No. 750,397. PATENTED JAN. 26, 1904.

A. W. SCHEUBER.

STROPPING MACHINE.

APPLICATION FILED FEB. 21, 1903.

NO MODEL.

Fig. 1.

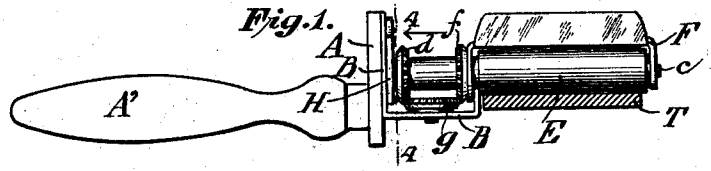


Fig. 2.

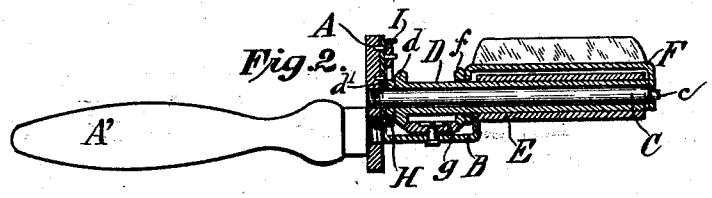


Fig. 3.

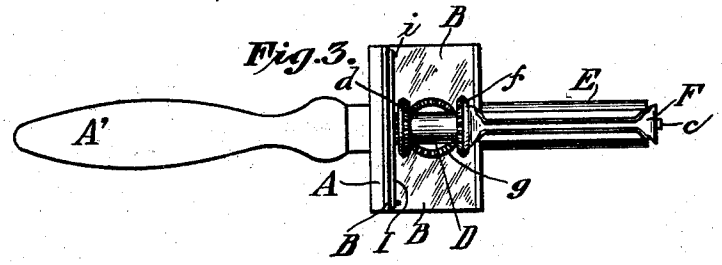


Fig. 4.

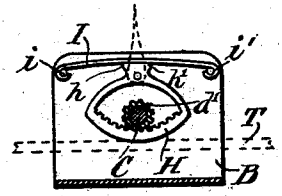


Fig. 5.

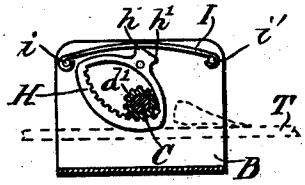


Fig. 6.

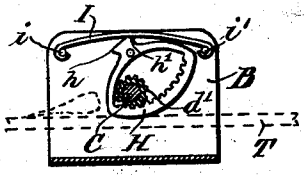
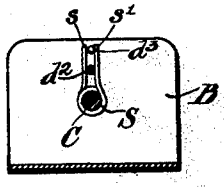


Fig. 7.



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 750,397. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

AUGUST WM. SCHEUBER, OF HOBOKEN, NEW JERSEY.

STROPPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 750,397, dated January 26, 1904.

Application filed February 21, 1903. Serial No. 144,377. (No model.)

To all whom it may concern:

Be it known that I, AUGUST WILLIAM SCHEUBER, a citizen of the United States, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Stropping-Machines, of which the following is a full, clear, and exact specification.

My invention relates generally to machines for stropping blades such as are used in the well-known types of safety-razors and which automatically turn the blade into a stropping position by a simple movement of the machine back and forth over the stropping-surface; and it consists of the combinations and parts hereinafter more particularly referred to, which produce a structure that is not only simple, effective, and cheap to construct, but one in which all liability and danger of injuring the stropping-surface is prevented.

One form of my invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side view, Fig. 2 a side sectional view, and Fig. 3 a top view, of the machine as a whole. Figs. 4, 5, and 6 represent vertical cross-sectional views taken on lines 4 4 of Fig. 1 looking in the direction of the arrow and showing the parts in several relative positions, and Fig. 7 shows a modified form of the mechanism for maintaining the blade and blade-holder in an upright or normal position.

