S. K. LUCE.

Knife-Scourer.

No. 200,550. Patented Feb. 19, 1878.

Fig. 1.

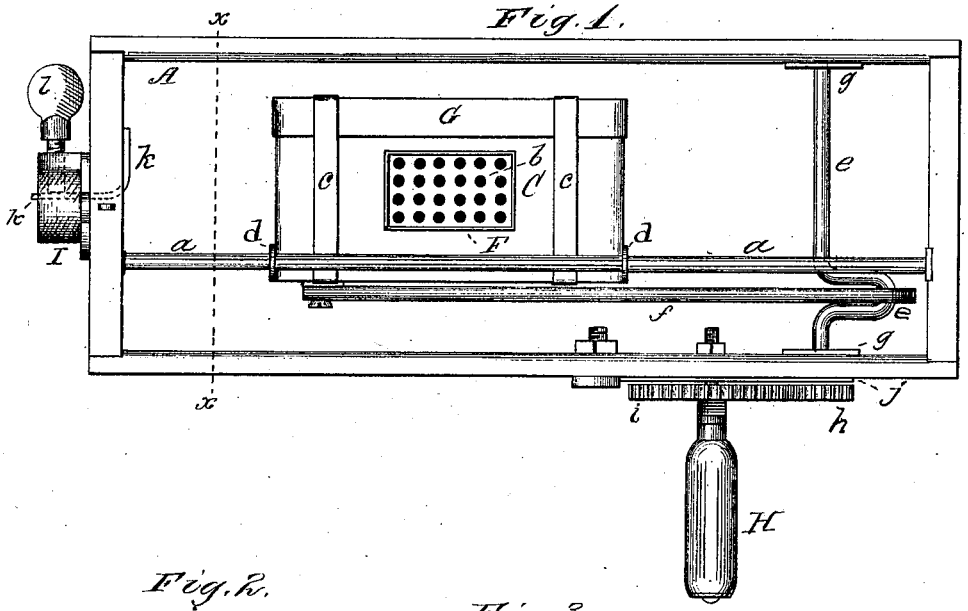


Fig. 2.

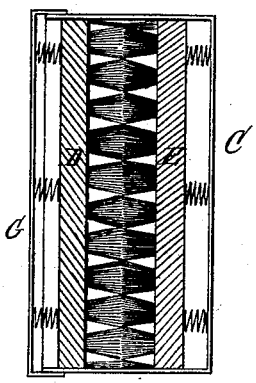
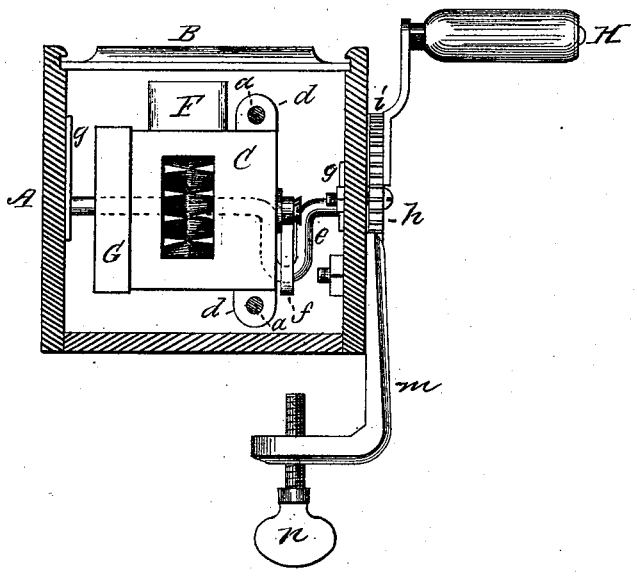


Fig. 3.



WITNESSES

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SHUBAEL K. LUCE, OF ATTLEBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN KNIFE-SCOURERS.

Specification forming part of Letters Patent No. **200,550**, dated February 19, 1878; application filed January 18, 1878.

To all whom it may concern:

Be it known that I, SHUBAEL K. LUCE, of Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and valuable Improvement in Knife-Cleaners; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a top-plan view of my invention. Fig. 2 is a similar view of the drum, with the top removed to show the brushes. Fig. 3 is a cross-section taken through line *x x* of Fig. 1.

