No. 750,399. PATENTED JAN. 26, 1904.

A. W. SCHEUBER.

RAZOR SHARPENING MACHINE.

APPLICATION FILED SEPT. 4, 1903.

NO MODEL.

Fig. 1

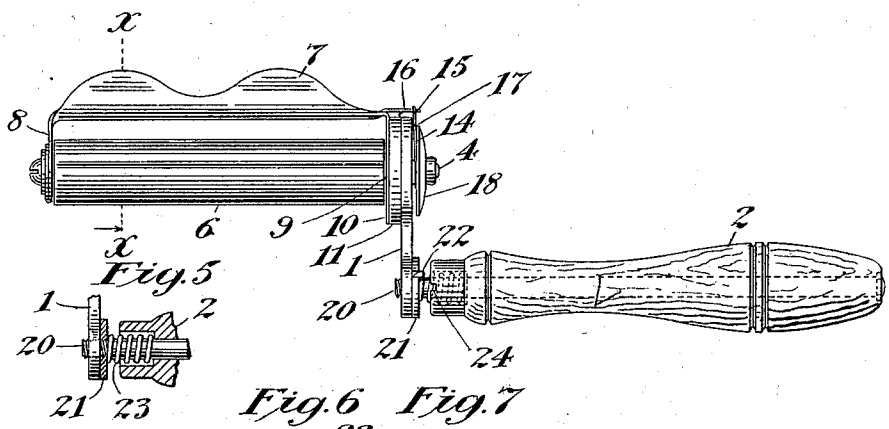


Fig. 5

Fig. 6

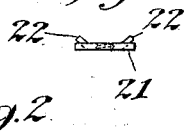


Fig. 7

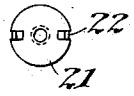


Fig. 2

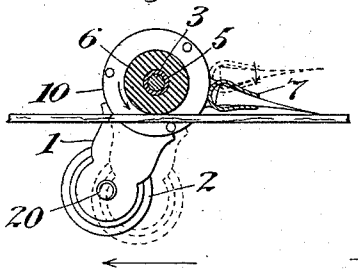


Fig. 3

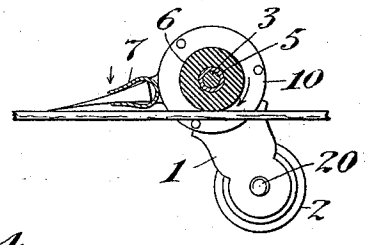
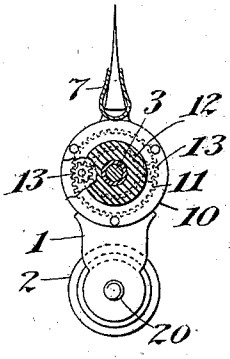


Fig. 4



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By his Attorney
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 750,399. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

AUGUST WILLIAM SCHEUBER, OF HOBOKEN, NEW JERSEY.

RAZOR-SHARPENING MACHINE.

SPECIFICATION forming part of Letters Patent No. 750,399, dated January 26, 1904.

Application filed September 4, 1903. Serial No. 171,955. (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 Razor-Sharpening Machines, of which the following is a full, clear, and exact specification.

My invention relates to machines for stropping razor-blades, and particularly to that type of machine wherein a blade is held in a suitable holder and by merely moving the machine backward and forward upon the stropping-surface the blade is automatically turned down and its edge brought into contact with the stropping-surface for sharpening.

In two former applications, filed by me upon February 21, 1903, and April 27, 1903, Serial Nos. 144,377 and 154,558, respectively, I have shown machines of the general character mentioned. While the machines of these applications are very simple, efficient, and satisfactory in the hands of a person accustomed to use the same, I have found that in some instances in the hands of an inexperienced person some slight danger exists of cutting the strop caused by the edge of the blade nicking the same at the moment the direction of movement of the machine is changed. My present improvement therefore relates, chiefly, to providing such a machine with means for absolutely preventing the cutting of the stropping-surface no matter how unskilful or careless the person handling the same may be, and I accomplish this by the combinations and parts hereinafter more fully shown and described.

