(No Model.)

T. A. EVANS.

MACHINE FOR CLEANING AND POLISHING KNIVES.

No. 440,948. Patented Nov. 18, 1890.

Fig. 1.

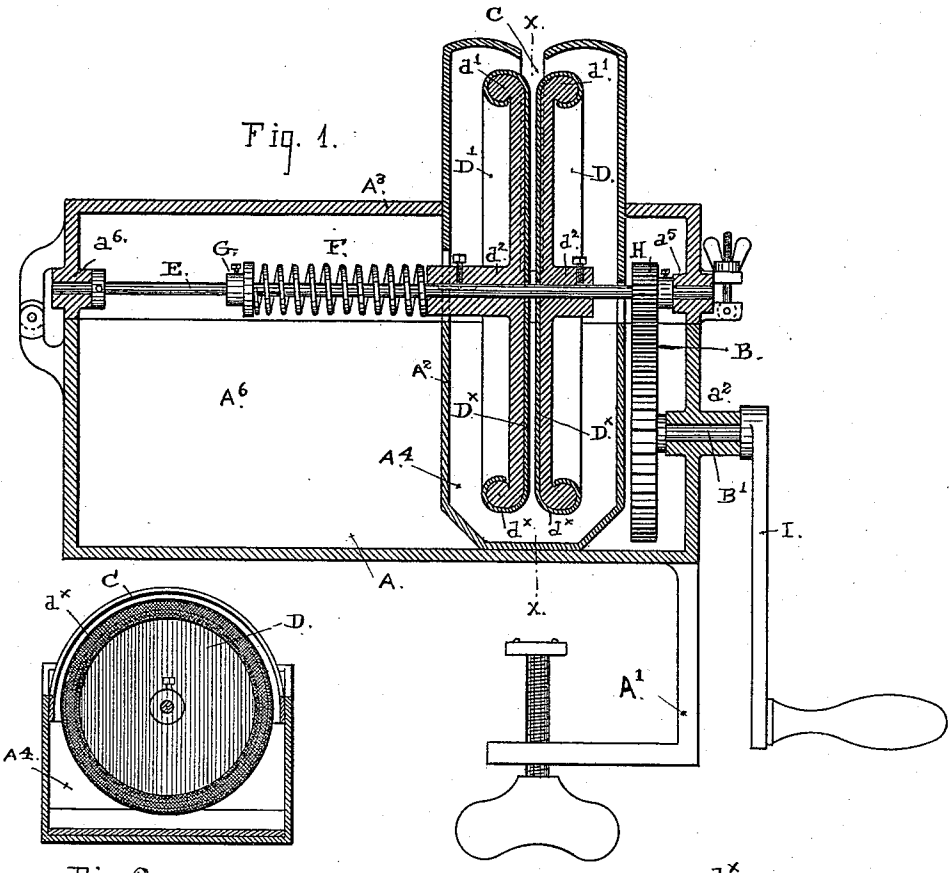
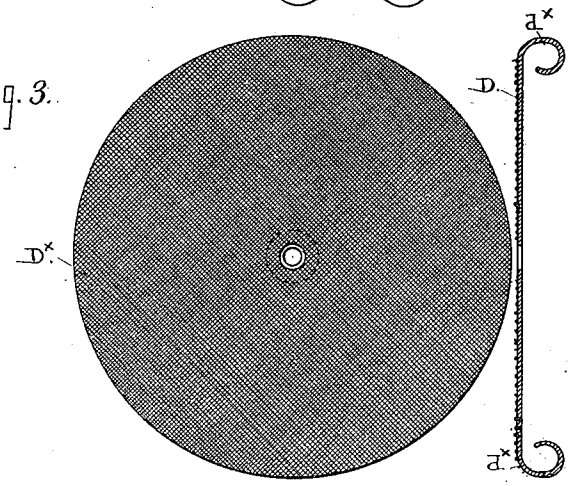


Fig. 2.

