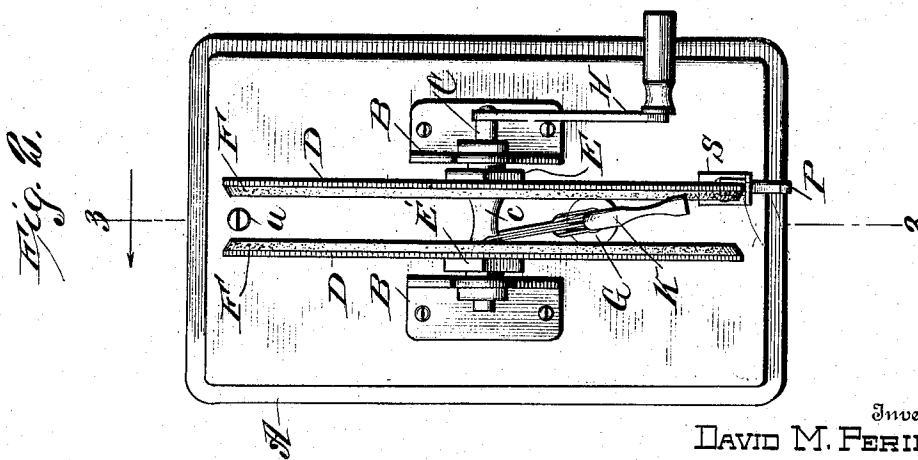
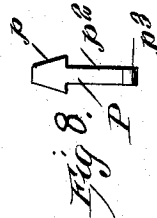
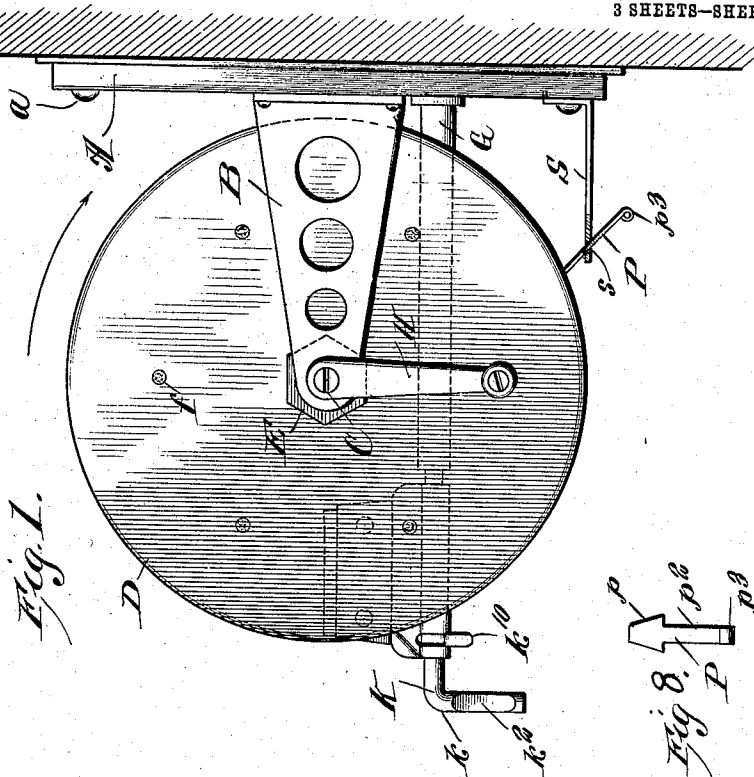


D. M. PERINE.
 RAZOR BLADE SHARPENER.
 APPLICATION FILED MAR. 25, 1909.

936,935.

Patented Oct. 12, 1909.

