

(No Model.)

C. L. THORNTON.
RAZOR SHARPENING MACHINE.

No. 525,240.

Patented Aug. 28, 1894.

Fig. 1. A

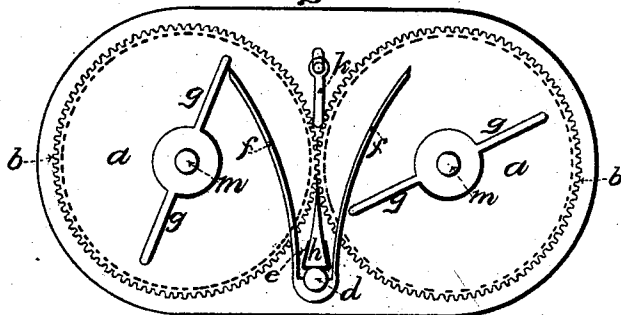


Fig. 2. m

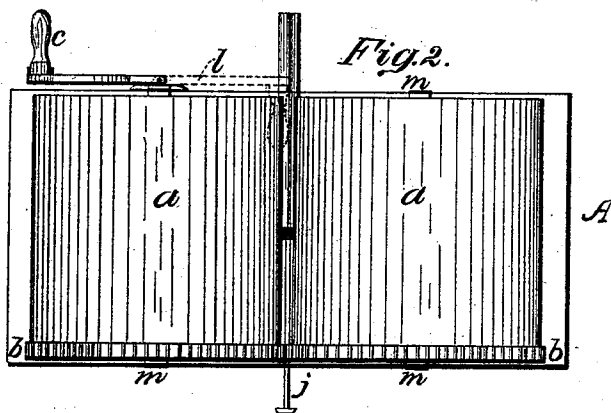
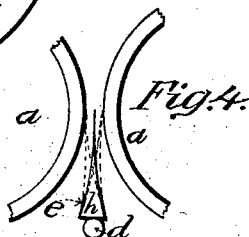
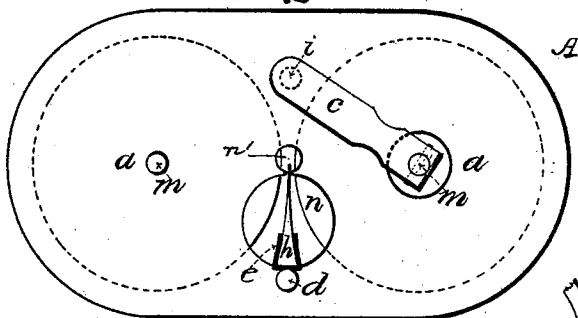


Fig. 3.



Witnesses.

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RAZOR-SHARPENING MACHINE.

SPECIFICATION forming part of Letters Patent No. 525,240, dated August 28, 1894.

Application filed February 23, 1894. Serial No. 501,318. (No model.)

To all whom it may concern:

Be it known that I, CLAUDE LAURAIN THORNTON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Razor-Sharpening Machines, of which the following is a full, clear, and exact specification.

This invention relates to improvements in razor-sharpening machines, and it has for its object to provide a novel apparatus or machine by means of which a razor may be properly sharpened, the sharpening surfaces moving upon the razor-blade from the back to the front or cutting edge.

To this end my said invention consists in the novel combination and arrangement of parts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is an end elevation, the end of the casing being removed. Fig. 2 is a top plan of the machine, the top of the casing being removed. Fig. 3 is an elevation taken at that end of the machine opposite that illustrated in Fig. 1, and Fig. 4 is a detail showing a razor-blade in position to be sharpened.

In the said drawings the reference-letter A, designates a suitable casing or inclosure for the operative parts of the machine, and *a, a*, indicate leather-covered cylinders carried by shafts *m, m*, journaled to rotate in the casing A. Rotation is imparted to said cylinders *a, a*, through the medium of a crank-handle *c*, secured or connected to the shaft *m* of one of the cylinders and cog or other suitable gearing *b* carried by said cylinders.

In the casing A between the shafts *m, m*, of the cylinders and in the same or substantially the same vertical line with the meeting or adjacent peripheries of said cylinders, is journaled a rock-shaft *d*, carrying a razor-blade holder or clasp *e*, which, when the shaft *d* is rocked, oscillates from side to side, carrying the contained razor-blade *h*, alternately into operative contact with the opposite cylinders *a, a*, as hereinafter more particularly referred to. The clasping lips of the holder or clasp *e* may be made somewhat elastic in order that razor-blades of varying thickness may be firmly supported during the operation

of sharpening. Coincident with the blade-holder or clasp an opening *n* is formed in the casing A, to permit the entrance of a blade to be sharpened and its withdrawal after sharpening, said opening being slightly less in diameter than the distance from the back to the front edge of the razor-blade, and having a projecting notch *n'* with which the front or cutting-edge of the razor-blade must be brought to register before it can be inserted or withdrawn from between the cylinders *a, a*.

