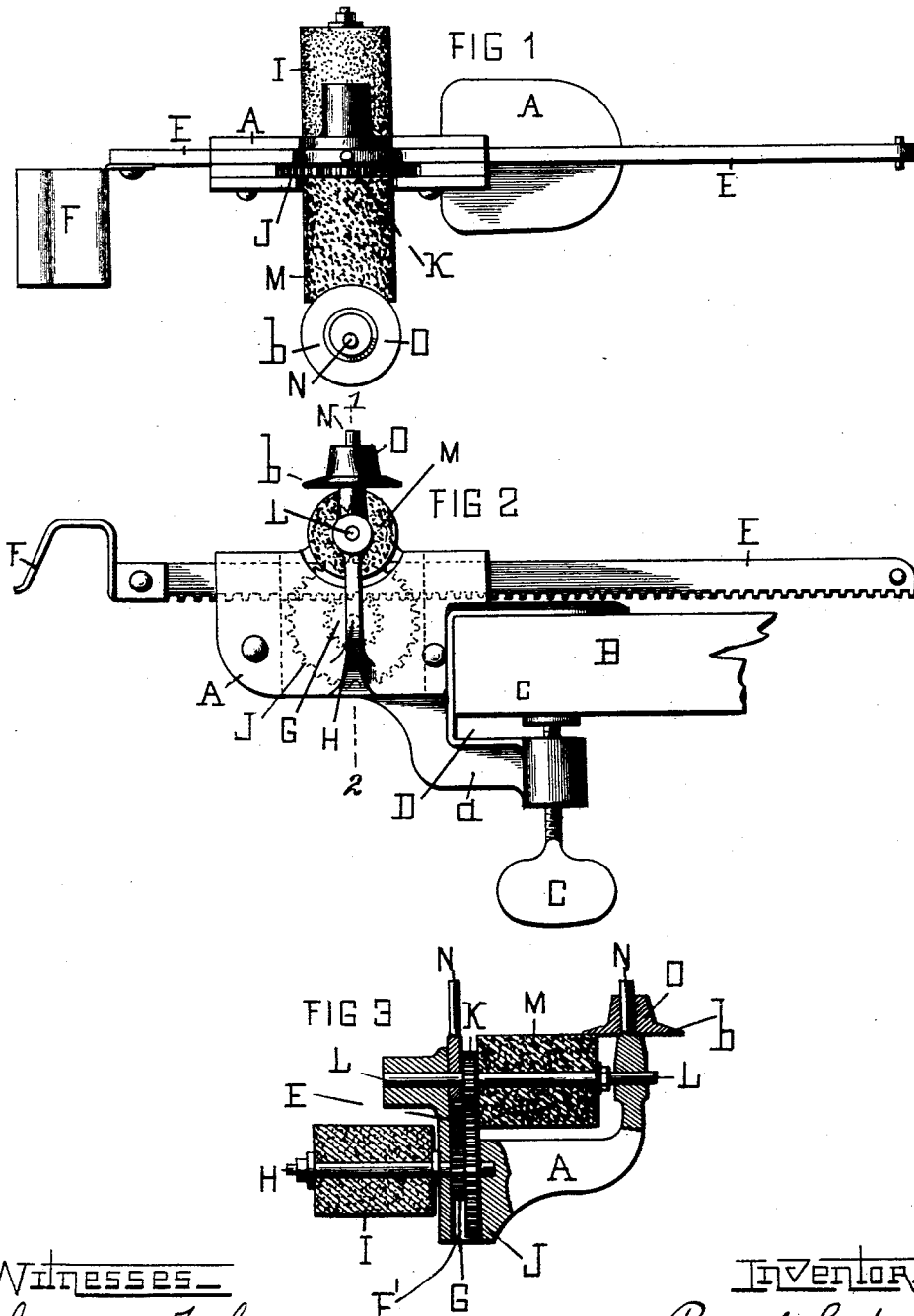


(No Model.)

R. LOEB.
KNIFE SHARPENER AND BURNISHER.

No. 586,361.

Patented July 13, 1897.



Witnesses—

James F. Gannon
Allen R. Sharpless

Inventor—

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Att'y.

UNITED STATES PATENT OFFICE.

