No. 758,699. PATENTED MAY 3, 1904.

A. W. SCHEUBER.

RAZOR STROPPING MACHINE.

APPLICATION FILED JULY 3, 1903.

NO MODEL.

Fig. 1

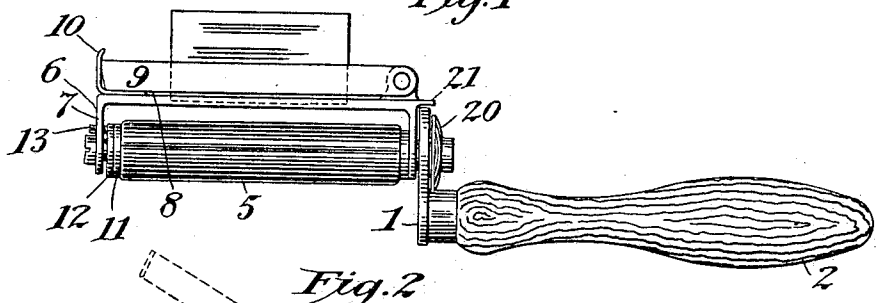


Fig. 2

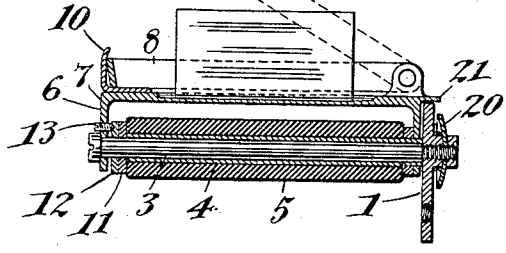


Fig. 3

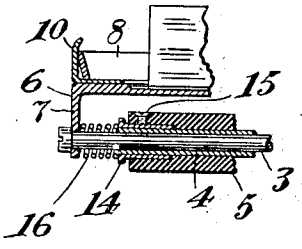


Fig. 4

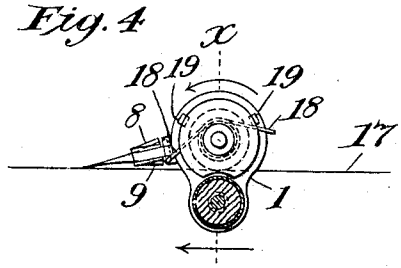


Fig. 5

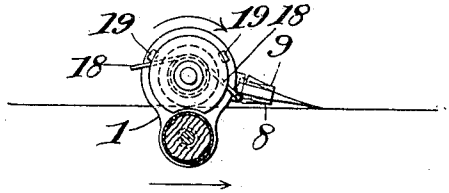


Fig. 6

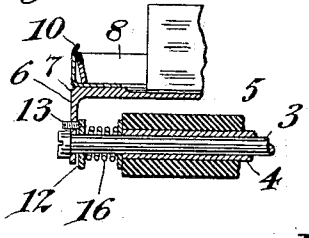


Fig. 7

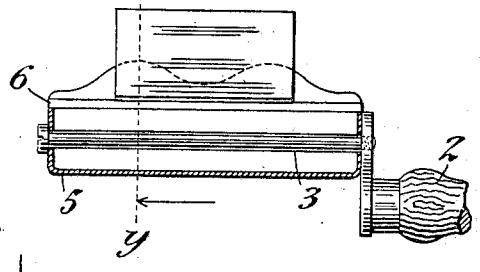


Fig. 8



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By his Attorney

THE MORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 758,699. Patented May 3, 1904.

UNITED STATES PATENT OFFICE.

AUGUST WILLIAM SCHEUBER, OF HOBOKEN, NEW JERSEY, ASSIGNOR TO HIMSELF, AND JEREMIAH REICHARD, OF CALDWELL, NEW JERSEY, DOING BUSINESS AS REICHARD & SCHEUBER MANUFACTURING COMPANY, A FIRM.

RAZOR-STROPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 758,699, dated May 3, 1904.

Application filed July 3, 1903. Serial No. 164,176. (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 sharpening razor and other blades; and it consists of the combinations and parts more particularly pointed out hereinafter. 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 for sharpening razor-blades which consist of a blade-holder and friction device and various means connecting the blade-holder and friction device, so that when the latter is moved along the sharpening-surface the blade is moved in an opposite direction and brought down upon the said sharpening-surface, its edge, however, pointing in a direction opposite to that in which the machine is moved. Such a machine is especially adapted to operate successfully as a stropping-machine where the sharpening-surface consists of leather, &c., and as such the machine is a great success. One of the important features of my present invention, while containing a blade-holder, a friction device, and connecting means for rotating the said parts, differs from the inventions of my former applications in that the movement of the friction device in one direction brings about a movement of the blade-holder in the same direction, thereby causing the blade to be brought to and maintained in contact with the sharpening-surface, its edge pointing in the direction of movement of the machine across the sharpening-surface during the sharpening operation.

