No. 620,273. Patented Feb. 28, 1899.

F. L. BRUNSWICK.

RAZOR SHARPENING DEVICE.

(Application filed Feb. 18, 1898.)

(No Model.)

Fig. 3.

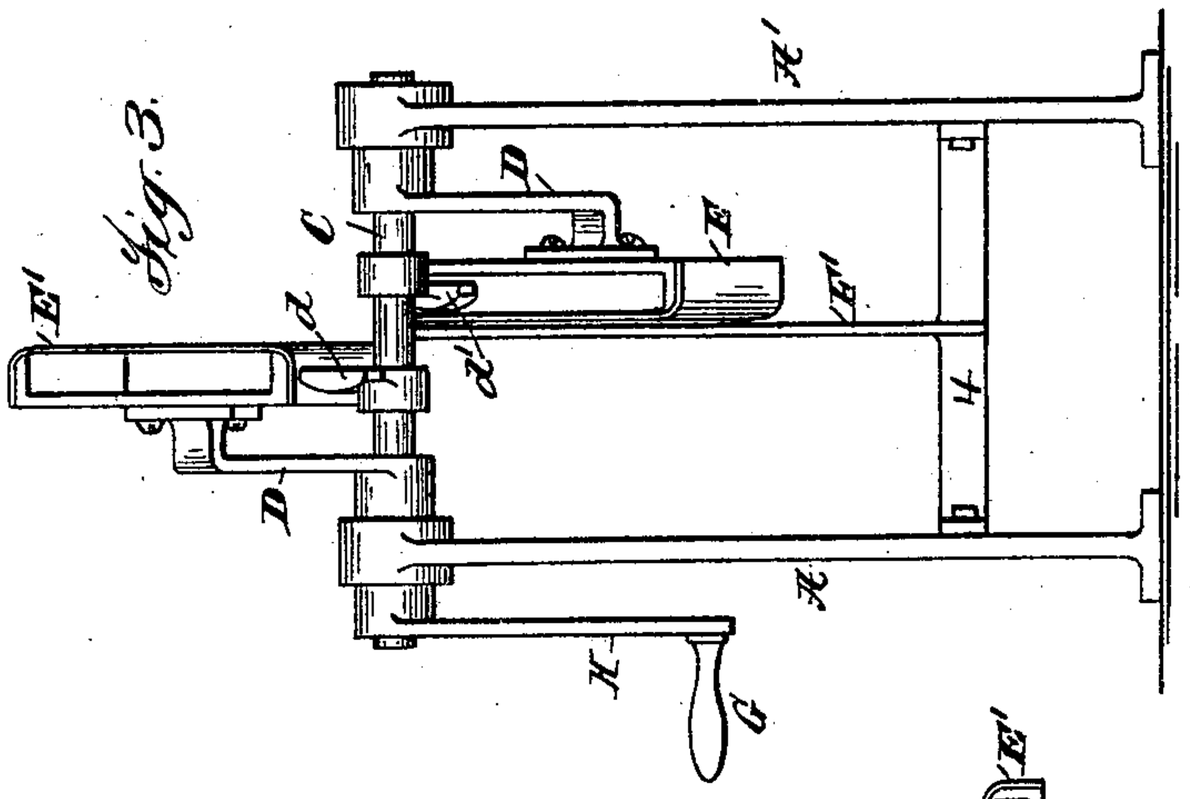


Fig. 4.

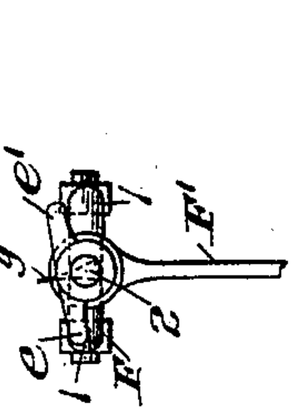


Fig. 2.