Fig. 3.



Witnesses:

Wm. Mayer.

J. E. Freeman

Inventor:

Thomas A. Evans

By Dewitt & Dewitt

his Att'ys.

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UNITED STATES PATENT OFFICE.

THOMAS A. EVANS, OF SAN FRANCISCO, CALIFORNIA.

MACHINE FOR CLEANING AND POLISHING KNIVES.

SPECIFICATION forming part of Letters Patent No. 440,948, dated November 18, 1890.

Application filed March 24, 1890. Serial No. 345,126. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. EVANS, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented an Improved Knife Cleaning and Polishing Machine, of which the following is a specification.

This invention relates to machines for cleaning and polishing knives, in which revolving disks are driven at considerable rate of motion while the knife-blade is held between them; and the invention consists in certain novel parts and combination of parts, as hereinafter described, producing an improved machine for kitchen use.

The construction of my improved machine will be understood from the following description and the accompanying drawings, that form part of this specification.

Figure 1 represents the machine generally in longitudinal section. Fig. 2 is a cross-section at *x x*, Fig. 1. Fig. 3 is a detail view of one of the polishing-disks.

A indicates a box or case provided with a screw-clamp A′ on the bottom for fastening the machine on the edge of a bench or table. A bearing a^2 is formed on the front for the shaft B′ of a driving-gear B, and a cover A^3 is attached to the bottom part A by a hinge-connection, so that it may be raised and turned back to give access to the polishing-disks D D′, which are covered by it. That portion of the hinged top which sets over the disks corresponds in shape to the disks, and is of suitable width also to give clearance on the sides. It has a slit or opening C extending from the top downward to or nearly to the center, and in line with this opening the disks are set to work one on each side and in such position that the knife-blade, when introduced from above or from either side, will set between the faces of the disks.

Bearings a^5 a^6 are provided for a shaft E, on which the disks are mounted, the disk D being made fast to the shaft, but the other disk being fixed to it by feather and groove to have longitudinal movement both toward and away from the opposite disk, while a coil-spring F behind this sliding disk holds it with a degree of pressure against the other disk, which is capable of adjustment, it being increased or reduced by moving and setting the collar G on the shaft behind the spring in one direction or the other.

The shaft E is driven from the main gear by a pinion H, the difference in the sizes of the two gears giving a rapid motion to the disks from a slow movement of the hand-crank I.

The disks are solid, with a turned-over rim d' and a central hub d^2 for the shaft E, and the face D*, which is the polishing side of the disk, is made of rubber molded to shape with a turned-over edge $d^\times$, as shown in Fig. 3, properly shaped to fit tightly over the rim of the disk, and also provided with a central aperture for the hub. The outer face of this part D* is grooved or corrugated for the purpose of taking up and holding the polishing material, such character of surface being produced by molding these rubber coverings in the usual manner of making articles of rubber with corrugated surfaces. Any form or style of fine corrugations, grooves, or channels will answer well. When these rubber facings are worn down by use, they are readily taken off and new ones substituted for them.

The space or compartment A^4 at the bottom of the box forms a trough to contain polishing substance or material, and as the disks revolve in this trough they take up and become charged with the polishing material. The compartment A^6 in the box is provided as a matter of convenience to hold a supply of polishing material, with which the trough can be charged from time to time, as required. Access to the inside for cleaning out the trough and renewing the polishing-faces of the disks is afforded by turning back the cover. As thus constructed, all the working parts are either inclosed or so separated from the polishing-disks that they are well protected from the polishing material and are readily cleaned and kept in working order.

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

In a knife cleaning and polishing machine,

a polishing-disk having a solid face and a turned-over rim, in combination with a corrugated surface, covering, or facing for holding polishing material having a rim of corresponding shape which is adapted to be stretched over the disk, as hereinbefore described.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

THOS. A. EVANS. [L. S.]

Witnesses:
CHAS. A. KELLY,
EDWARD E. OSBORN.