In the drawings, A represents a shield or plate to which is secured by any suitable means the handle A′. Upon the opposite face of this plate is secured the second L-shaped plate B, and through both of said plates is rigidly fastened the spindle C. Upon this spindle the cylinder D revolves freely, and to one end of this cylinder the beveled pinion *d* and pinion *d′* are rigidly secured, so as to revolve therewith, while to the other end of the cylinder is likewise fastened the friction-roller E, made of rubber or any other suitable material. The blade-holder F is preferably bent, as shown, out of a metal blank, so as to receive and hold the blade firmly, and is mounted to revolve concentric with the friction-roller, one end being journaled on a reduced portion *c* at the end of the spindle C, while the other end is journaled on the cylinder D. To the last-mentioned end of the blade-holder is rigidly secured the beveled pinion *f*, and upon the horizontal portion of the L-shaped plate is pivoted a third beveled pinion *g*. The end of this L-shaped plate is bent upward and forms a guide to prevent the strop from touching and interfering with the mechanism when the machine is operated. The beveled pinions *d*, *f*, and *g* form a bevel-gear connecting the friction-roller and blade-holder and cause a reciprocal movement of these parts. To the face of the plate B is pivoted the rack H in such a position that its teeth mesh with the pinion *d′* on the cylinder D, so that a rotation thereof causes the rack to be swung to one side or the other, and the upper end of the rack is provided with shoulders *h h′* to contact with a spring I, mounted on studs *i i′* on the plate B, which mechanism operates to maintain the blade-holder in an upright position.

From the foregoing the operation of the machine will be obvious. Grasping the handle so that the blade and blade-holder project upwardly it is only necessary to bring the rubber roller in contact with the stropping-surface (such as T in Fig. 1) and with slight pressure thereon move the machine backward and forward. The rotation of the rubber roller causes a reciprocal rotation of the blade-holder and blade, so that the blade is turned down behind the roller and its edge brought into contact with the stropping-surface. The movement of the blade-holder during this operation has also rotated the pinion *d′*, which in turn swings the rack H against the tension of the spring I. Upon releasing the pressure of the roller on the stropping-surface or reversing the direction of movement immediately permits the spring I, rack H, and coöperating mechanism to remove the blade edge from the stropping-surface, and thus prevents all liability of cutting and damaging it. The construction of this spring is such that while the blade-holder and blade move a considerable distance in either direction the movement of the spring is comparatively small, and it

thus exerts a slight but constant and effective pressure and assures the immediate return of the blade to a position out of contact with the stropping-surface.

It is evident that other mechanism than that above described may be employed to remove the blade from the strop at the end of a stroke. One other is indicated in Fig. 7. Instead of the mechanism disclosed in Figs. 4, 5, and 6 it is only necessary to omit the pinion d' and insert a stud d^2 in the back of the beveled pinion d, insert a corresponding stud d^3 in the plate B, and provide a coil-spring S with a few turns and two projecting arms $s\ s'$ around the spindle C between the beveled pinion d and the plate B. A rotation of the cylinder D and beveled pinion d in one direction will cause the stud d^2 to bear against one of the projecting arms s' of the coil-spring, and as the other end of the spring is bearing against the stationary stud d^3 it causes a movement of the arm s' against the tension of the spring. Upon the release of pressure the spring immediately acts to return the parts to their normal condition, wherein the blade and blade-holder are upright.

It is furthermore obvious that many other different devices may be employed for raising the blade from the stropping-surface at the end of the stroke, and I do not limit myself to any specific mechanism for this purpose. It is also evident that it is not necessary to return the blade to an upright position, the essential thing only being to raise it from the strop at the end of a stroke a sufficient distance to prevent the liability of cutting it.

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

1. In a stropping-machine, a suitable frame or support, a spindle rigidly secured thereto, a movable blade-holder on said spindle, a friction device concentric therewith, and means connecting said blade-holder and friction device whereby a movement of the friction vice in one direction causes a movement of the blade-holder in an opposite direction, substantially as described.

2. In a stropping-machine, a suitable frame or support, a spindle rigidly secured thereto, a movable blade-holder on said spindle, a friction-roller concentric therewith, and means connecting said blade-holder and friction-roller whereby a rotation of the friction-roller in one direction causes a rotation of the blade-holder in an opposite direction, substantially as described.

3. In a stropping-machine, a suitable frame or support, a spindle rigidly secured thereto, a movable blade-holder on said spindle, a friction device concentric therewith, means connecting said blade-holder and friction device whereby a movement of the friction device in one direction causes a movement of the blade-holder in an opposite direction, and automatic means for moving the blade out of contact with the strop, substantially as described.

4. In a stropping-machine, a suitable frame or support, a spindle rigidly secured thereto, a movable blade-holder on said spindle, a friction-roller concentric therewith, means connecting said blade-holder and friction-roller whereby a rotation of the the friction-roller in one direction causes a rotation of the blade-holder in an opposite direction and automatic means for moving the blade out of contact with the strop, substantially as described.