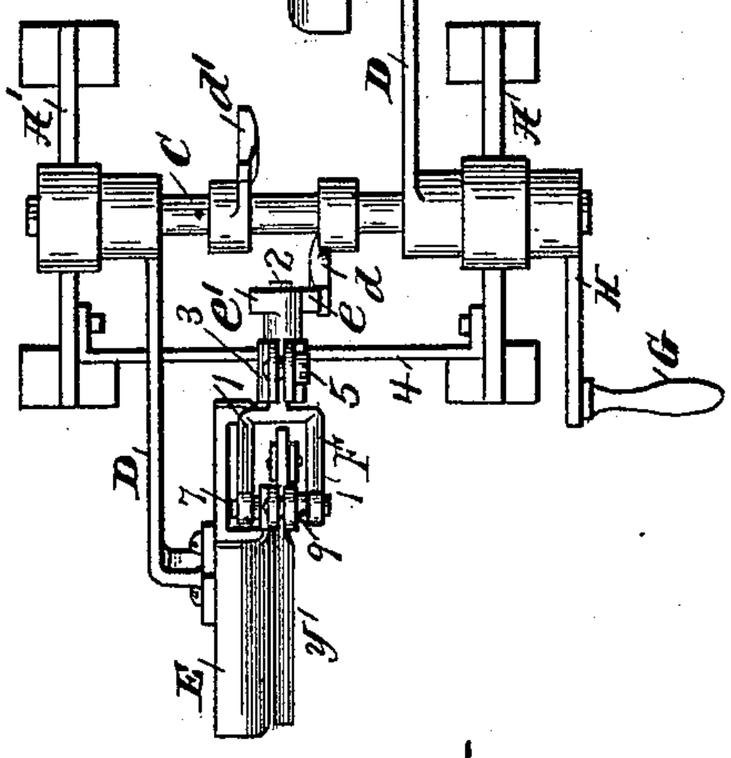
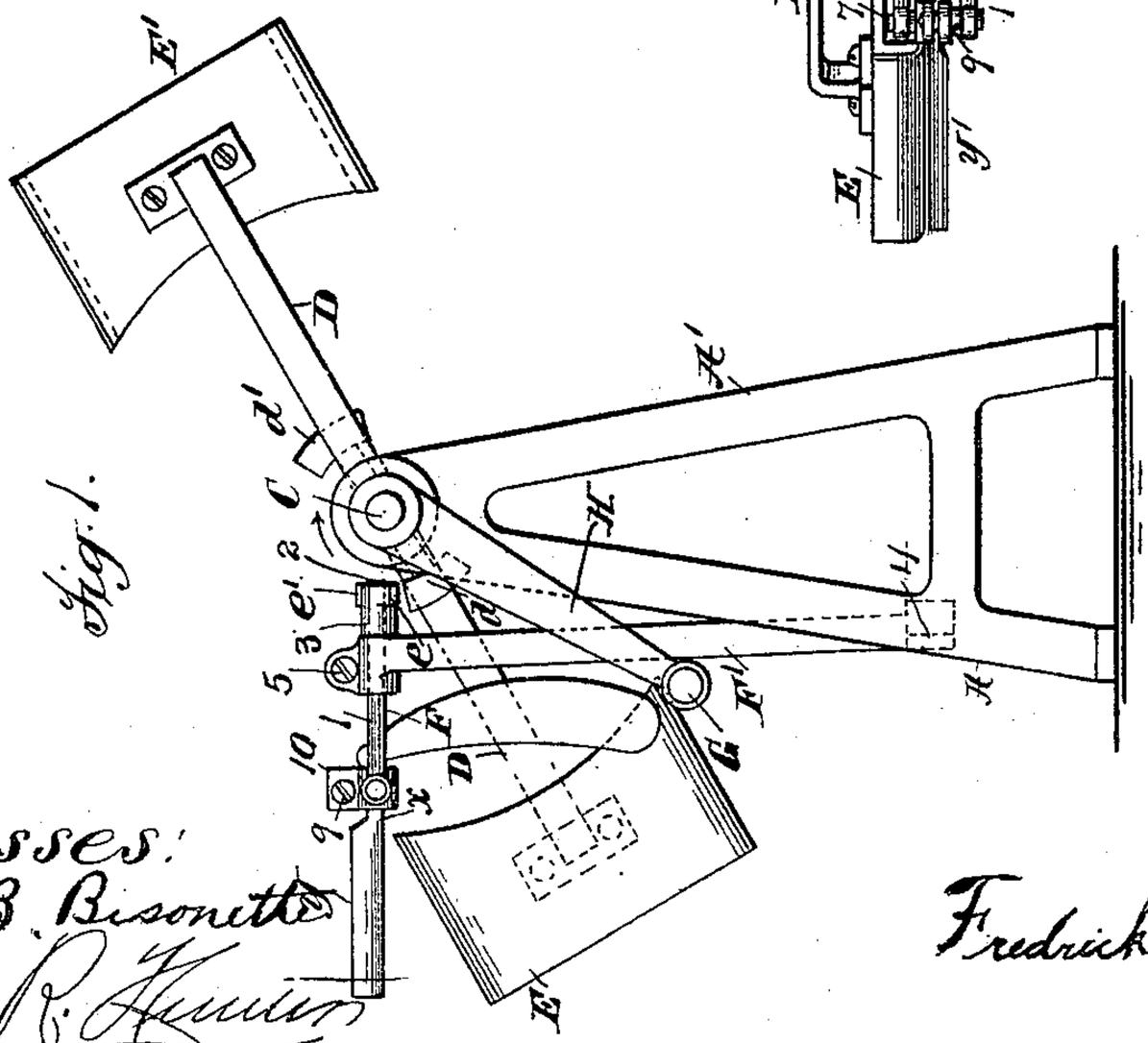


