

(No Model.)

H. F. HAMBRUCH.
KNIFE CLEANING MACHINE.

No. 271,841.

Patented Feb. 6, 1883.

Fig. 1.

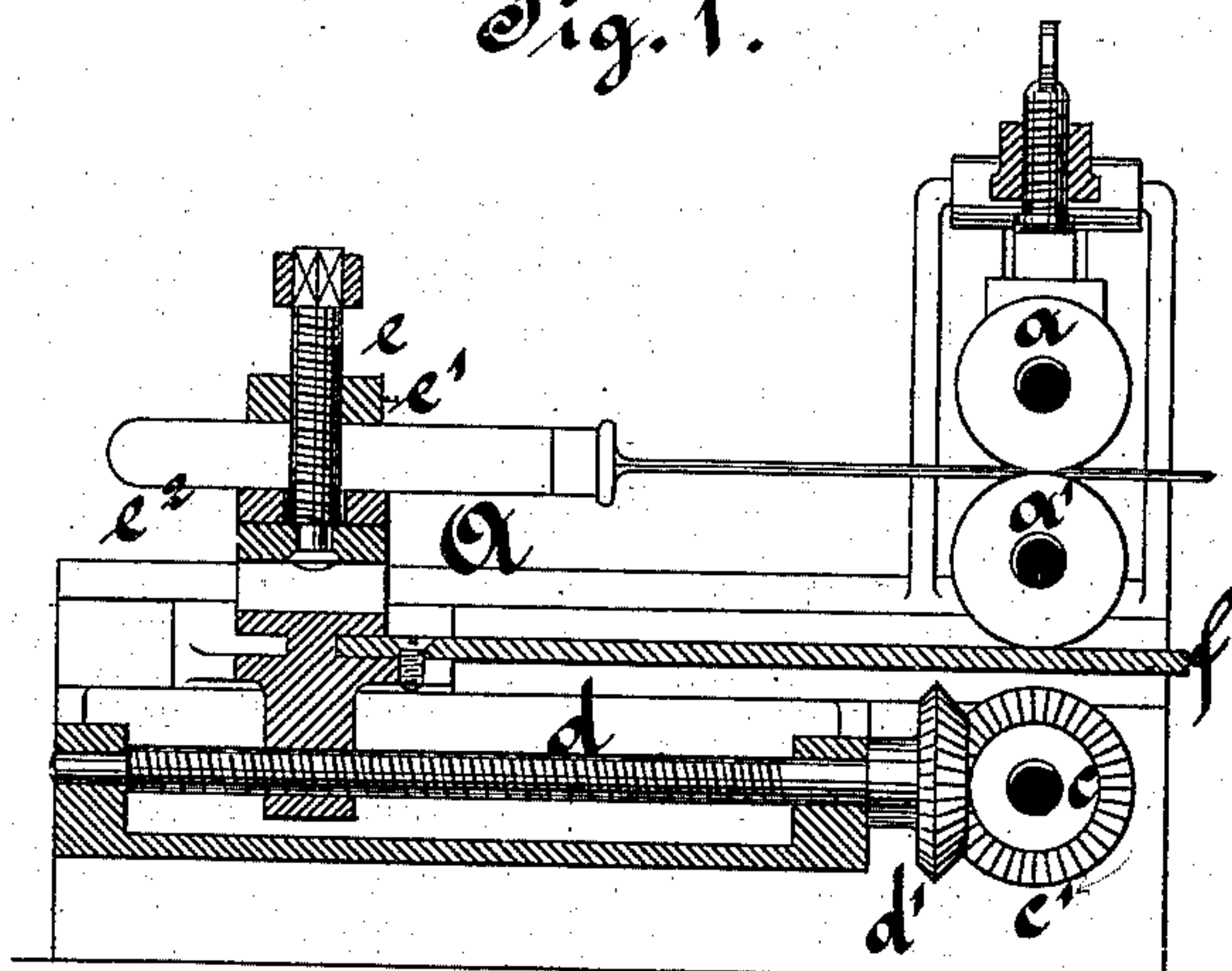


Fig. 2.

