Howlett & Sherman,

Grindstone Gearing.

No. 83,064. Fig: 1 Patented Oct. 13, 1868.

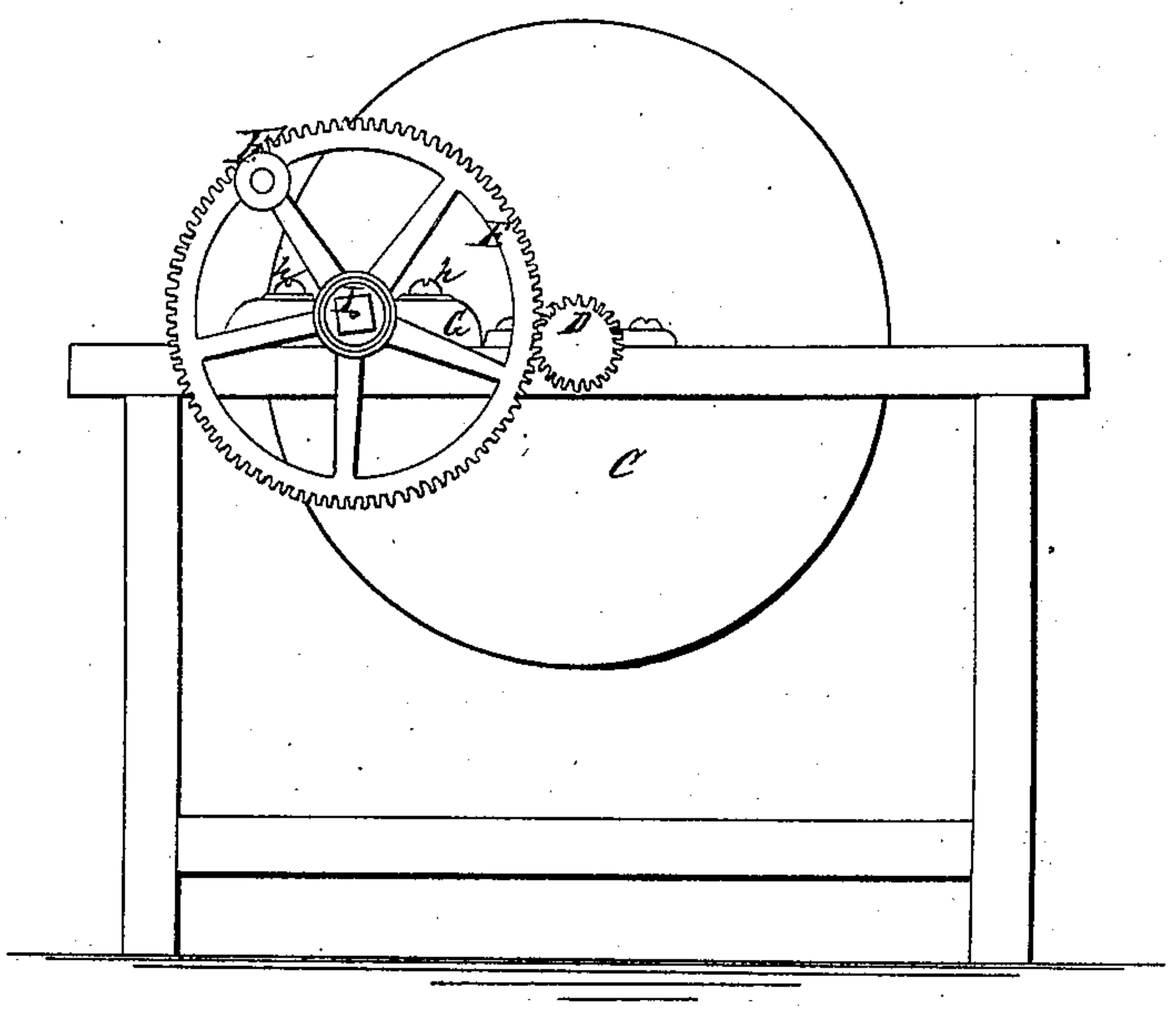

Fig: 2.