5. In a stropping-machine, a suitable frame or support, a spindle rigidly secured thereto, a movable blade-holder on said spindle, a friction device concentric therewith, means connecting said blade-holder and friction device whereby a movement of the friction device in one direction causes a movement of the blade-holder in an opposite direction, and spring-actuated means for returning the blade-holder to a normal position, substantially as described.

6. In a stropping-machine, a suitable frame or support, a spindle rigidly secured thereto, a movable blade-holder on said spindle, a friction-roller concentric therewith, means connecting said blade-holder and friction-roller whereby a rotation of the friction-roller in one direction causes a rotation of the blade-holder in an opposite direction, and spring-actuated means for returning the blade-holder to a normal position, substantially as described.

7. In a stropping-machine, a spindle, a friction-roller and blade-holder thereon, and gear-wheels connecting said friction-roller and blade-holder, substantially as described.

8. In a stropping-machine, a spindle, a friction-roller and blade-holder thereon, and beveled gear-wheels connecting said friction-roller and blade-holder.

9. In a stropping-machine, a spindle, a friction-roller and blade-holder thereon, gear-wheels connecting said friction-roller and blade-holder, and automatic means for returning the blade-holder to a normal position, substantially as described.

10. In a stropping-machine, a spindle, a friction-roller, and blade-holder thereon, a beveled gear connecting said friction-roller and blade-holder, and automatic means for returning the blade-holder to a normal position, substantially as described.

11. In a stropping-machine, a spindle, a friction-roller, and blade-holder thereon, a beveled gear connecting said friction-roller and blade-holder, and spring-actuated means for returning the blade-holder to a normal position, substantially as described.

12. In a stropping-machine, a guard-plate, a detachable handle, a spindle, a friction-roller and blade-holder on said spindle, a beveled

gear connecting said friction-roller and blade-holder, a pinion operatively connected to the friction-roller, a movable rack engaging said pinion, and a spring contacting with said rack, substantially as described.

13. In a stropping-machine, a spindle, a suitable support therefor, a friction-roller and a blade-holder on said spindle, a beveled gear connecting said friction-roller and blade-holder, a pinion operatively connected to the friction-roller, a movable rack engaging said pinion, and a spring contacting with said rack, substantially as described.

14. In a stropping-machine, a spindle, a friction device on said spindle, a blade-holder concentric with said friction device, and a beveled gear connecting said friction device and said blade-holder, substantially as described.

15. In a stropping-machine, a spindle, a friction device on said spindle, a blade-holder concentric with said friction device, a beveled gear connecting said friction device and blade-holder, and automatic means for returning the blade-holder to a normal position, substantially as described.

16. In a stropping-machine, a suitable frame or support, a spindle rigidly secured thereto, a friction-roller and blade-holder thereon, a beveled gear connecting said friction-roller and blade-holder, and automatic means for returning the blade-holder to a normal position, substantially as described.

17. In a stropping-machine, a suitable frame or support, a spindle rigidly secured thereto, a friction-roller and blade-holder thereon, a beveled gear connecting said friction-roller and blade-holder, and spring-actuated means for returning the blade-holder to a normal position, substantially as described.

18. In a stropping-machine, a guard-plate, a spindle rigidly secured thereto, a friction-roller and blade-holder on said spindle, a beveled gear connecting said friction-roller and blade-holder, a pinion on said blade-holder, a movable rack engaging said pinion, and a spring contacting with said rack, substantially as described.

19. In a stropping-machine, a guard-plate, a detachable handle, a spindle rigidly secured to said guard-plate, a friction-roller and blade-holder on said spindle, a beveled gear connecting said friction-roller and blade-holder, a pinion on said blade-holder, a movable rack engaging said pinion, and a spring contacting with said rack, substantially as described.

20. In a stropping-machine, a spindle, a blade-holder and friction-roller on said spindle, means connecting said blade-holder and friction-roller whereby a movement of the friction-roller in one direction causes a movement of the blade-holder in an opposite direction, and a coiled spring, the ends of which are in operative contact with the blade-holder for moving the blade out of contact with the strop, substantially as described.

21. In a stropping-machine, a spindle, a blade-holder and friction-roller on said spindle, gear-wheels connecting said blade-holder and friction-roller, whereby a movement of the friction-roller in one direction causes a movement of the blade-holder in an opposite direction, and a coiled spring on said spindle, the ends of which are adapted to contact with a portion of the blade-holder for moving the blade out of contact with the strop, substantially as described.

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

AUGUST WM. SCHEUBER.

Witnesses:
CLIFFORD E. DUNN,
ROBERT VALENTINE MATHEWS.