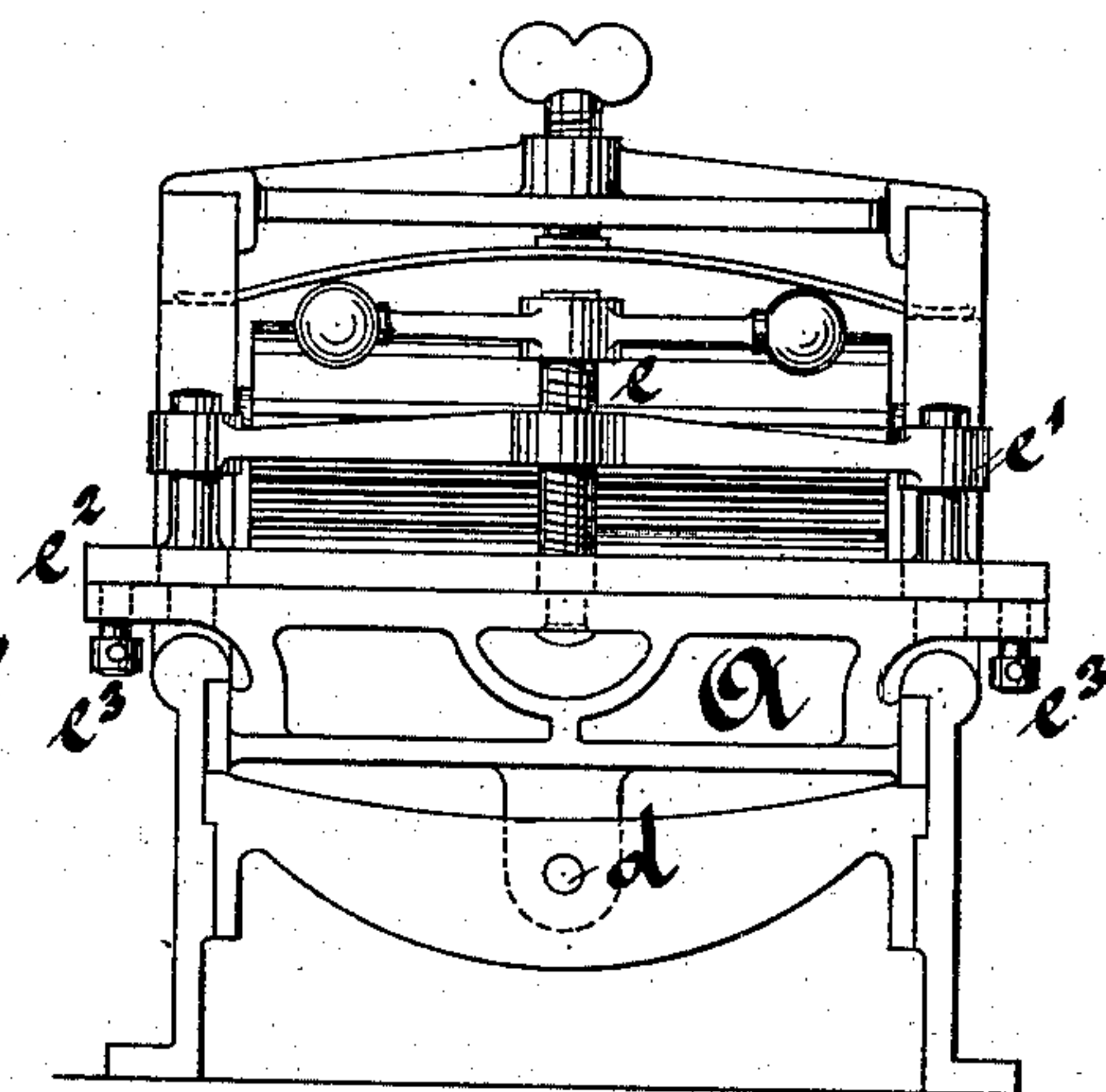


Fig. 4.