RUDOLF LOEB, OF CAMDEN, NEW JERSEY, ASSIGNOR OF ONE-HALF TO
GUSTAVE BOURQUIN, OF MERCHANTVILLE, NEW JERSEY.

KNIFE SHARPENER AND BURNISHER.

SPECIFICATION forming part of Letters Patent No. 586,361, dated July 13, 1897.

Application filed November 16, 1896. Serial No. 612,239. (No model.)

To all whom it may concern:

Be it known that I, RUDOLF LOEB, a subject of the Emperor of Germany, and a resident of Camden, in the county of Camden and State of New Jersey, have invented a new and useful Knife Sharpener and Burnisher, of which the following is a specification.

The invention consists in a horizontal rack in guides of a frame which is removably secured to a table-top or other suitable place by a thumb-screw. The said rack and intervening gearing impart a simultaneous motion to a knife-sharpening roll and burnisher. An eccentric roll or support gives a lateral reciprocating motion to the knife across the roll while being ground, thus increasing the width of the grind.

On reference to the accompanying sheet of drawings, making part of this specification, Figure 1 is a top or plan view. Fig. 2 is a side elevation; and Fig. 3 is a vertical and transverse section through the line 1 2, Fig. 2.

Similar letters refer to similar parts in the several views.

A is a frame, which is secured to a table-top B or other desirable place by a thumb-screw C, which passes upwardly through the bottom jaw *a* of the recess D, formed in the frame for embracing the table-top.

E is a longitudinal rack in guides E' of the frame, which has its teeth formed on its bottom edge and is reciprocated by means of a handhold F at its end.

G is a pinion on the horizontal shaft H of a burnishing-roll I. It gears with the rack E above it. On the same pinion-shaft H is a spur gear-wheel J, which meshes with a pinion K on the shaft L of the grinding-roll M.

On a vertical stud N of the frame A is an eccentric knife-carrier O, of which there may be two, one on each stud. The knife bears on the inclined rim *b* while grinding to give it an in-and-out or transverse reciprocating motion to widen the edge cut of the blade.

The reciprocation of the rack E by hand-power applied to the handhold F is transmitted to the pinion G, its shaft H, and the burnisher I. The spur-gear J, being fixed on the same shaft H, is driven in the same direction and, gearing with the pinion K on the shaft L, imparts a high speed to the grinding-roll M.

In putting my invention in practice the frame A is fixed to the table-top B by passing the recess D over its edge *c* and tightening the thumb-screw C. For grinding, the knife-blade is pressed on the roll M and the rack E rapidly reciprocated by hand-pressure applied to the handhold F. When a broad cutting edge is required, the blade is pressed on and carried by the eccentric O on the edge *b*, its cutting edge in contact with the grinding-roll M. The reciprocation of the rack E in connection with the foregoing gearing imparts a rotary reciprocating motion to said roll, and the movement of the knife reciprocates the eccentric on its stud N and imparts a transverse reciprocation of the knife-blade across said roll. The motion of the rack imparts a simultaneous rotary reciprocation to the burnishing-roll I for polishing the knife-blade.

I claim—

1. In a device of the character described, the combination of a horizontally-rotating knife-bearing eccentric, a grinding-roll, and means for rotating the grinding-roll, for the purpose shown and described.

2. In a device of the character described, the combination of a horizontally-rotating knife-bearing eccentric mounted on a vertical stud of the frame, a horizontal grinding-roll, a reciprocating rack in guides of the frame, a pinion-gear and spur-gear on the same pinion-shaft, a pinion-gear on the grinding-roll shaft in engagement with the spur-gear, for the purpose shown and described.

3. In a device of the character described, the combination of a horizontally-rotating knife-bearing eccentric mounted on a vertical stud of the frame, a horizontal grinding-roll on a transverse shaft of the frame, a pinion-gear on said shaft, a reciprocating rack in guides of the frame, a pinion-gear and spur-gear on the same pinion-shaft, a burnishing-roll on said pinion-shaft, of the grinding-roll, whereby the rack actuates both the grinding and burnishing rolls, for the purpose shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

RUDOLF LOEB.

Witnesses:

FRANCIS D. PASTORIUS,
B. D. ARCHER.