In the accompanying drawings, illustrating my invention, Figure 1 is a plan view; Figs. 2 and 3, sectional views taken on lines x x of Fig. 1, but showing the parts in different positions assumed during the operation of the machine; Fig. 4, a similar cross-sectional view taken on lines x x of Fig. 1, but showing part of the casing broken away and disclosing the operating mechanism. Fig. 5 is a detail sectional view of the drag or braking device; and Figs. 6 and 7 are side and face views of the disk provided with lugs adapted to interlock with the handle, as will be more particularly described hereinafter.

The machine is constructed in substantially the same way as the machine of application Serial No. 154,558 and consists of a suitable plate or support 1, to which is secured the handle 2. To this support is rigidly secured the spindle 3, with its end 4 screw-threaded into said plate. Upon this spindle is mounted to revolve the cylinder or sleeve 5, carrying the friction-roller 6 to revolve therewith, and journaled concentric with said roller is the blade-holder 7, its outer end 8 journaled upon the outer end of the spindle 3, while its inner end is journaled upon the cylinder 5 adjacent to the inner end of the rubber roller, as at 9. The blade-holder is preferably bent out of a single piece of metal into the proper shape and its inner end formed into the shape of a disk 10. To this disk is secured the internal-toothed gear-wheel 11, (shown in Fig. 4,) while to the inner end of the cylinder 5 is secured to revolve therewith the external gear 12. Gears 11 and 12 both lie in the same plane and are concentric. Gear-wheels 13 13, mounted upon suitable studs secured to the plate 1, operatively connect gears 11 and 12 and provide for a reciprocal motion of said gears, and therefore the roller and blade-holder. A small coil-spring 14 is mounted on the back of the plate 1, and its two projecting arms 15 15 are adapted to contact with a lug 16, struck out from the blade-holder and a second lug 17 from the upper edge of the guard-plate 18, secured on the end of the spindle. The function of this spring is twofold. It serves to always maintain the blade-support and blade in an upright position, and this in handling the device prevents injury of the blade by bringing it into contact with any surrounding object. It further serves to lift the blade from the stropping-surface and raise it to an upright position at the end of each stroke, thus preventing the cutting of the strop. So much of the machine is substantially like the parts shown, described, and claimed in the application filed by me last mentioned, and the novelty of my present improvement consists, first, in providing such a machine with a movable han-

dle, (though the movement is retarded to a certain extent,) and, second, in providing a readily-detachable handle containing and provided with this function. To the plate or support 1, and preferably at a point somewhat below the plane of the stropping-surface, I provide a second spindle 20, preferably provided with a screw-threaded end adapted to engage a female thread in the support 1. Rigidly secured to said spindle and fixed to revolve therewith is the disk or plate 21, provided with projecting lugs 22, struck up from the face or otherwise formed integral therewith. Upon this spindle I mount the handle 2, securing it against being forced off the spindle by a riveted-washer or other similar device at its outer end in any well-known manner. Upon said spindle and partly within a socket in the end I mount a spring 23, which bears against the face of the disk 21 and upon some suitable portion of the handle and which tends to press the handle outwardly, and, furthermore, acts as a drag or braking device to prevent the too free rotation of the handle upon the spindle. In the ferrule of the handle I provide notches or sockets 24, which are adapted to engage or lock with the lugs 22, as will be hereinafter more fully described. The operation of the machine will be readily gathered from the foregoing description. A blade having been placed in the blade-holder, the machine being grasped by its handle, and the friction device brought in contact with the stropping-surface, upon moving the machine in the direction of the lower arrow in Fig. 2 the friction device and blade-holder will be rotated in the direction of the arrows indicated in said figure and the edge of the blade brought down in contact with the stropping-surface. At the same time for the reason that the handle held by the operator is not rigid against rotation and is in a plane somewhat below the stropping-surface the machine will be tilted somewhat, the guard-plate being inclined at a slight angle, as shown in full lines in Fig. 2. This inclination will continue until the end of the stroke, when upon a reversal of movement the plate will be tilted to a position, for instance, such as indicated in dotted lines, Fig. 2, the machine rocking slightly and lifting the edge of the blade from the strop instantly, thus preventing any chance of nicking the stropping-surface. This motion of the whole machine is entirely independent of the operation of the reversing-gear and acts as a positive means for lifting the blade out of contact with the strop at the end of the stroke. It is furthermore wholly independent of the lifting tendency of the spring 14, and, in fact, anticipates the action of said spring. The lifting of the blade by means of this swinging action is very efficient in machines which are geared as the one shown in the drawings—namely, where the friction device revolves twice as fast as the blade-holder. In such cases some considerable movement of the friction-roller must occur to raise the blade-holder and lift the blade clear of the strop, and such a gearing is more efficient, and therefore desirable.