Fig. 1.



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UNITED STATES PATENT OFFICE.

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RAZOR-SHARPENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 620,273, dated February 28, 1899.

Application filed February 18, 1898. Serial No. 670,733. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK L. BRUNSWICK, a citizen of the United States, residing at Oswego, county of Oswego, and State of New York, have invented certain new and useful Improvements in Razor-Sharpening Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to machines for stropping or honing razors in which the strops or hones are rotated on a shaft operated by hand or other power.

The objects of the invention are to provide a machine of simple construction which will avoid the difficulties in existing machines of this class and with which a novice can quickly and accurately sharpen a razor by stropping or honing.

As a full understanding of the invention can best be had by a detailed description of a construction embodying all the features thereof, such a description will now be given in connection with the accompanying drawings, illustrating a preferred form of machine, in which all of the features of the invention are combined and which will be specifically pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a machine embodying the invention. Fig. 2 is a plan view of the same. Fig. 3 is an end view, and Fig. 4 a detail showing the razor mounted in the rocking support in position to be operated upon.

The various parts of the machine are supported by uprights A A′. Rotatably mounted in journal-bearings in the upper end of the uprights A A′ is a shaft C, to which is secured, preferably at right angles thereto, arms D, which at their outer ends carry the strops or hones E E′, which may be secured to the arms D by screws, as shown, or in any other suitable manner. Mounted on the shaft C, so as to rotate therewith, are two abutments *d d′*, so positioned that upon the rotation of the shaft C and before the strops E E′ come in contact with the razor they will strike the lugs *e e′* of the razor-support F, which will hereinafter be described, and alternately tilt the razor in opposite directions, so that its edge will be engaged by the rotating strops. The abutments *d d′* will preferably be made with a convex surface, so that the pressure of the strops on the razor will gradually increase from the beginning to the middle of the stroke and gradually diminish from the middle to the end of the stroke. At the outer end of the shaft C is provided a crank-arm H and handle G for the purpose of operating the machine.

The razor-support F consists of a U-shaped frame 1, provided with a shank 2, projecting through the clamp 3 on the head of the standard F′, extending up from the cross-piece 4, the inner end of said shank being flattened so as to receive a collar having on opposite sides the lugs *e e′*, which coact with the abutments *d d′* on the shaft C to rock the razor-support to present the razor in proper position to the strops. The clamp 3 is provided with a screw 5 for adjusting the grip of the clamp on the shank of the support F. The clamp 3 may thus be adjusted so as to cause the support to be held with the proper friction to hold the razor in position for stropping after the support has been rocked and yet not to interfere with the rocking of the support by the abutments. Between the ends of the frame 1 on the pin 7 is carried the clamp 10, provided with a set-screw 9, by which the shank of the razor is rigidly secured in said clamp to hold the razor in the path of rotation of the strops.

In addition to the feature of rocking the razor and holding it in operative position to be acted upon by the strops the abutments *d d′* and lugs *e e′* prevent injury to the strops or razor by operation of the machine in the wrong direction. If the operator should turn the handle in the wrong direction, one of the abutments on the shaft will contact with one of the lugs, thus preventing injury to the razor or strops in being struck in the wrong direction.