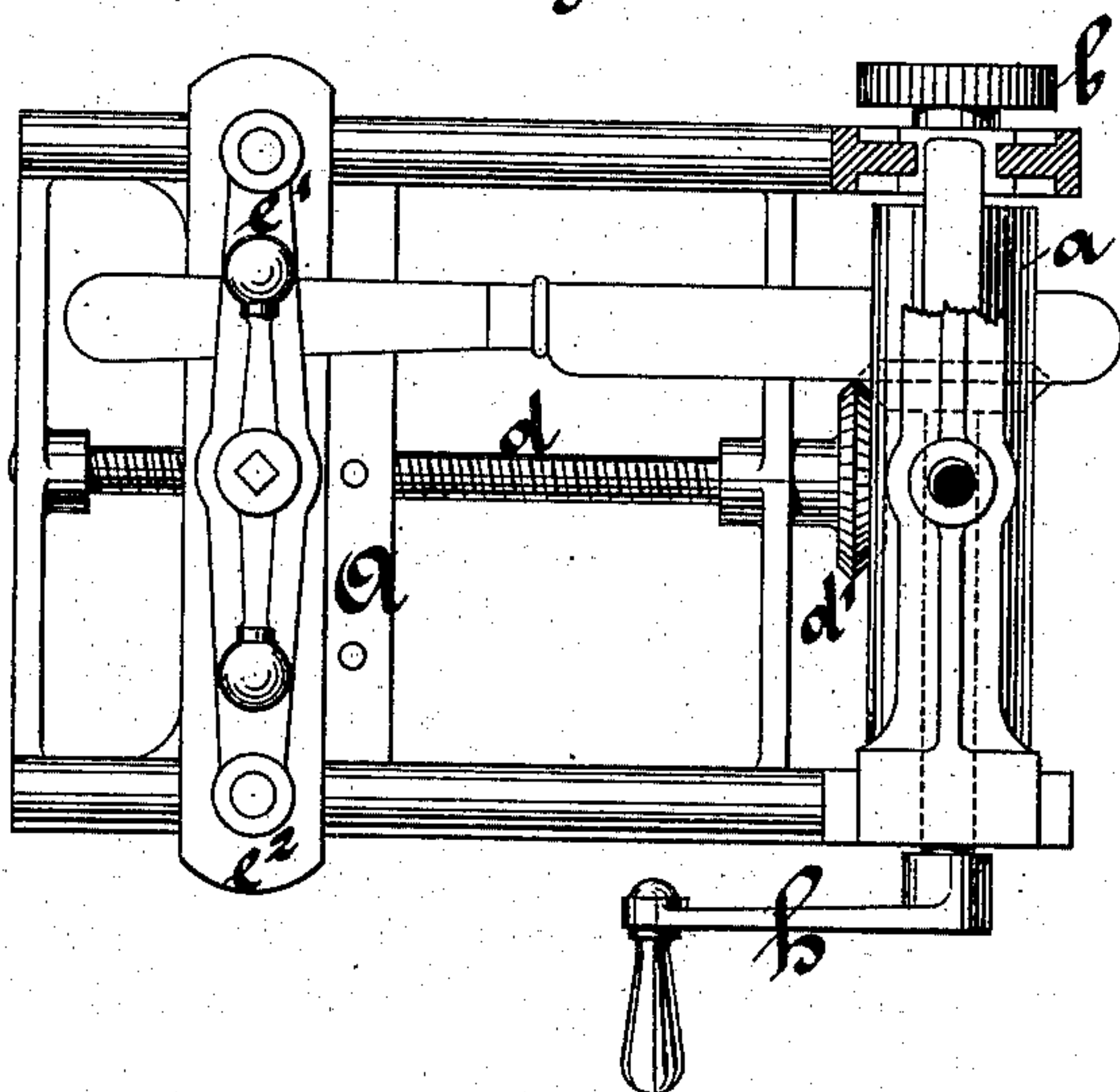
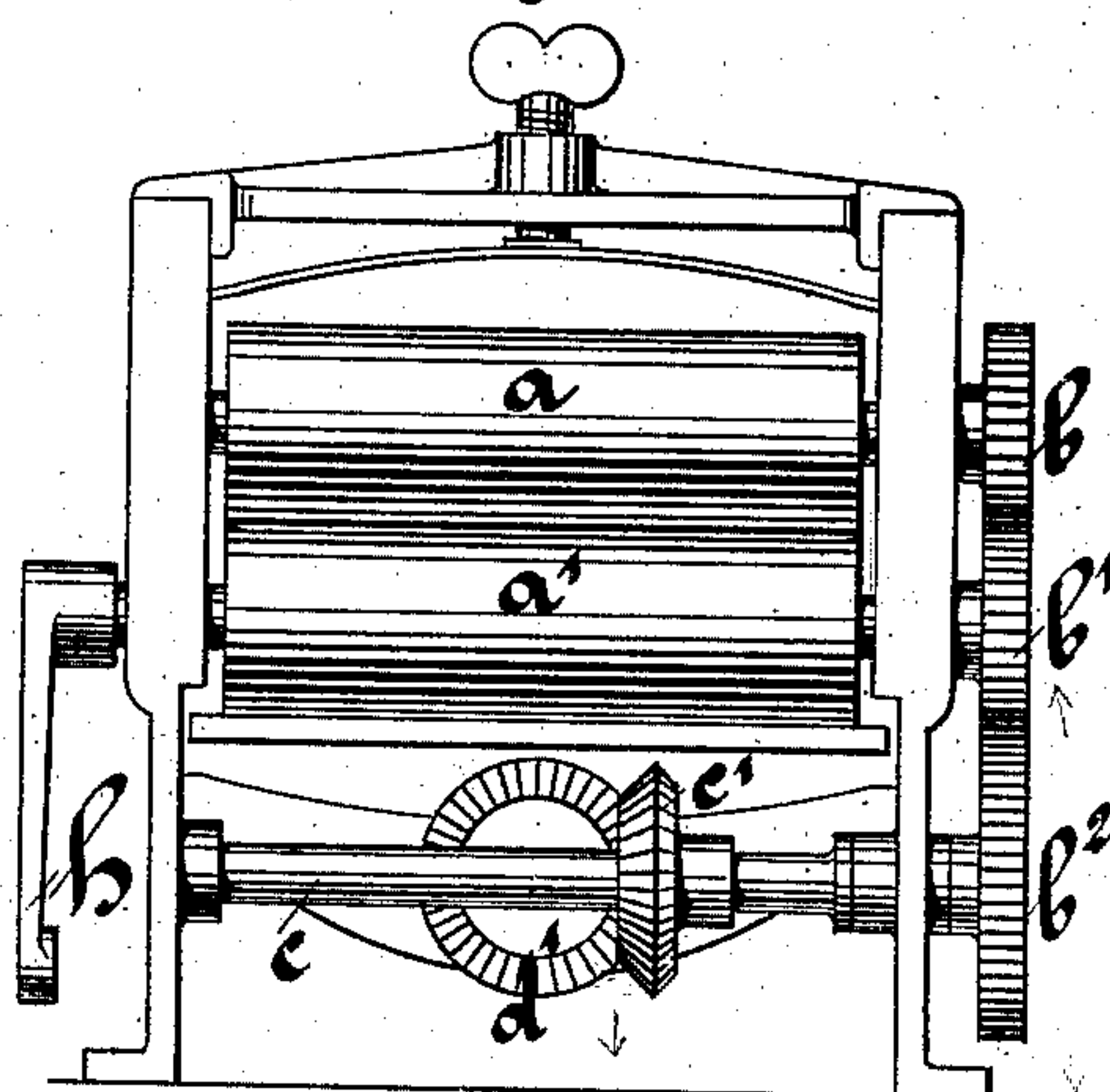