This invention has relation to machines or devices for scouring and polishing knives; and the object and purpose thereof are to provide such a machine with certain attachments and mechanism that will render it perfect in its operation and effective in its purpose.

The invention therefore consists in so arranging the brushes with relation to each other within a reciprocating drum or casing that they will be automatically or self adjusting to the varying thickness of the knife-blades, and to insure the brushes at all times during the operation of the machine being pressed against the sides of the blade.

My invention further consists of a box or outer casing, in one end of which is an opening for the reception of the knife, said opening being surrounded by a metallic bushing and a set-screw to hold or force an elastic packing against the handle of the knife, to hold the same stationary and steady while being scoured and polished.

My invention also consists in giving to the polishing or scouring brushes a reciprocating movement while the knife is being held stationary in the machine.

In the accompanying drawings, A represents a box or casing of any suitable material, and preferably of rectangular form, said box or casing being provided with a sliding or hinged cover, B. Within the box or casing A, running lengthwise therewith, are guide-rods *a*, placed a suitable distance apart, one above the other. A drum, C, is made to reciprocate thereon, and carries brushes D E. Upon the top of the drum is a hopper or feeding device, F, with a perforated or gauze bottom, *b*, to allow the polishing powder or compound to pass through into the drum C and between the brushes D E while the knife is being operated upon. The brushes D E are made automatically or self adjusting by providing the drum C with a cover, G, and having the back of the brush of sufficient thickness to fit snugly against the inner side of the cover, and placing around the cover and drum elastic bands *c*. This arrangement will admit of the brush which is connected to the cover G yielding when the knife is placed between the brushes, and at all times being pressed up against the knife-blade during the operation of the machine.

I do not wish, however, to be understood as confining myself to this particular means employed to render the brushes automatically adjustable, as there are various other ways of obtaining the same result—as, for example, spiral or coiled springs may be placed at the back of the brushes and the cover may be rigidly connected or locked to the drum, as illustrated in Fig. 2 of the drawings; or, if desired, flat bow or curved springs may be used in place of coiled springs.

The cover G will also be found convenient in obtaining access to the interior of the drum, when required, for removing and repairing the brushes.

The guide-rods *a* pass through eyes in flanges *d* at each end and at the top and botton of the drum. A crank-arm, *e*, running at right angles to the guide-rods, connects with one end of a shaft, *f*, the other end of said shaft being pivoted to the side of the drum. The ends of the crank-arm *e* have their bearings in metallic plates *g*, secured to the inner sides of the box A. One end of the crank-arm *e* passes out through the side of the box, and has keyed thereto a gear-wheel, *h*, whose teeth mesh with those upon a driving-wheel, *i*, to which is secured a suitable handle, H. A guard-plate, *j*, is secured to the side of the box, to prevent the gear-wheels from wearing into the wood. An opening is formed in one end of the box A, around which is secured a metallic bushing, I, and has an elastic packing, *k*, to prevent the handle of the knife, when held within the

opening, from becoming scratched or otherwise injured by the set-screw *l*.

As the knife is held between the brushes, and made stationary by the set-screw, the drum is made to reciprocate, which causes the brushes to thoroughly and expeditiously polish and scour each side of the knife-blade.

Any scouring or polishing material may be used and placed within the hopper F; and, if desired, a clamp, *m*, with set-screw *n*, may be attached to the side of the box, for the purpose of holding it on a table or bench, or any other place found most convenient.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for scouring and polishing knives, two or more brushes, between which the knife-blade is inserted and held, said brushes being made to reciprocate during the process of polishing and scouring, substantially as and for the purpose set forth.

2. In a machine for scouring and polishing knives, two or more brushes secured or placed within a reciprocating drum or casing, said brushes being automatically or self adjusting to the varying thickness of the knife-blade, substantially as and for the purpose specified.

3. In a machine for scouring and polishing knives, a metallic bushing placed around the opening of the box or casing, through which the knife is inserted, and a set-screw and packing for holding the knife stationary while being operated upon, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SHUBAEL K. LUCE.

Witnesses:
C. H. STURDY,
L. TAYLOR.