

(No Model.)

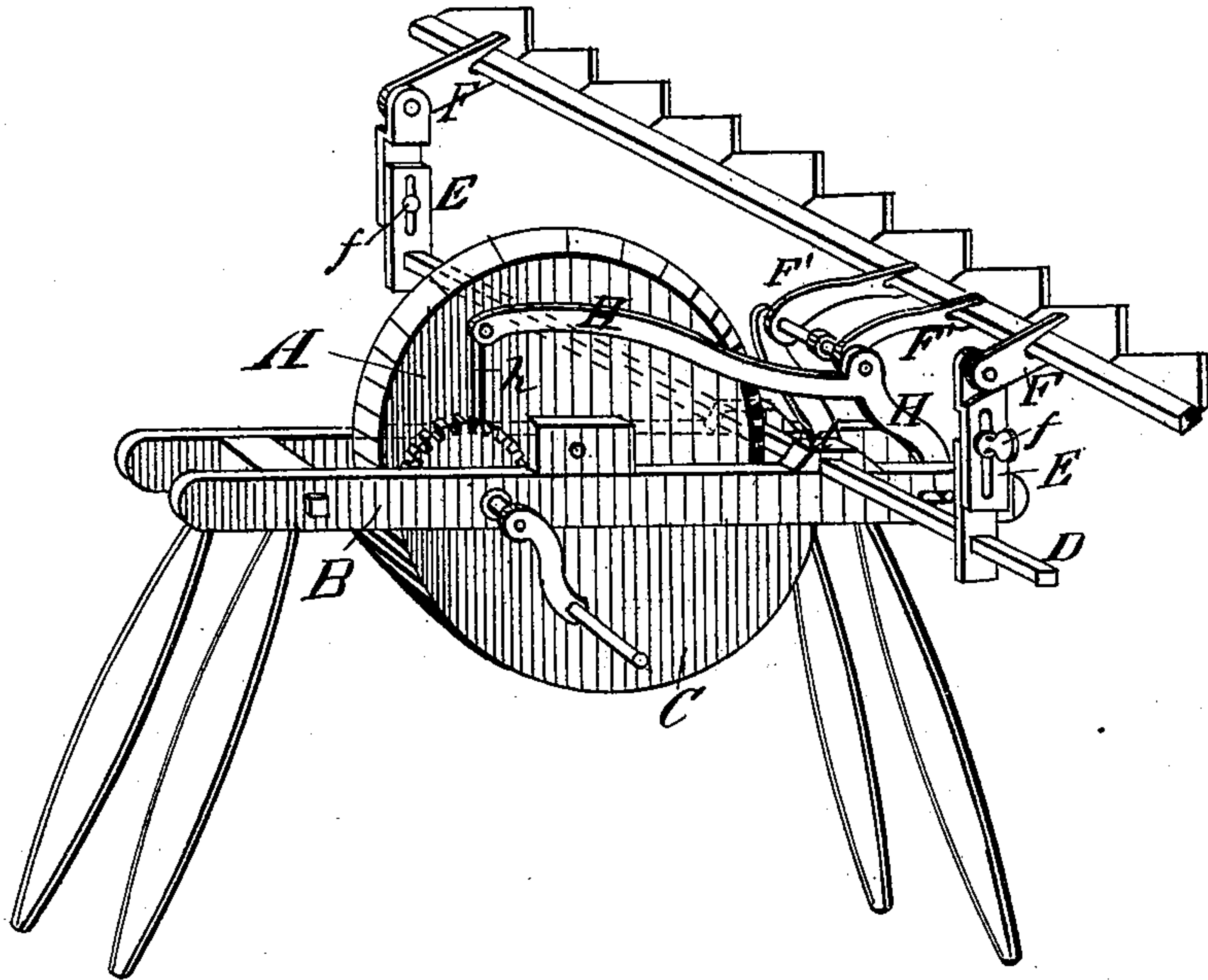
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MACHINE FOR SHARPENING THE KNIVES OF REAPERS AND MOWERS.