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

HEINRICH FRIEDRICH HAMBRUCH, OF HAMBURG, GERMANY.

KNIFE-CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 271,841, dated February 6, 1883.

Application filed July 8, 1882. (No model.) Patented in France June 20, 1882, No. 149,684; in Belgium June 20, 1882, No. 58,252, and in Austria-Hungary September 7, 1882, No. 21,327, and No. 35,697.

To all whom it may concern:

Be it known that I, HEINRICH FRIEDRICH HAMBRUCH, a subject of the Emperor of Germany, residing at Hamburg, in the German Empire, have invented certain new and useful Improvements in Knife-Cleaning Machines, of which the following is a specification.

My invention relates to improvements in knife-cleaning machines in which the blades of the knives pass between rotating rollers; and the objects of my improvements are, first, to apply a device for automatically pushing the blades to and fro; second, to provide a fastening mechanism for holding the knives while cleaned; third, to facilitate the adjusting of the knives in proper position for passing the blades between the cleaning-rollers, and, fourth, to furnish a transportable feeder of the cleaning powder. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional side elevation of the entire machine; Fig. 2, a front elevation thereof; Fig. 3, a back view; and Fig. 4, a top view, partly in section.

Similar letters refer to similar parts throughout the several views.

The rotation of the cleaning-rollers *a* and *a'*, of a soft or elastic material—such like india-rubber, leather, &c.—is communicated to the shaft *c* and the bevel-wheel *c'*, fixed thereon, by means of the geared wheels *b*, *b'*, and *b²*. In consequence thereof the screw *d* rotates by intermedium of the bevel-wheel *d'*, and causes the slide *A* to travel in a direction corresponding to that of the hand-crank *h*.

The handles of the knives to be cleaned are attached to the slide *A* by means of the clamping device, actuated by means of the screw *e* in such a manner that the blades of the knives are pushed between the rotating rollers *a* and

a'. The upper cross-piece, *e'*, is pressed toward the plate *e²* by the screw *e*. The plate *e²* may be adjusted according to the thickness of the knives' handles by means of the screws *e³*, in order to hold the knives in the position required for satisfactory working of the machine. The table *f*, fastened to the slide *A* and traveling with the same, serves to protect the mechanism located below, and to receive the cleaning-powder for feeding the rollers *a* and *a'* continuously.

The upper roller, *a*, may be pressed by a convenient mechanism—either a weighted lever or springs or rubber cushions—to the lower roller, *a'*. The screw may be replaced by a rack and pinion, or by a connecting-rod between the slide *A* and a crank or disk fixed to the shaft *c*. Also, endless bands may be substituted for the rollers *a* and *a'*.

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

1. In a knife-cleaning machine, the combination of the rotating rollers *a* and *a'* with the slide *A*, the feeding-table *f*, and the clamping device composed of the adjustable plate *e²*, the cross-piece *e'*, and the screw *e*, substantially as described.

2. In a knife-cleaning machine, the combination of the slide *A* with the clamping device composed of the screw *e*, the cross-piece *e'*, and the adjustable plate *e²*, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 19th day of June, 1882.

HEINRICH FRIEDRICH HAMBRUCH.

Witnesses:

ALEXANDER SPECHT,
HERMANN GARSSEN.