In the accompanying drawings, illustrating some forms of my invention, Figure 1 is a plan view showing the machine complete. Fig. 2 is a sectional view of the operative parts thereof, taken on line $x\,x$ of Fig. 4; Fig. 3, a fragmentary sectional view taken on line $x\,x$ of Fig. 4, but showing a different method of adjusting means from Fig. 2; Fig. 4, an end view showing the position of the blade when the machine is moved in the direction of the lower arrow. Fig. 5 is a similar view to Fig. 4, but shows the position of the blade when the machine is moved in the direction opposite to that in Fig. 4. Fig. 6 is a fragmentary sectional view and shows an additional modification of the adjusting mechanism between the blade-holder and friction device. Fig. 7 is a sectional view showing a further modification, and Fig. 8 is a cross-sectional view taken on line $y\,y$ of Fig. 7.

In the structure shown in Figs. 1, 2, 4, and 5, 1 represents the support, to which is secured by any suitable means the handle 2, mounted free to revolve. To this support and preferably somewhat above the point at which the handle is connected is secured the main spindle 3, which has mounted to revolve thereon the sleeve 4, carrying the roller 5, which may be of rubber, leather, or other suitable frictional material. Upon the said spindle and sleeve is likewise mounted to revolve the blade-holder 6, comprising the frame 7, and the pivoted plates 8 and 9, between which the blade is inserted, the same being held in place by the lip 10 engaging the ends of said swinging parts when the same are forced down upon the blade-holder. In order that a movement or rotation of the friction device may cause the blade-holder and blade to move into operative position, some connecting means must be employed. In Figs. 1 and 2 I have shown a rubber or leather washer 11 inserted between the end of the friction-roller 5 and a metal washer 12, which metal washer may be adjusted by a screw 13, passing through the blade-holder and bearing upon the said metal washer 12. By this means the tension between the parts may be adjusted and a rotation of the friction-roller cause a corresponding rotation of the blade and blade-holder. A coiled spring is mounted upon the

opposite face of the plate 1 in a manner similar to that described in my former application, and its ends 18 18 are normally held substantially in a horizontal position by the lugs 19 19, formed upon the cover-plate 20, and a finger or projection 2 upon the blade is adapted to contact therewith when the blade is rotated, the purpose of which will be more fully described hereinafter. Other means may be employed for connecting the blade-holder and friction-roller—for instance, that shown in Fig. 3, where an adjustable sleeve 14 slides upon the cylinder 4 and is secured by a set-screw 15, and thus may be moved to adjust the tension of the spring 16, mounted upon the spindle between the end of the blade-holder and face of the said sleeve 14. Further means of adjustment are illustrated in Fig. 6, wherein the spring 16 is mounted on the spindle between the roller and blade-holder and its tension adjusted by the washer 12 and set-screw 13.

A somewhat modified form of my invention which is simpler and cheaper to construct is shown in Figs. 7 and 8. In this structure the blade-holder and roller are bent from one piece of metal, as shown, and pivoted upon the spindle in the usual manner. In this modification no frictional connection is found, as the parts are integral.

The operation of the first-described device is as follows: When a blade is inserted in the blade-holder by slipping it between the inclosed faces 8 and 9, it is locked in place by the catch 10, as before described. Grasping the handle the operator brings the rubber roller in contact with the sharpening-surface 17 (see Fig. 4) and moves it in the direction of the lower arrow. This causes a rotation of the friction-roller in the direction indicated by the upper arrow, and there is sufficient frictional contact between the friction-roller and blade-holder to cause the latter to rotate in the same direction until the edge of the blade is brought down in contact with the sharpening-surface 17. The rotation of the blade and blade-holder is then stopped, and a further movement of the machine in this direction merely causes the roller to revolve, the frictional contact permitting its independent movement. When the machine is moved in the opposite direction, as shown in Fig. 5, the roller, however, revolves in the direction of the upper arrow and carries with it the blade and blade-holder until the former reaches the position shown, when the movement of the blade and blade-holder is arrested, but the roller continues to revolve. In using this device it often happens that the machine is moved back and forth across the sharpening-surface with considerable rapidity, thus causing a rapid rotation of the friction device, which would bring about a comparatively severe impact between the edge of the blade and the sharpening-surface when brought into contact. It is desirable that this impact should not be too severe, and to prevent this the spring referred to has been so arranged that just before the blade is about to contact with the sharpening-surface the lug 21 on the blade-holder will engage one of the arms 18 of the spring, and thus the force of the impact of the blade upon the sharpening-surface will be considerably reduced.

In the modification shown in Figs. 7 and 8 the rotation of the friction-roller causes a rotation of the blade-holder and blade until the latter's edge is brought into contact with the sharpening-surface, when a continued motion of the machine merely causes the friction-roller to slip over the sharpening-surface, the edge of the blade-holder being maintained in contact therewith.