The form of strop will preferably be of a width equal to the length of the razor-blade, as shown, so that the entire surface of the razor will be acted upon simultaneously; but any form of strop may be used. When narrow strops are used, it will be necessary to mount them at an angle to the arms, so they will take against the edge of the razor from

heel to toe. The strops will also preferably be provided with reverse sides, one composed of leather and the other of canvas.

The operation of the machine is as follows: The shank *x* of the razor *y* is secured in the jaws of the clamp 10 by means of a set-screw 9 with the edge of the razor pointing upward. The operator turns the handle G of the crank H in the direction indicated by the arrow in Fig. 1, thus rotating the arms D D′, carrying the strops E E′ in the same direction. When one of the abutments, as *d*, contacts with the corresponding lug *e*, the razor-support is rocked to rock the razor into a slightly-inclined position, so that the edge of the razor will be engaged by the strop E. This operation upon the further rotation of the shaft C is repeated by the coaction of the abutment *d′* and lug *e′* to present the other side of the razor to the strop E′. This movement is continued for a suitable time or until the razor is removed.

Parts of the machine are removably secured in their respective positions, so that the machine may be readily taken apart for the purpose of transportation or the replacement of injured or worn parts and when taken apart make a very convenient package for transportation. The parts may also be made of wood or metal, as desired.

Although the invention has been illustrated and described as used for stropping razors, it will be apparent that it may also be used for honing. It will also be seen that the blade of a safety-razor can be applied in the clamp 10 and operated upon in the same manner as an ordinary razor.

It will be understood that my invention is not to be limited to the exact form or arrangement of parts in the construction shown, but that many modifications may be made therein without departing from the invention.

What I claim is—

1. In a razor-sharpening machine, the combination of rotating strops having its stropping-surface in a plane substantially at right angles to its axis of rotation, a support for the razor, and means controlled by the movement of the strops for moving the razor to present its sides alternately in position to be stropped, substantially as described.

2. In a razor-sharpening machine, the combination of rotary strops having its stropping-surface in a plane substantially at right angles to its axis of rotation, a rocking support for the razor, and means controlled by the movement of the strops for rocking the razor-support to present the sides of the razor alternately in position to be stropped, substantially as described.

3. In a razor-sharpening machine, the combination of rotating strops having their stropping-surfaces in planes substantially at right angles to their axis of rotation for engaging opposite sides of the razor, a rocking support for the razor, and abutments moving with the strops to engage lugs on the razor-support to rock the razor-support to present the sides of the razor alternately in position to be stropped, substantially as described.

4. In a razor-sharpening machine, the combination of rotary strops, a rocking support for the razor, a clamp for holding said razor-support, a clamp carried by the support for holding the razor, and means controlled by the movement of the strops for rocking the razor-support to present the sides of the razor alternately in position to be stropped, substantially as described.

5. In a razor-sharpening machine, the combination of rotary strops, a rocking support for the razor, an adjustable clamp for holding said razor-support, an adjustable clamp carried by the support for holding the razor, and means controlled by the movement of the strops for rocking the razor-support to present the sides of the razor alternately in position to be stropped, substantially as described.

6. In a razor-sharpening machine, the combination of rotating strops having its stropping-surface in a plane substantially at right angles to its axis of rotation, a support for the razor consisting of a U-shaped frame having a shank carrying lugs to be engaged for rocking the support, and means controlled by the movement of the strops for moving the razor to present the sides alternately in position to be stropped, substantially as described.

7. In a razor-sharpening machine, the combination of rotating strops having their stropping-surfaces in planes substantially at right angles to their axis of rotation, a rocking support for the razor, means controlled by the movement of the strops for rocking the razor-support to present the sides of the razor alternately in position to be stropped, and means for preventing rotation of the strops in reverse direction, substantially as described.

8. In a razor-sharpening machine, the combination of rotary strops, a rocking support for the razor, an adjustable clamp for holding said razor-support, an adjustable clamp carried by the support for holding the razor, means controlled by the movement of the strops for rocking the support to present the sides of the razor alternately in position to be stropped, and means for preventing rotation of the strops in reverse direction, substantially as described.

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

FREDRICK L. BRUNSWICK.

Witnesses:
LOUIS C. ROWE,
D. J. O'CONNOR.