

1,016,599.

Patented Feb. 6, 1912.

Fig:1.

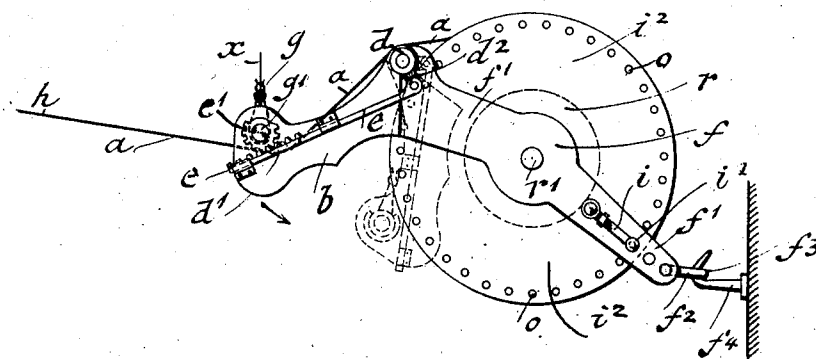


Fig:2.

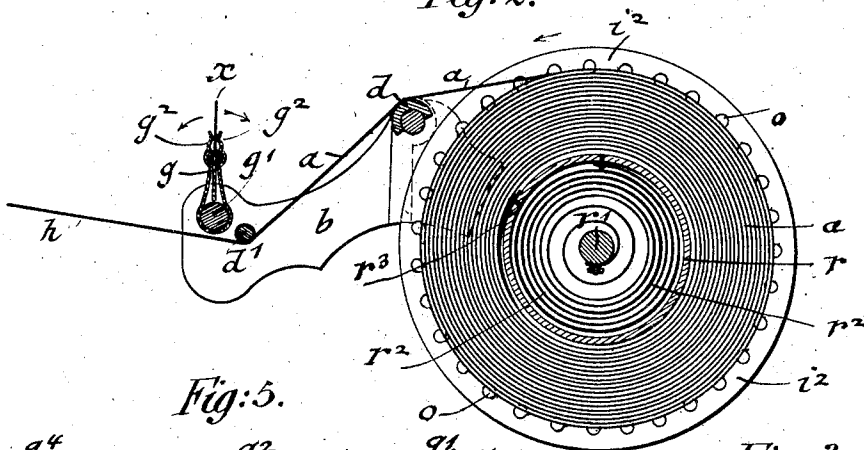


Fig:5.

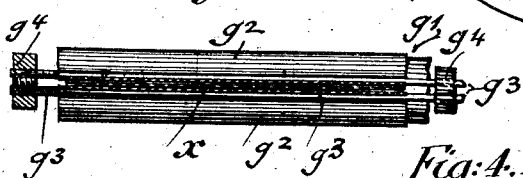


Fig:3.

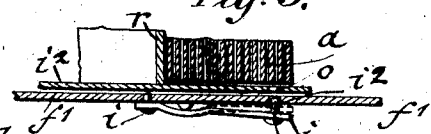
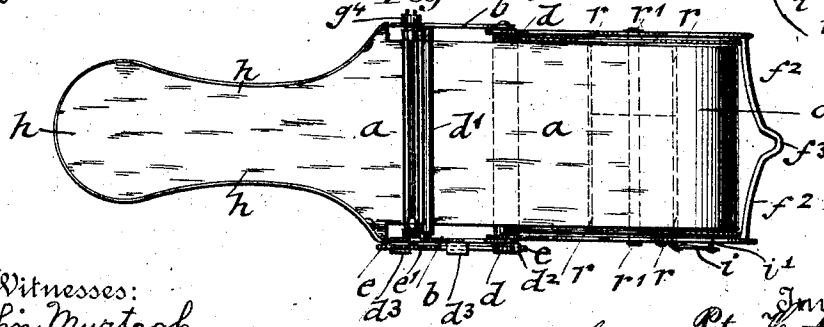


Fig:4.



