates of the frame is a blade supporting shaft 10, on which is fixedly secured a plate clamping member 11 which

may be of any suitable construction to receive the inner portion of the blade 12 whereby the latter is firmly held in place. In the blade 12 is formed a centrally disposed aperture 13, the purpose of which will be hereinafter described.

Revolvably mounted in the bearing lugs 4 of the side plates 2, immediately in the rear of the shaft 10, is a strop engaging roller 14. Revolvably mounted in the upper and lower portion of the side plates 2 are strop engaging rollers 15 and 16. When the strop is engaged with the razor for the purpose of stopping the blade, the strop is inserted between the rollers 15 and 16 and the roller 14 said rollers thus frictionally engaging the opposite sides of the strop as indicated in dotted lines in Fig. 1 of the drawings. When thus engaged the razor frame is reciprocated back and forth whereby the frictional engagement of the strop with the rollers will revolve the same first in one direction and then the other. On one end of the shaft 10 and the pintle of the roller 14 are fixedly mounted intermeshing spur gears 17 and 18 by means of which the movement of the roller 14 when engaged with the strop, will be imparted to the shaft 10 to swing the blade clamping member 11 and the blade 12 back and forth, thus engaging first one side and then the other of the blade with the strop.

In order to provide for the adjustment of the blade and cause the same to shave more or less closely, I provide a blade adjusting mechanism comprising a pair of curved arms 19 which are pivotally connected at their inner ends with the outer sides of the side plates 2 as clearly shown in Fig. 1 of the drawings. The lower upwardly curved ends of the arms 19 are connected together by an inwardly curved, integrally formed plate 20. The lower portion of the plate 20 is preferably tapered to an edge as shown. The plate 20 is drawn into frictional engagement with the edge of the blade and said edge thereby sprung into more or less close engagement with the toothed lower end of the guard 5 by means of an adjusting bolt 21 having a loose connection with the plate 20. This connection comprises a stud 22 having on its inner end a pair of apertured lugs between which is pivotally connected the flattened outer end of the bolt as shown. The inner end of the bolt is

threaded and inserted through an enlarged opening 24 formed in the guard plate 5 and said threaded end is adapted to be engaged with a milled adjusting nut 25 having on its inner end an annular retaining-flange 26 which is engaged with an attaching plate 27 having therein an annular recess to receive said flange; said plate being securely fastened to the rear side of the guard plate 5 by screws 28 or other suitable fastening devices. The nut 25 when thus arranged will be rev-
 10 olubly secured to the guard plate and adapted to be turned in one direction or the other and thus screwing the bolt 21 inwardly or outwardly whereby the latter will
 15 actuate the adjusting plate 20 to draw the edge of the blade into more or less close engagement with the toothed edge of the guard plate.

20 When it is desired to stop the blade the nut 25 is turned to screw the bolt 21 entirely out of engagement therewith, thus permitting the blade adjusting arms 19 and plate 20 to be swung upwardly and rear-
 25 wardly onto the handle 8 as shown in dotted lines in Fig. 1 of the drawings in which position said blade adjusting parts will be out of the way and prevented from interfering with the operation of the stop.

30 From the foregoing description taken in connection with the accompanying drawings the construction and operation of the invention will be readily understood without requiring a more extended explanation.

35 Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the claimed invention as defined in
 40 the appended claims.

Having thus described my invention what I claim is:

1. In a safety razor, a frame, a guard
 45 formed thereon, a blade holding member carried thereby, a blade secured in said member, a blade adjusting member pivotally mounted on said frame and adapted to be swung to an out-of-the-way position to permit the blade to be stopped, and detachable means to draw said adjusting
 50 member into engagement with the edge of the blade whereby the latter is sprung into

more or less close engagement with the guard.

2. In a safety razor, a frame, a pivotally
 55 mounted blade holding member, a blade secured therein, a blade adjusting member adapted to hold said blade in operative engagement with said guard, said adjusting member comprising a pair of curved arms
 60 pivotally connected at their upper ends to said frame, a curved plate formed between the lower ends of said arms, an adjusting bolt loosely engaged in said plate, a rev-
 65 olubly mounted nut adapted to receive the threaded end of said bolt whereby the latter is actuated to draw said adjusting plates into forcible engagement with the edge of the blade whereby the latter is sprung into
 70 more or less close engagement with said guard.

3. In a safety razor, a frame, a toothed
 guard formed thereon and having formed therein a passage, a blade holding member
 75 pivotally mounted in said frame, a blade secured in said holding member, said blade having formed therein an aperture, a blade
 80 adjusting member, said member comprising a pair of curved arms pivotally connected at their outer ends to said frame, a curved plate formed between the lower ends of said
 85 arms, said plate being tapered toward its lower edge, a stud arranged in said plate, an adjusting bolt hingedly connected to said stud, said bolt having a threaded inner end
 90 adapted to project through the passage in said guard plate, a recessed nut attaching plate secured to the rear side of said guard plate, a nut having a revoluble engagement with said attaching plate and adapted to
 95 receive said threaded end of the bolt whereby the latter is screwed inwardly or outwardly, thus actuating said blade adjusting member, whereby the edge of the blade is sprung into more or less close engagement with said guard.

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

STEPHEN V. DILLON.

Witnesses:

L. O. HILTON,
 O. B. HOPKINS.