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 friction device and blade-holder mounted upon said support and a yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

2. In a razor-sharpening machine, a suitable support, a friction device and blade-holder mounted upon said support, and an adjustable yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

3. In a razor-sharpening machine, a suitable support, a friction device and blade-holder mounted upon said support and a frictional yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

4. In a razor-sharpening machine, a suitable support, a friction device and blade-holder mounted upon said support, and an adjustable frictional yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

5. In a razor-sharpening machine, a spindle, a friction device and blade-holder on said spindle, and a yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

6. In a razor-sharpening machine, a spindle,

a friction device and blade-holder on said spindle, and an adjustable yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

7. In a razor-sharpening machine, a fixed spindle, a friction device and blade-holder on said spindle, and a yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

8. In a razor-sharpening machine, a fixed spindle, a friction device and blade-holder on said spindle, and an adjustable yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

9. In a razor-sharpening machine, a spindle, a friction device and blade-holder on said spindle, and a frictional yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

10. In a razor-sharpening machine, a spindle, a friction device and blade-holder on said spindle, and an adjustable frictional connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

11. In a razor-sharpening machine, a spindle, a blade-holder and friction-roller on said spindle, and a suitable braking material interposed between said blade-holder and friction-roller, whereby the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

12. In a razor-sharpening machine, a spindle, a blade-holder and friction-roller on said spindle and a suitable braking material interposed between said blade-holder and friction-roller whereby the blade is automatically brought into position for sharpening when the machine is operated, and means for adjusting the tension of the brake, substantially as described.

13. In a razor-sharpening machine, a spindle, a blade-holder and friction-roller on said spindle and a suitable braking material interposed between said blade-holder and friction-roller whereby the blade is automatically brought into position for sharpening when the machine is operated, and screw adjusting means for adjusting the tension of the brake, substantially as described.

14. In a razor-sharpening machine, a suitable support, a spindle mounted on said support and a blade-holder and friction-roller rigidly connected together and mounted to revolve on said spindle, so that the blade is automatically brought into position for sharpening when the machine is operated, substantially as described.

15. In a razor-sharpening machine, a suitable support, a blade-holder and friction device mounted on said support and a revolving handle also mounted on said support in a plane below that of the friction device, substantially as described.

16. In a razor-sharpening machine, a support and spindle mounted on said support, a blade-holder and friction device mounted on said spindle, and a revolving handle also mounted on said support, in a plane below that of the holder and friction device, substantially as described.

17. A blade-holder for a razor-sharpening machine comprising a seat for the back of the blade, gripping-surfaces adapted to engage the sides of the blade, the said seat and gripping-surfaces being movable with respect to each other, substantially as described.

18. A blade-holder for a razor-sharpening machine, comprising a seat for the back of the blade and inclined plates movably secured to said seat and adapted to engage the sides of the blade, substantially as described.

19. A blade-holder for a razor-sharpening machine, comprising a seat for the back of the blade, inclined plates pivoted to said seat and adapted to engage the sides of the blade, and a catch for securing the plates in an operative position, substantially as described.

20. In a razor-sharpening machine, a suitable support, a friction device and blade-holder mounted upon said support and a yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, and means for reducing the impact of the blade upon the sharpening-surface, substantially as described.

21. In a razor-sharpening machine, a suitable support, a friction device and blade-holder mounted upon said support, and an adjustable yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, and means for reducing the impact of the blade upon the sharpening-surface, substantially as described.

22. In a razor-sharpening machine, a spindle, a friction device and blade-holder on said spindle, and a yielding connection between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, and means for reducing the impact of the blade upon the sharpening-surface, substantially as described.

23. In a razor-sharpening machine, a spindle, a friction device and blade-holder on said spindle, and an adjustable yielding connection

between said friction device and blade-holder, whereby the blade is automatically brought into position for sharpening when the machine is operated, and means for reducing the impact of the blade upon the sharpening-surface, substantially as described.

24. In a razor-sharpening machine, a spindle, a blade-holder and friction-roller on said spindle, and a suitable braking material interposed between said blade-holder and friction-roller, whereby the blade is automatically brought into position for sharpening when the machine is operated, and means for reducing the impact of the blade upon the sharpening-surface, substantially as described.

25. In a razor-sharpening machine, a spindle, a blade-holder and friction-roller on said spindle and a suitable braking material interposed between said blade-holder and friction-roller whereby the blade is automatically brought into position for sharpening when the machine is operated, and screw adjusting means for adjusting the tension of the brake, and means for reducing the impact of the blade upon the sharpening-surface, substantially as described.

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

AUGUST WILLIAM SCHEUBER.

Witnesses:
JEREMIAH REICHARD,
ADOLPH F. DINSY.