Witnesses:
 John Murtagh
 L. M. Dornau

Inventor
 Peter H. Alpp
 By his Attorneys
 Charles J. Sipe

UNITED STATES PATENT OFFICE.

PETER H. ALPP, OF NEW YORK, N. Y.

RAZOR-STROP.

1,016,599.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed August 12, 1911. Serial No. 643,697.

To all whom it may concern:

Be it known that I, PETER H. ALPP, a subject of the Czar of Russia, residing in New York, in the borough of Manhattan, county and State of New York, have invented certain new and useful Improvements in Razor-Strops, of which the following is a specification.

This invention relates to an improved device for stropping the blades of ordinary and safety-razors in such a manner that during the forward motion of the strop one side of the edge of the blade is held in contact with the strop, while during the return-motion of the strop the blade is automatically reversed so that the other side of the cutting edge is placed in contact with the strop, and the blade thereby effectively sharpened; and for this purpose the invention consists of a stropping device the strop of which is wound up on a spring-actuated roller that is rotated in a supporting-frame which is suspended at one end from a stationary hook or other point of support and provided at the other end with forwardly-projecting brackets carrying guide-rollers for the strop and an oscillating holder for the blade to be stropped, means being interposed between one of the guide-rollers and the blade-holder for oscillating the latter by reciprocatory movement of the strop and moving the blade in contact with the strop, first on one side and then the other side of the edge for sharpening the same.

The invention consists further of certain details of construction, which will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side-elevation of my improved razor-strop showing the position of the blade-holder when the strop is in its normal position of rest. Fig. 2 is a vertical, longitudinal section of the stropping-device on line 2-2 Fig. 4,—drawn on a larger scale. Fig. 3 is a detail section of the locking device for the strop-roller for holding the same in position for removing, reversing or exchanging the strop. Fig. 4 is a plan-view of Fig. 1. Fig. 5 is a detail sectional plan-view of the blade-holder, drawn on a larger scale.

Similar letters of reference indicate corresponding parts throughout the several figures.

Referring to the drawings, *a* represents a

strop of suitable length which is wound around a sheet-metal roller *r* that turns by means of its center shaft *r'* in a frame *f* which is formed by two sections *f'* one on each side of the roller, and which is suspended by a stout transverse wire rod *f²*, extending between the sections and having a loop *f³* from a hook *f⁴* or other point of support. A spiral spring *r²* is located at the interior of the roller *r*, the inner end of the spring being applied to the shaft *r'* while the outer end is attached to a point on the inner circumference of the roller *r*. The inner end of the strop *a* is removably attached to headed studs *r³* on the roller *r*, so as to be capable of detachment therefrom for reversing the strop or inserting a new strop as required. The opposite end of the supporting-frame *f* is provided with forwardly extending brackets *b* which are preferably arranged at an obtuse angle to the sections *f'* of the frame *f* and which are pivoted at their inner ends near the apex of the angle to the shaft of a semi-circular guide-roller *d* for the strop, while a second guide-roller *d'* is arranged near the front-ends of the brackets *b*. The brackets *b* are dropped, when the stropping device is not in use, into the position shown in dotted lines in Fig. 1, but placed into the position shown in full lines in Figs. 1 and 2, when the strop is pulled in outward direction. The strop *a* is passed over the first guide-roller *d* but under the second guide-roller *d'* and formed at the outer end into the shape of a handle *h*, as shown in Fig. 4. The shaft of the guide-roller *d* is provided with a short crank-arm *d²* which is connected with a rack-bar *e* that is guided in keepers *d³* located on one of the side-brackets *b*, the rack-shaped end *e* intermeshing with a mutilated pinion *e'* on the shaft *g'* of a blade-holder *g* which is pivoted to the outer end of the brackets *b* adjacent to the guide-roller *d'*, as shown clearly in Fig. 2. The blade-holder *g* is constructed in any approved manner, either for holding an ordinary razor-blade or the blade of any known construction of safety-razors, and is so constructed that the blade can be conveniently inserted into and removed from the holder.

