June 21, 1927. 1,633,085

R. FORSHAW

KNIFE SHARPENING MACHINE

Filed Dec. 19, 1923 2 Sheets-Sheet 1

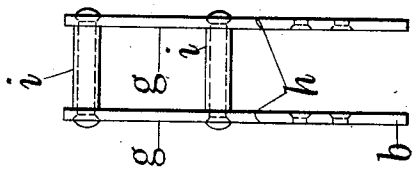


Fig.4

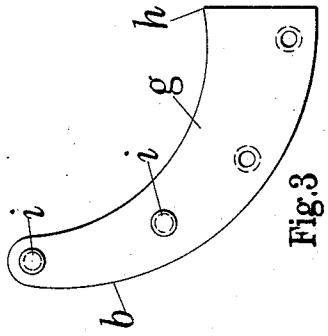


Fig.3

Fig.1

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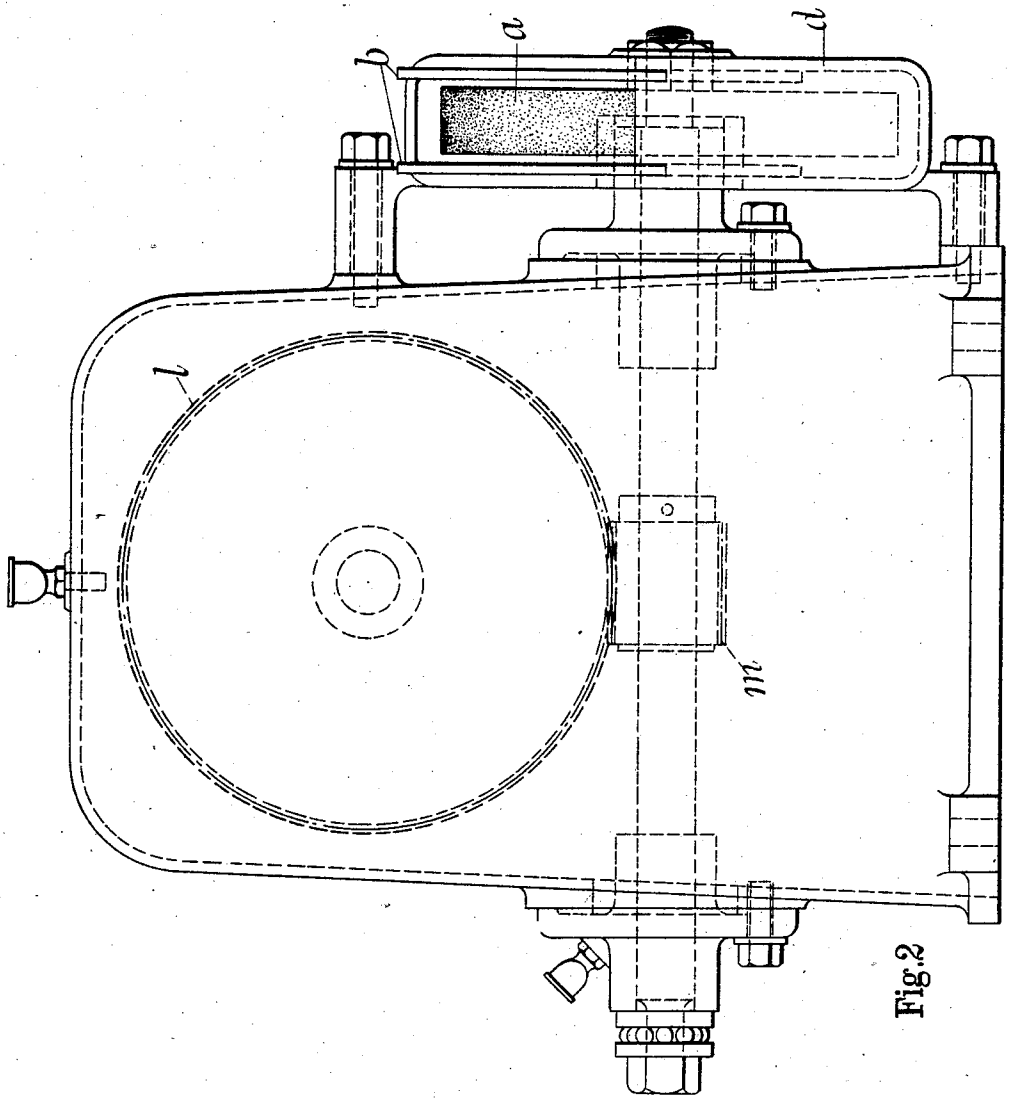


Fig.2

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Patented June 21, 1927. 1,633,085

UNITED STATES PATENT OFFICE.

RICHARD FORSHAW, OF WEASTE, NEAR MANCHESTER, ENGLAND.

KNIFE-SHARPENING MACHINE.

Application filed December 19, 1923, Serial No. 681,664, and in Great Britain July 6, 1923.

This invention relates to knife grinding or sharpening machines of the type in which the knife is brought into engagement with a rotating grinding wheel, and has for its object to provide improved means for supporting and guiding the knife blade during the grinding operation and for removing any burr or roughness from the blade due to the action of the grinding wheel.

Referring to the two accompanying sheets of explanatory drawings:—

Figure 1 is an end elevation and Figure 2 a side elevation of a knife sharpening machine constructed in accordance with this invention.

Figures 3 and 4 are respectively side and end elevations of the detachable guiding and burr removing members of the said machine.

The same reference letters in the different views indicate the same or similar parts.

In accordance with my invention the knife blade to be sharpened is guided with its cutting edge in contact with the grinding wheel *a* of the machine by two detachable guiding and burr removing members as *b*, preferably of hardened steel, disposed at the opposite sides of the said wheel *a*. The said members *b* may be curved or straight but are preferably of the curved shape shown and when attached in position on the machine they provide, in association with the correspondingly curved portion *c* of the grinding wheel casing *d*, a slot *e* enabling the knife blade (which is represented by the dotted line *f* at Figure 1) to be brought into contact with the grinding wheel periphery throughout the effective life of such wheel *a*, notwithstanding the decrease in the diameter of the latter due to wear.

The sides or portions *g* of the aforesaid members *b* against which the knife blade is pressed by the operator, in moving the blade backwards and forwards across the grinding wheel *a*, may be fluted or roughened but preferably the said portions are made to a bevelled or like shape to provide sharp edges as *h* (Figure 4) for effecting the removal of the burr when the knife blade, on the backward or withdrawing stroke, is drawn against the said edges.

The said guiding and burr removing members *b* are inter-connected by cross stays as *i* and are attached in position on the machine by bolts as *j*.

A single guiding and burr removing member *b* may be employed instead of a pair of such members and said member or members may be adjustable.

The grinding wheel *a* is rotated by the handle *k*, the motion of which is speeded up by skew or like gear wheels as *l*, *m*, but the invention is not limited to any particular means for rotating the wheel *a* nor to any particular form or arrangement of the casing or other ordinary parts or elements of the machine.

I claim:—

In knife sharpening machines, the combination comprising a single grinding wheel, an enclosing casing for said wheel having a gap exposing a portion of the wheel sides and periphery, and a pair of burr removing members detachably fixed to the said casing adjacent the said exposed portion of the wheel and forming in association with the casing a receptacle and guide directing the knife blade into grinding contact with the periphery of the wheel notwithstanding the reducing diameter of the latter due to wear.

In testimony whereof I have signed my name to this specification.

RICHARD FORSHAW.