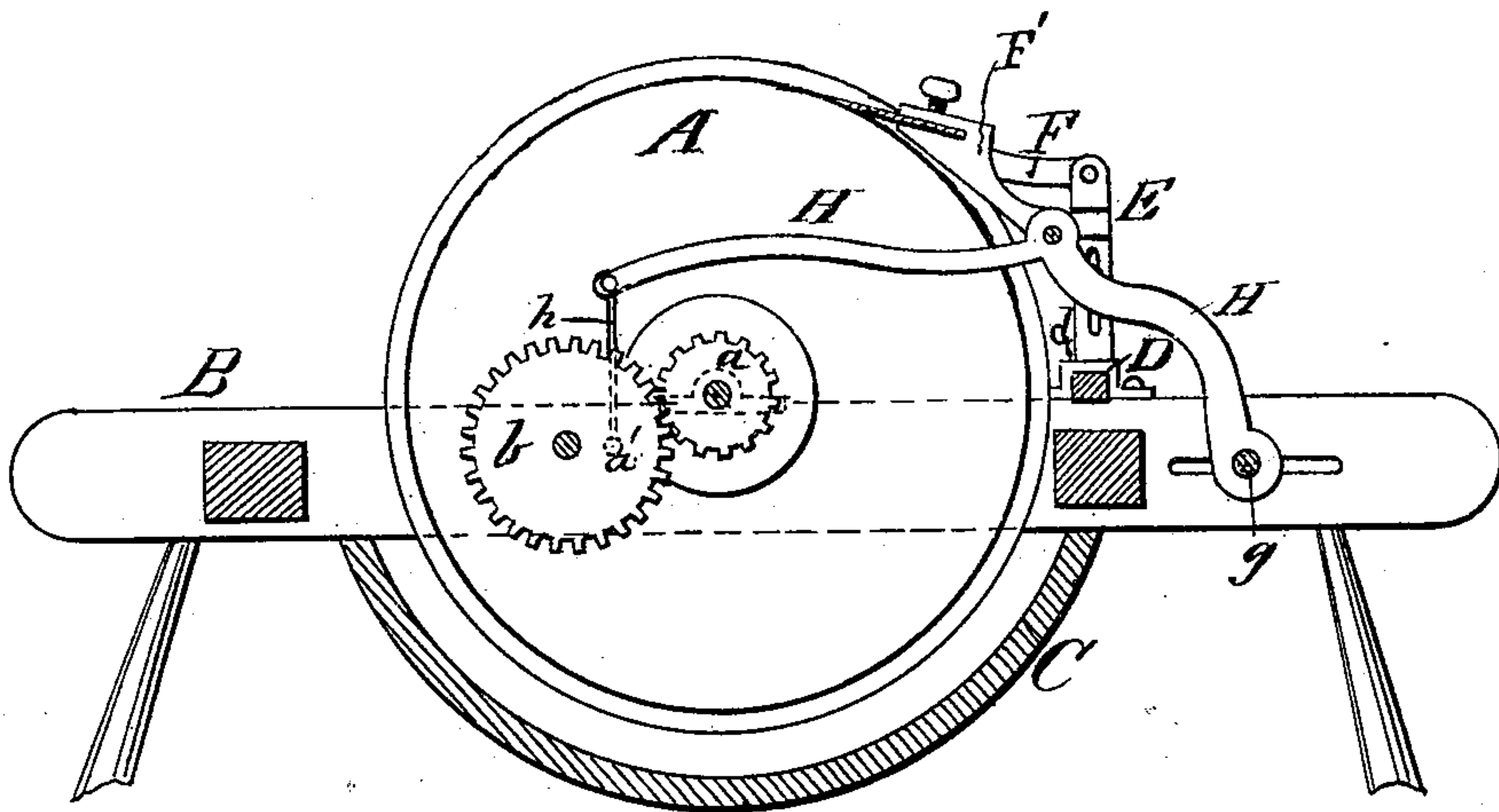
No. 270,858.

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*fig 1.*



*fig 2.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

PETER STRAITH, TORONTO, ONTARIO, CANADA.

MACHINE FOR SHARPENING THE KNIVES OF REAPERS AND MOWERS.

SPECIFICATION forming part of Letters Patent No. 270,858, dated January 16, 1883.

Application filed September 22, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, PETER STRAITH, of Toronto, in the Province of Ontario and Dominion of Canada, have invented a new and Improved Machine for Sharpening the Knives of Reapers and Mowers, of which the following is a full, clear, and exact description.

My invention consists in an improved machine for sharpening the knives of reaping and mowing machines, in which the cutter-bar is held by an adjustable frame constructed so that the bar can be turned back from the stone, and provided with devices whereby the cutters are given an oscillating movement upon the stone, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved sharpening-machine. Fig. 2 is a sectional side elevation, showing the knives in position for being sharpened.

A is the grindstone, having its edges beveled in V form, supported by an axle upon a suitable frame, B, which is provided with a water-box, C, beneath the stone. On the axle of the stone is a pinion, *a*, with which meshes the driving-pinion *b*, which is fitted for operation by a handle, to give rotation to the grindstone. At one end of the frame B is a bar or plate, D, fitted in boxes *d*, so that it may slide transversely on the frame B. At the ends of the bar D are standards E, provided at their upper ends with pivoted notched holders F for receiving the cutter-bar. The standards E are made in two portions, attached together by clamping-screws *f* passing through slots, so that the height of the standards can be adjusted, and the cutter-bar thus raised or lowered at either end, as may be required.

H is a lever, pivoted at one end by a bolt, *g*, that passes through a slot in the end of the frame B, so as to allow adjustment of the lever. This lever extends upward and forward, and at its outer end is connected by a pitman, *h*, to a crank-pin, *a'*, on the driving-pinion *b*. Upon the lever H are pivoted two notched knife-holders, F', in which the cutter-bar will be held by thumb-screws. The cutter-bar is to be fastened to the holders F F' in the position as shown in Fig. 1, and the holders, being

pivoted, can then be turned forward to bring the cutter-sections upon the beveled faces of the stone. By the endwise movement of the bar D either section can be brought in contact with the stone. As the stone is revolved the connection of the lever H to the driving-pinion *b* has the effect to rock the lever H on its pivot *g*, thereby causing a sliding and oscillating movement of the cutters upon the stone. The teeth of the pinions are proportioned so that the knife will not reverse its movement upon the stone in one place more than once, thereby insuring an even wear upon the stone. The cutter is sharpened at its point, or at its heel, or over the whole length of its cutting-edge, according to the adjustment of the lever H at its connection to the frame B. When the pivot *g* is moved outward it has the effect to bring the point of the cutter to bear upon the stone, while by a reverse movement the pressure will be at the heel of the cutter.

This machine is simple in construction, can be readily operated, and is durable in all its parts. The work of sharpening the cutters can be readily and rapidly carried out, the adjoining sides of two sections being operated upon at once.

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

1. The combination, with the frame B, provided with the boxes *d*, and sliding bar D, of the slotted adjustable standards E, formed in pairs secured together by the clamping-screws *f*, the pivoted notched holders F, and the stone A, substantially as described, and for the purpose set forth.

2. The combination, with the stone A, pinions *a b*, and slotted frame B, of the transverse adjustable bar D, adjustable standards E, notched pivoted holders F, lever H, and holders F' F', pivoted thereto, and pitman *h*, connecting the forward end of the lever H with the crank-pin *a*, substantially as shown and described.

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