3 SHEETS—SHEET 1.



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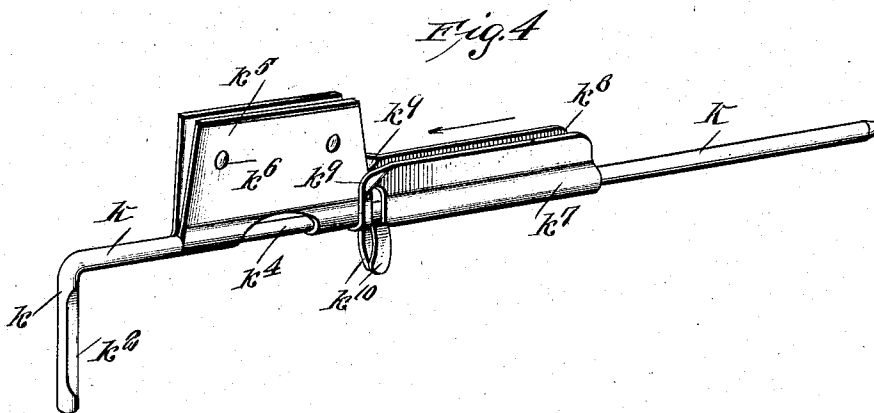
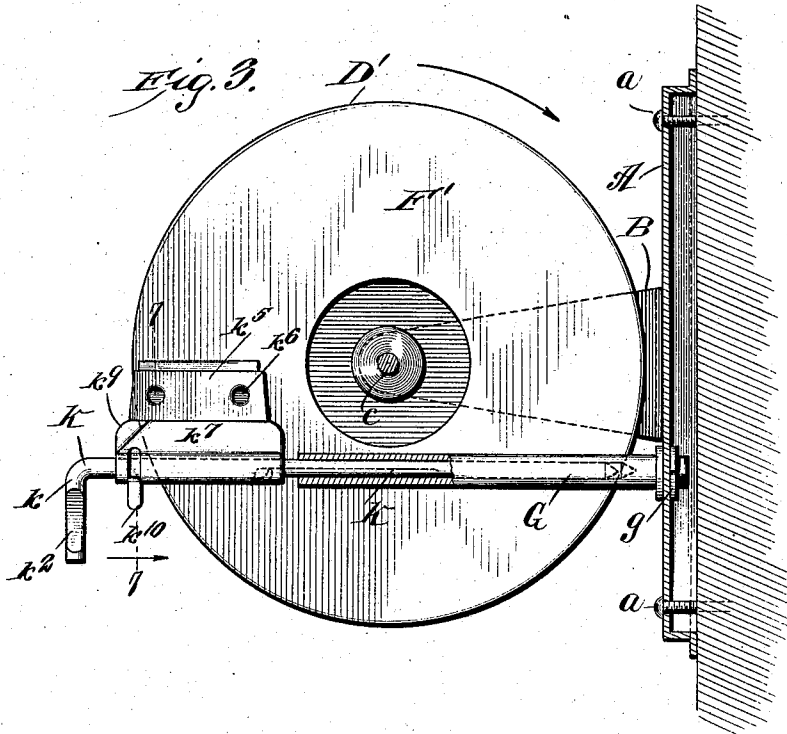
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 3 SHEETS—SHEET 2.



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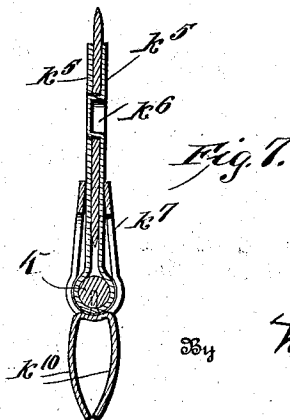
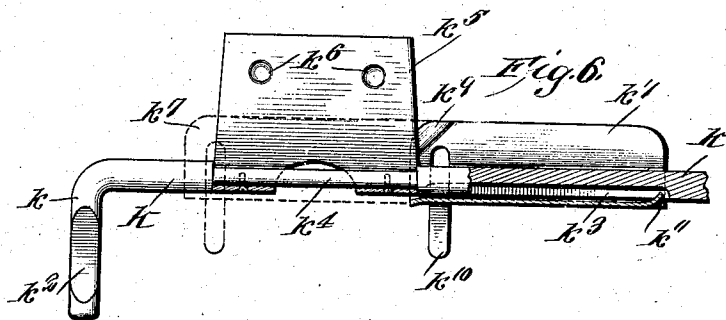
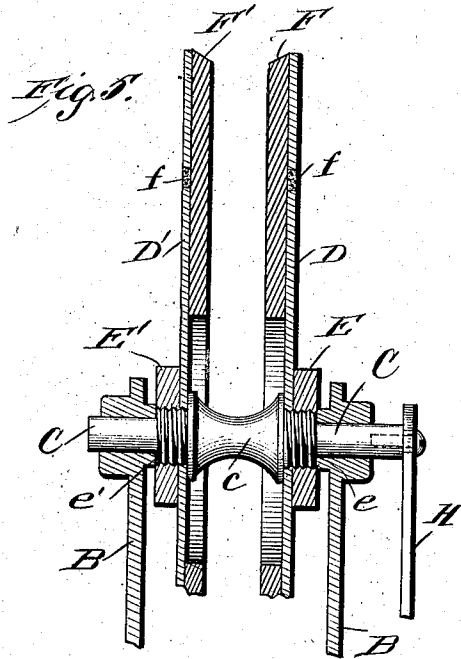
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 3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

DAVID M. PERINE, OF PITTSBURG, PENNSYLVANIA.