Connected to the rock-shaft *d* are two spring arms *f, f*, or, if preferred a single spring having two arms *f, f*, and arranged upon the shaft *m* of each cylinder *a*, and rotating therewith are fingers *g, g*, which are so relatively disposed that they alternately engage or contact with the springs *f, f*, whereby the shaft *d* is rocked so as to oscillate the blade-holder or clasp to bring the blade *h* into operative contact alternately with the opposite leather-covered cylinders *a, a*, to be sharpened. Thus the opposite sides of the edge of the blade are operated upon alternately by the said cylinders, and a proper and symmetrical sharpening process accomplished. It is proper and necessary that the stroke or movement of the cylinders upon the blade shall be from the back to the front or cutting edge, the reasons thereof being obvious, and if the cylinders should be rotated in the other direction the leather covering of the cylinders would be cut or hacked and the blade destroyed. To prevent the possibility of this happening, I provide a gravity guard against rotation in the wrong direction, consisting of a pin *k* arranged in a slot in the casing A, the point of said pin reaching down in between the cog or gear wheels *b, b*. The operation of this guard will be apparent from an inspection of the drawings; when the cylinders are rotated in the proper direction the pin will be constantly pushed out of the way, but when an attempt is made to rotate said cylinders in the opposite direction the pin will by gravity fall in between the gears and prevent rotation.

The handle *c* is pivotally connected with the shaft *m* of one of the cylinders *a* so that it can be turned over or reversed upon the pivot as shown in dotted lines in Fig. 2 of the drawings, and at a predetermined point

in the casing A is formed a guide-hole or socket *i*, so that when the handle is turned or reversed upon its pivot and its grasping part made to register with and inserted in said hole or socket, the rock-shaft *d* will have been rocked or turned, through the agency of the fingers *g* and spring arms *f*, to bring the razor-blade out of contact with both cylinders *a* and into register with the notch *n'*, when it may be withdrawn without coming into contact with and cutting the surfaces of the leather-covered cylinders; and when it is desired to insert a blade to be sharpened the holder or clasp *e* is in the same manner brought into proper position to receive the blade and permit its insertion into the machine. Until the parts have been brought into the relative position just described the blade cannot be inserted or withdrawn. When the blade is sharpened it may be pushed out by means of a pin or rod *j*, shown in the drawings, an opening *n* and notch *n'* being formed in the opposite end of the casing to permit the egress of the blade.

25 Having thus described my invention, what I claim is—

1. In a razor-sharpening machine the combination with rotating cylinders, of an oscillatory razor-blade-holder, and automatic mechanism for oscillating the same to present the razor blade to said cylinders alternately, substantially as described.

2. In a razor-sharpening machine, the combination with rotating cylinders, of a razor-blade-holder oscillated by said cylinders, substantially as described.

3. In a razor-sharpening machine, the combination with rotating cylinders, a razor-blade-holder, and devices intermediate said

cylinders and holder for oscillating the latter, substantially as described.

4. In a razor-sharpening machine, the combination with rotating cylinders, a rock-shaft carrying a razor-blade holder, springs secured to said rock-shaft and arms connected to said cylinders and alternately engaging said springs to rock the shaft and oscillate the holder carried thereby, substantially as described.

5. In a machine for sharpening razors, the combination with cylinders means for rotating the same in one direction and a gravity guard for preventing their rotation in the opposite direction, substantially as described.

6. In a razor-sharpening machine, a casing having rotary cylinders and a razor-blade holder mounted therein and provided with an opening *n* having a projecting notch *n'*, substantially as described.

7. In a razor-sharpener, the combination with a casing having rotary cylinders journaled therein and provided with an opening *n* having a projecting notch *n'*, of a razor-holder journaled in said casing and means for oscillating said razor-holder, substantially as described.

8. In a razor-sharpening machine, the combination with a casing having an aperture *n* and a guide socket or hole *j*, of rotary cylinders and an oscillatory blade holder journaled in said casing, and a pivoted reversible handle secured to one of said rotary cylinders and adapted to engage said guide socket or hole, substantially as described.

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Witnesses:

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