The blade-holder shown in the drawing is composed of two spring-jaws *g²* which are clamped to the blade inserted between by a split screw-bolt *g³*, the threaded ends of which are firmly held together by screw-

nuts g^4 after the blade x is inserted between the jaws, as shown in Fig. 5. On taking hold of the handle of the strop and pulling it in forward direction against the tension of the spiral spring in its roller, the holder is oscillated in forward direction so that the one side of the edge of the blade is placed in contact with the strop, the oscillating motion being caused by the friction of the strop with the guide-roller d and the intermediate crank-arm and rack and pinion mechanism described. As soon as the pull on the strop is released, the spring-roller winds up the strop again on the roller and oscillates by the friction of the strop with the guide-roller d the blade-holder and blade in the opposite direction so that the other side of the edge of its blade is placed in contact with the strop and thereby sharpened. By the alternating forward motion of the strop against the tension of the spring and the return-motion of the same under the influence of the spring, the blade-holder is oscillated from one side to the other and the edge of the blade stropped in a quick and effective manner.

When it is desired to remove the strop from its spring-actuated roller, the inner end of the strop, which is connected to the headed studs r^s by slotted openings in any suitable manner, is removed after fully unwinding the strop. In this position the spring-actuated roller r has to be locked and retained in position so as to be ready for receiving the strop again in a reversed position, or a new strop in case the former strop is worn out by use. For this purpose a flat spring-arm i is attached at its inner end alongside of one of the side-sections of the supporting frame f , said spring-arm engaging by a pin i' near its outer end one of the holes o in the disk-shaped head i^2 of the roller. The pin i' passes through a hole in the frame section f' . The holes o are arranged near the circumference of the head i^2 and permit the locking of the roller to the section f' of the frame f , so that the roller is prevented from being returned under the influence of its spiral spring and the latter held under tension. The spring i is bent outwardly so as to hold the locking pin i' normally out of locking connection with the holes o of the head i^2 . As soon as the inner end of the reversed strop, or the end of a new strop is placed in position on the headed studs r^s on the roller, the locking-pin i' of

the spring-arm i is released from the hole o in the head of the roller so that the spiral spring of the roller is permitted to wind up the strop and place the roller into position for resuming its rotary-reciprocating motion under the alternating influence of the pull of the hand and the tension of the spiral spring in the roller for operating the blade-holder and stropping the blade as before described.

When it is desired to use the device for stropping other cutting tools, this can be readily accomplished by changing the construction of the blade-holder accordingly so as to take differently shaped blades or tools to be sharpened.

I claim:

1. A stropping device for razor-blades, comprising a rotary spring-actuated roller, a strop applied at one end to said roller and provided with a handle at the outer end, a supporting frame for said roller and strop provided with forwardly-extending brackets, guide-rollers for the strop supported on said brackets, said guide-rollers being located one near the inner and the other near the outer end of the brackets, a blade-holder pivoted to the front-ends of said brackets, and means interposed between the inner guide-roller and the blade-holder for oscillating the latter from one side to the other by the forward and backward motion of the strop.

2. A stropping device for razor-blades, comprising a rotary spring-actuated roller, a strop applied at one end to said roller, a supporting-frame for said roller and strop provided with forwardly-extending brackets pivoted to the frame, guide-rollers for the strop supported respectively near the inner and outer ends of said brackets, a blade-holder fulcrumed to the front-ends of said brackets, a crank-arm on the shaft of the inner guide-roller and a rack and pinion-connection between said guide-roller and the blade-holder for oscillating the latter from one side to the other by the forward or backward motion of the strop.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

PETER H. ALPP.

Witnesses:

PAUL GORFEL,
JOHN MURTAGH.