RAZOR-BLADE SHARPENER.

936,935.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DAVID M. PERINE, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have made certain new and useful Improvements in Razor-Blade Sharpeners, of which the following is a specification.

My invention relates to devices for sharpening blades of razors, especially blades used in safety razors, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a device by which the blade may be sharpened evenly, such result being obtained by disposing the blade holder on a pivot centrally located between two sharpening disks.

A further object of my invention is to provide an improved device for securely holding the blade to be sharpened.

A further object of my invention is to provide means for moving the blade to different parts of the stropping or sharpening member so as to compensate for any inequalities in the stropping surface or on the blade.

A further object of my invention is to provide a rotatable strop in which there are no joints.

Other objects and advantages will appear in the following specification and the novel features of the device will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings in which similar reference characters indicate like parts in the several views, and in which—

Figure 1 is a side view of my improved blade sharpener showing the same attached to the wall. Fig. 2 is an end view of the same. Fig. 3 is a sectional view along the line 3—3 of Fig. 2. Fig. 4 is a detail view in perspective of the blade holder. Fig. 5 is a detail sectional view along a vertical plane through the axis of the disks. Fig. 6 is a detail view of a portion of the blade holding device, certain parts being in section. Fig. 7 is a section along the line 7—7 of Fig. 6 and Fig. 8 is a detail view of the pawl.

In carrying out my invention I provide a base A which may be of any suitable material such as wood or metal and which can be attached to the wall by screws or nails *a*. Secured to the base A are the supports B

which forms the bearing members for the shaft C, see Fig. 5. The shaft C is an enlarged central portion *c* whose ends form shoulders against which the metal disks or wheels D and D' bear. These disks are securely fastened to the shaft by means of the nuts E and E' respectively which engage the threaded portions *e* and *e'* of the shaft.

Secured on the inner surfaces of the circular disks D and D' are the strops F and F'. These strops may be made of any good abrading material such as leather and are preferably glued to the inner surface of the disks as clearly shown in Fig. 5. In order to insure the adhesion of the leather to the metal, I provide a series of tapered openings *f* in each disk into which the glue runs. The hardening of the glue provides a retaining medium similar to a rivet as will be clearly seen from an inspection of Fig. 5. Each of the disks B and B' is milled on its periphery as shown at *d* in Fig. 2, for the purpose hereinafter explained.

Disposed between the disks D and D' is a tubular post G which is secured to the base A by means of the nut *g* as shown in Fig. 3. This post is arranged to receive the rod K of the blade holder.

The construction of the blade holder is clearly shown in Figs. 4, 6 and 7. It consists of the rod K before mentioned which has a bent end *k* having flattened sides *k*² in order to provide a good finger hold. The rod K is provided with a longitudinal slot *k*³ on its underside, see Fig. 6 and has a reduced portion *k*⁴ to which the spring gripping member *k*⁵ is securely fastened. The gripping member consists of the two sides one of which is provided with two openings and the other with two lugs *k*⁶ which are stamped from the metal and are adapted to register with the respective openings in the opposite side. The normal position of the gripping member *k*⁵ is shown in Fig. 4 in which the jaws are distended.

In order to close the jaws of the gripping member, I have provided the slide *k*⁷. This is made of a single piece of spring metal somewhat thicker than the gripping member *k*⁵. The slide *k*⁷ is bent around the rod K in the manner shown in Fig. 7 and the upper edges are bent toward each other to leave a narrow space *k*⁸ as shown in Fig. 4. The ends of the slide *k*⁷ adjacent the gripping member *k*⁵ are flared outwardly to provide cam members *k*⁹ which are arranged to en-

gage the sides of the gripping member k^5 . Just below the cam surfaces k^6 are two pieces k^{10} which are stamped from the metal of the slide k^7 and are bent downwardly to form a handle for the slide as shown in the drawings. At the opposite end of the slide is a tongue k^{11} , see Fig. 6, which is bent upwardly into the slot k^3 and which prevents the slide k^7 from rotating about the rod K.

10 From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

The machine may be attached to a wall, a table or other convenient place.

