No. 887,754. PATENTED MAY 19, 1908.

P. BEHRENS.

KNIFE SHARPENING MACHINE.

APPLICATION FILED AUG. 16, 1907.

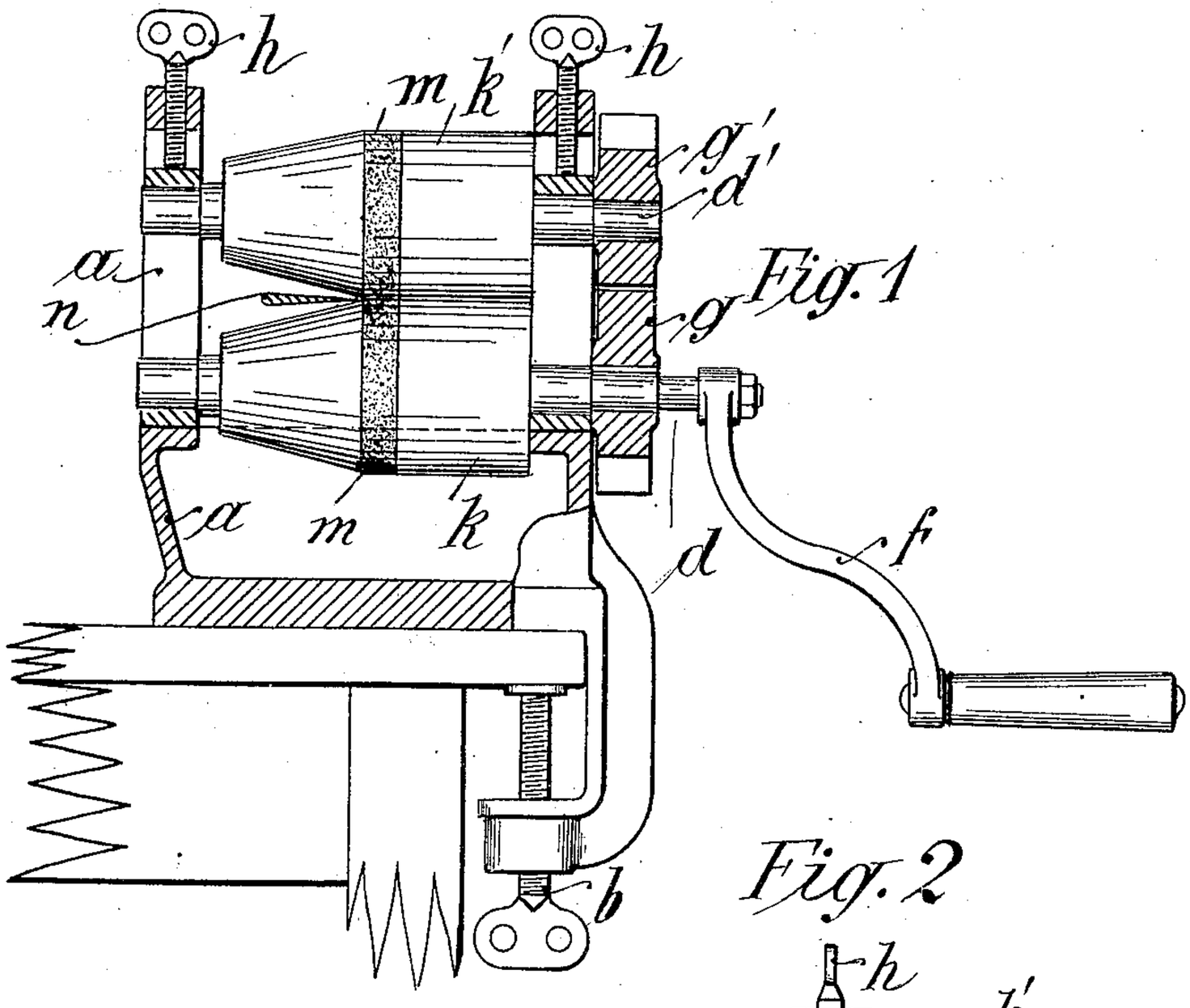

Fig. 1

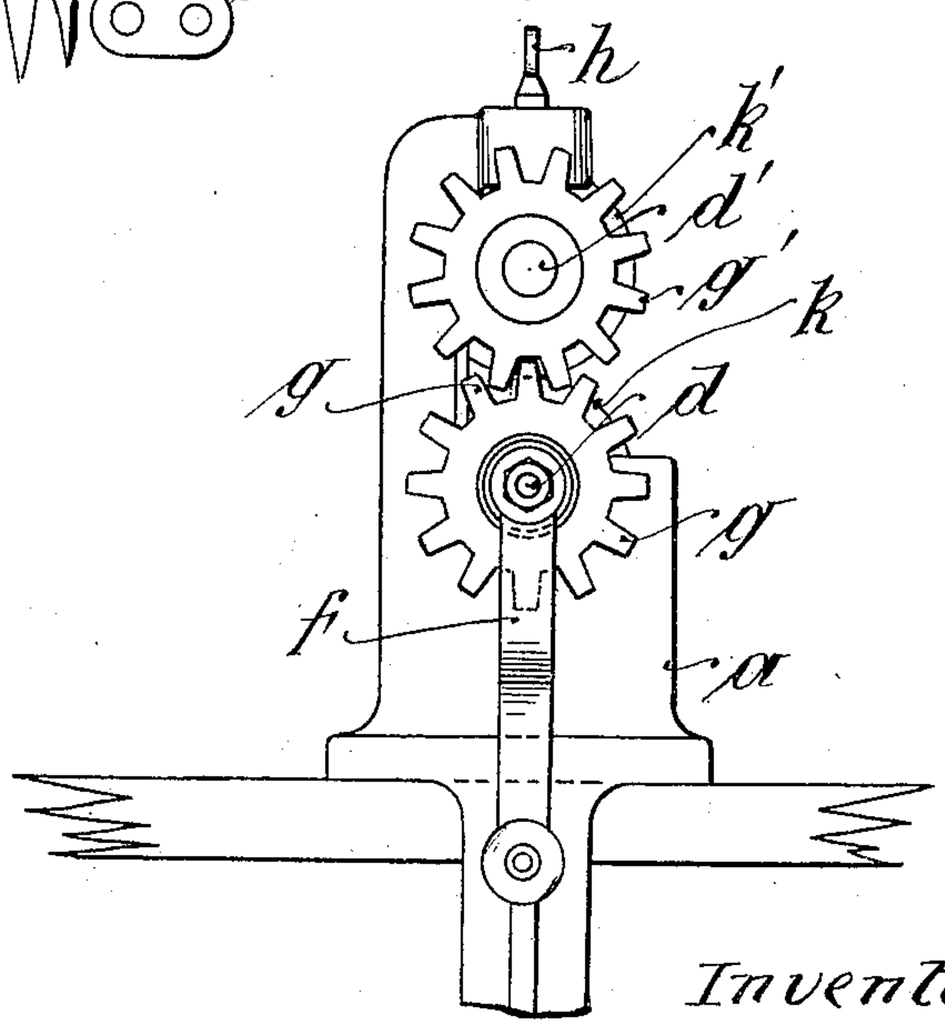

Fig. 2

Witnesses
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UNITED STATES PATENT OFFICE.

PAUL BEHRENS, OF LEIPZIG LINDENAU, GERMANY.

KNIFE-SHARPENING MACHINE.

No. 887,754. Specification of Letters Patent. Patented May 19, 1908.

Application filed August 16, 1907. Serial No. 388,877.

To all whom it may concern:

Be it known that I, PAUL BEHRENS, a subject of the King of Saxony, residing at Leipzig Lindenau, in Germany, have invented certain new and useful Improvements in Knife-Sharpening Machines, of which the following is a specification.

This invention relates to a machine which allows of rapidly and effectively sharpening knives of all kinds without grinding away their side surfaces.

A construction embodying the invention is shown in the annexed drawing, in which

Figure 1 is a front-view and Fig. 2 a side-view of the machine.

The frame *a* is adapted to be fixed to the table by means of the clamp *b* and has bearings for the two shafts *d* and d^1, which have their axes in the same vertical plane. To the lower shaft is fixed the crank-handle *f*. The toothed wheels *g* and g^1 fixed to the shafts mesh with each other so that by turning the handle both shafts are rotated. Each of the bearings of the upper shaft d^1 is a loose saddle resting on the axle and subject to the downward pressure of a screw *h*. To the two shafts are fixed the stone grinding rolls *k* and k^1 respectively, both of which are cylindrical for part of their length and coned at one end to form an angular gap at the apex of which the edge of the knife *n* is placed. Each of the rolls is surrounded, at the cylindrical part directly adjacent to the coned part, by an elastic ring *m* or m^1 of india-rubber mixed with very fine emery powder.

When the knife *n* has been placed in the angular gap, with its edge at the apex thereof, and the grinding rolls are rotated, the edge alone is ground on both sides. The knife may also then be passed between the cylindrical parts of the rolls so as to be polished.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. In a knife sharpening machine the combination of two rotary grinding rolls portions of which are conical, bearings positioned to support said rolls in contact with one another so that the generators of their conical faces form an acute angle to one another, greater than that between the planes of the side surfaces of the knife and means for revolving said rolls.

2. In a knife grinding and polishing machine the combination of two parallel grinding rolls portions of which are conical, and a polishing band surrounding each roll at the base of the conical portion thereof.

In witness whereof I have signed this specification in the presence of two witnesses.

PAUL BEHRENS.

Witnesses:
ARTHUR WERNER,
SOUTHARD P. WARNER.