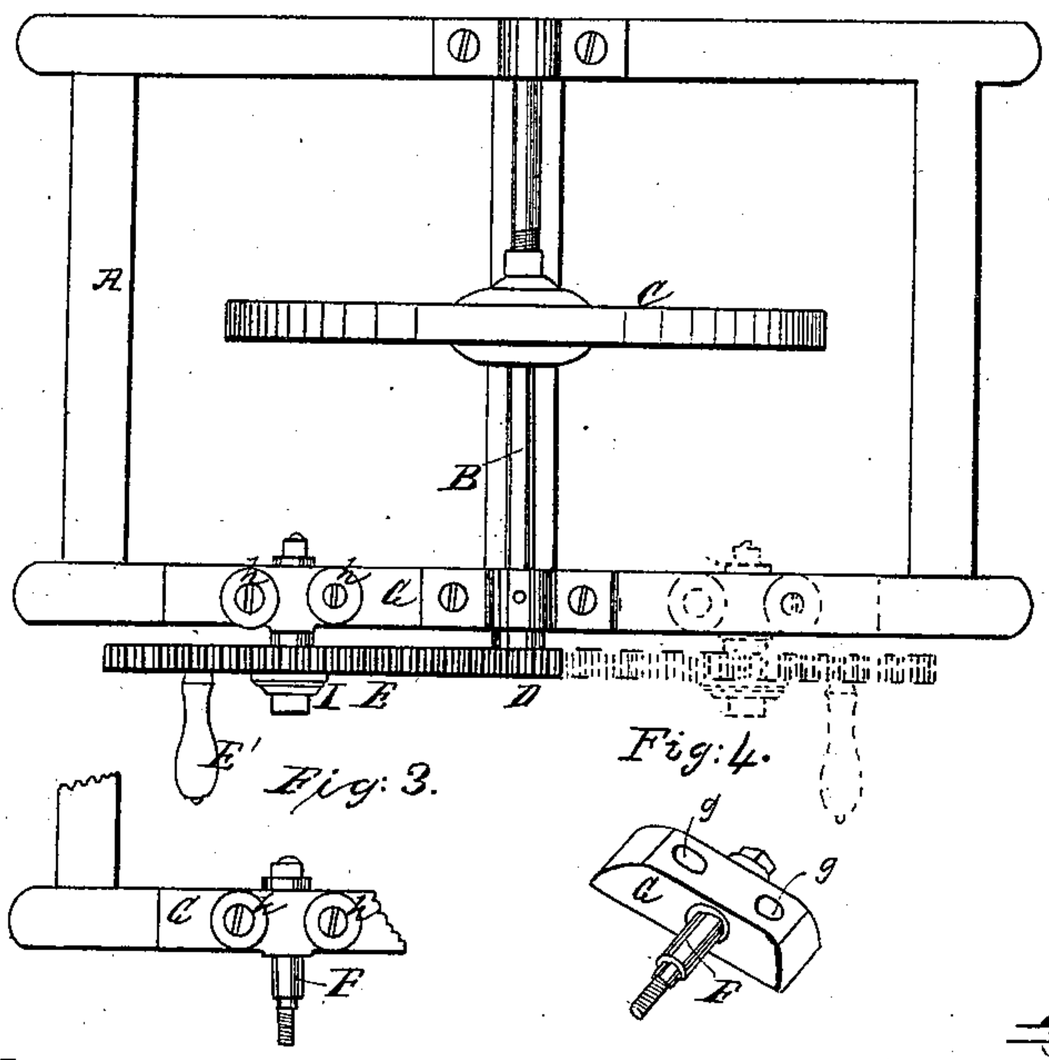

Fig: 3.

Fig: 4.

Witnesses:

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FRANCIS HOWLETT, OF WEST RUPERT, VERMONT, AND CHARLES R. SHERMAN, OF SALEM, NEW YORK.

Letters Patent No. 83,064, *dated October* 13, 1868.

IMPROVED GEARING FOR GRINDSTONES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that we, FRANCIS HOWLETT, of West Rupert, in the county of Bennington, and State of Vermont, and CHARLES R. SHERMAN, of Salem, in the county of Washington, and State of New York, have invented a new and useful Improvement in Gearing for Grindstones; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, and in which—

Figure 1 is a side elevation of a grindstone embodying our invention.

Figure 2 is a plan of the same.

Figure 3 is a detached plan view of the bearing for the shaft of the main cog-wheel by which the grindstone is turned.

Figure 4 is a detached perspective view of said bearing.

Similar letters of reference indicate corresponding parts in the several figures.

It is a common expedient to employ a large cog-wheel, with a handle attached, for the purpose of imparting the desired velocity to the grindstone; said wheel being made to communicate motion to the grindstone through the medium of a pinion keyed upon the arbor.

Our invention consists in means for adjusting said cog-wheel and pinion, to compensate for the wear consequent to the use to which grindstones are subjected.

For this purpose we mount the cog-wheel upon a shaft which is secured to a block having slots, whereby the block, shaft, and cog-wheel may be brought nearer to or farther from the pinion, as will be found necessary.

In the drawings, A may represent a substantial frame upon which is mounted the arbor B, whereby the grindstone C is supported and rotated. D is a pinion keyed upon one end of the arbor B, which latter is confined in suitable bearings on the frame A. E is a large speed-multiplying cog-wheel, whose teeth engage those of the pinion D. E′ represents a handle attached to the rim of wheel E.

The wheel E is fitted to turn upon a short shaft, F, (see figs. 3 and 4,) which is permanently fixed in the block G. This block G is secured upon the side-piece of frame A, in sufficient proximity with the arbor to cause the wheels D and E to engage each other.

The block G has in it oblong apertures *g g* for the screws *h h*, whereby said block is secured upon the frame, and these apertures enable the block G, together with the wheel E, to be set up or adjusted towards the pinion D, to compensate for wear. The wheel E is held upon the shaft F by the nut I.

It will be observed that the fixing of the shaft F in the block G precludes the necessity of any preparation of the frame A, at either side of the pinion D, to receive said block and shaft, save, perhaps, the boring of holes for the screws *h h*. Hence the wheel E and block G can be transferred from one side of the pinion D to the other with the greatest facility. The red lines in fig. 2 denote the position of the wheel and block when transferred.

The common method is to secure the shaft F to the frame A by means of brasses requiring the partial formation of the bearing in the frame A. Our method of applying the shaft is manifestly different from and superior to that commonly employed.

Having thus described our invention,

What we claim as new herein, and desire to secure by Letters Patent, is—

The slotted adjustable block G, carrying the wheel E and adapting it for adjustment with the pinion D, substantially as and for the purpose described.

FRANCIS HOWLETT.
CHARLES R. SHERMAN.

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