15 To insert a blade the rod K is withdrawn from the tube G and the blade is inserted between the jaws of the gripping member k^5 . In case the razor blade should be of the Gillette type, the openings in the blade should register with the lugs k^6 . Now by merely resting the bent end k^2 of the rod in the hollow between the thumb and fore-finger and pulling on the handle k^{10} with the fore-finger in the manner of a pistol grip, the slide k^7 is moved toward the gripping member k^5 and as the cam surfaces k^6 come in contact with the slides of the latter they are pressed firmly upon the sides of the blade. The slide is prevented from going past the gripping member by the engagement of the tongue k^{11} with the end of the slot k^3 when the slide is in the central position with respect to the gripping member. The parts are now in the position shown in Fig. 7. The rod K is now inserted into the tube g and the stopping disks are turned by means of the handle H. As the stopping disks are rotated, the blade is turned from side to side so as to be brought into contact with them.

40 As much or as little pressure may be applied as is necessary and the blade is turned to first engage one disk and then the other, thus obviating the necessity of removing the blade when sharpened on one side and replacing it to sharpen the other. The stopping surfaces are continuous, there being no joints over which the blade has to pass and which cause a turning of the edge of the blade when it is dragged over the same. By moving the rod inwardly and outwardly during the operation, the blade is brought into contact with the various parts of the stopping disks and there is no danger therefore of abrading the edge more in one place than in another. In actual practice a few turns of the disks will suffice to sharpen a dull blade very quickly.

In order to prevent the disks from turning backward and thereby cutting the stopping surface, I have provided the pawl P, see Figs. 1 and 2 which is pivotally mounted on the arm S, secured to the base A. The construction of this pawl is shown in Fig. 8. It consists merely of a piece of metal having an enlarged head p . The body portion p^2 of

the pawl extends through the opening s of the standard S, while the head is in contact with one of the disks such as D. As the disk is turned forwardly, the pawl is pushed out of the way by the milled edge, but if a reverse motion is attempted, the pawl instantly prevents the backward movement of the disk by its engagement therewith. The weighted end P^3 of the pawl overbalances the head and keeps the latter in constant engagement with the disk.

I am aware that other devices based upon the same general idea might be made, but I consider as my own all such modifications as fairly fall within the spirit and scope of the invention.

I claim:

1. In a razor blade sharpener, a base, a pair of supports secured thereto, a shaft journaled in said supports, a pair of disks secured to said shaft, abrading material secured to each of said disks on its inner side, a cylinder disposed centrally between said disks, a slotted rod loosely supported in said cylinder for longitudinal and rotative movement, a gripping member having spring jaws secured to said rod, a slide provided with spring jaws movably supported on said rod and having a tongue arranged to enter said slot to prevent the slide from turning, a handle secured to said slide for forcing the jaws of said slide into engagement with the jaws of said gripping member thereby closing the latter, and means for rotating said disks.

2. In a razor blade sharpener, a base, a pair of arms secured to said base, a shaft journaled on said arms, a pair of disks secured to said shaft, each of said disks having a stopping surface on their opposed sides, a hollow cylinder secured to said base and arranged to project between said disks, a rod loosely mounted in said hollow cylinder, a pair of spring gripping jaws secured to said rod, a slide mounted on said rod for longitudinal movement thereon having an integral handle and a tongue arranged to engage said rod to prevent the rotation of the slide thereon and to limit its longitudinal movement, means for rotating said disks in one direction, and a pivoted pawl mounted on said base and arranged to engage the periphery of one of said disks to prevent rotation in a reverse direction.

3. In a razor blade sharpener, a base, arms secured thereto, a pair of disks rotatably mounted on said arms each of said disks having a stopping or abrading surface on their opposed sides, a hollow cylinder secured to said base between said abrading surfaces, a blade holder supported in said hollow cylinder and arranged for movement toward and away from the axis of said disks, said blade holder comprising a pair of spring jaws arranged to grip a razor blade, a slide adapted

to be forced into engagement with said spring jaws to cause the closing of the latter, an integral handle on said slide for operating the same and a tongue arranged to engage said rod to prevent the rotation of the slide upon the rod.

4. In a razor blade sharpener, a base, a pair of opposed abrading disks rotatably mounted on said base, a hollow cylinder secured to said base between said abrading disks, a blade holder comprising a movable rod slidably supported in said cylinder and having a gripping member secured thereto and a slide arranged to engage said gripping member to close the latter, said blade holder being adapted to be turned at will so as to bring the blade in contact with the surface of either disk, means for rotating said disks

in one direction and means for preventing the rotation of the disks in the reverse direction.

5. In a razor blade sharpener, a base, a pair of opposed abrading disks rotatably mounted on said base, a hollow cylinder secured to said base between said abrading surfaces, a blade holder pivotally and slidably mounted in said hollow cylinder between the abrading faces of said disks, and adapted to be turned at will so as to bring the blade in contact with either of said disks, said blade holder being arranged to move toward and away from the axis of said disks.

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Witnesses:

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D. E. KOLLER.