It is obvious that many changes and modifications may be made in my invention without departing from the spirit thereof, and I do not intend to limit myself to the particular structure shown and described; but

What I claim, and desire to secure by Letters Patent, is—

1. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a movable handle and a yielding connection between said handle and support, whereby the free movement of the handle is prevented, substantially as described.

2. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a spindle and a revolving handle on said spindle, and a drag or braking device adapted to prevent the free movement of the handle, substantially as described.

3. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a spindle and a revolving handle on said spindle, and a spring-actuated drag or braking device adapted to prevent the free movement of the handle, substantially as described.

4. In a razor-sharpening machine, a suitable support, a spindle, a blade-holder and friction device on said spindle, a movable handle and a yielding connection between said handle and support, whereby the free movement of the handle is prevented, substantially as described.

5. In a razor-sharpening machine, a suitable support, a spindle, a blade-holder and friction device on said spindle, a movable handle, and a drag or braking device adapted to prevent the free movement of the handle, substantially as described.

6. In a razor-sharpening machine, a suitable support, a spindle, a blade-holder and friction device on said spindle, a movable handle, and a spring-actuated drag or braking device adapted to prevent the free movement of the handle, substantially as described.

7. In a razor-sharpening machine, a suitable support, a spindle, a blade-holder and friction device upon said spindle, a second spindle, a revolving handle on said last-mentioned spindle, and a drag or braking device adapted to prevent the free movement of the handle, substantially as described.

8. In a razor-sharpening machine, a suitable support, a spindle and a blade-holder and friction device upon said spindle, a second spindle, a revolving handle on said last-mentioned spindle, and a spring-actuated drag or braking device adapted to prevent the free movement of the handle, substantially as described.

9. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a movable handle located in a plane below the stropping-surface, and a yielding connection between said handle and support whereby a free movement of the handle is prevented, substantially as described.

10. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a spindle and a revolving handle on said spindle, said handle located in a plane below the stropping-surface, and a drag or braking device adapted to prevent the free movement of the handle, substantially as described.

11. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a spindle and a revolving handle on said spindle, said handle located in a plane below the stropping-surface, and a spring-actuated drag or braking device adapted to prevent the free movement of the handle, substantially as described.

12. In a razor-sharpening machine, a suitable support, a spindle, a blade-holder and friction device on said spindle, a movable handle located in a plane below the stropping-surface, and a drag or braking device adapted to prevent the free movement of the handle, substantially as described.

13. In a razor-sharpening machine, a suitable support, a spindle, a blade-holder and friction device on said spindle, a movable handle located in a plane below the stropping-surface, and a spring-actuated drag or braking device adapted to prevent the free movement of the handle, substantially as described.

14. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted thereon, and a movable handle detachably connected to said support, substantially as described.

15. In a razor-sharpening machine, a suitable support, a spindle, a blade-holder and friction device mounted thereon and a movable handle detachably connected to said support in a plane below the stropping-surface, substantially as described.

16. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a spindle detachably secured to said support, a movable handle on said spindle, and a drag or braking device operatively connected to said handle for preventing the free movement thereof, substantially as described.

17. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a spindle detachably connected to said support, a movable handle on said spindle, a drag or braking device in operative contact with said handle for preventing the free movement thereof, and means for temporarily locking said handle and spindle for inserting or removing the spindle from the support, substantially as described.

18. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted upon said support, a spindle detachably connected to said support, a disk rigidly connected with said spindle and provided with lugs or projections, a spring-drag on said spindle between said disk and said handle, and recesses in said handle adapted to interlock with said lugs for turning the spindle, substantially as described.

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

AUGUST WILLIAM SCHEUBER.

Witnesses:
A. C. FISCHER,
ADOLPH F. DINSE