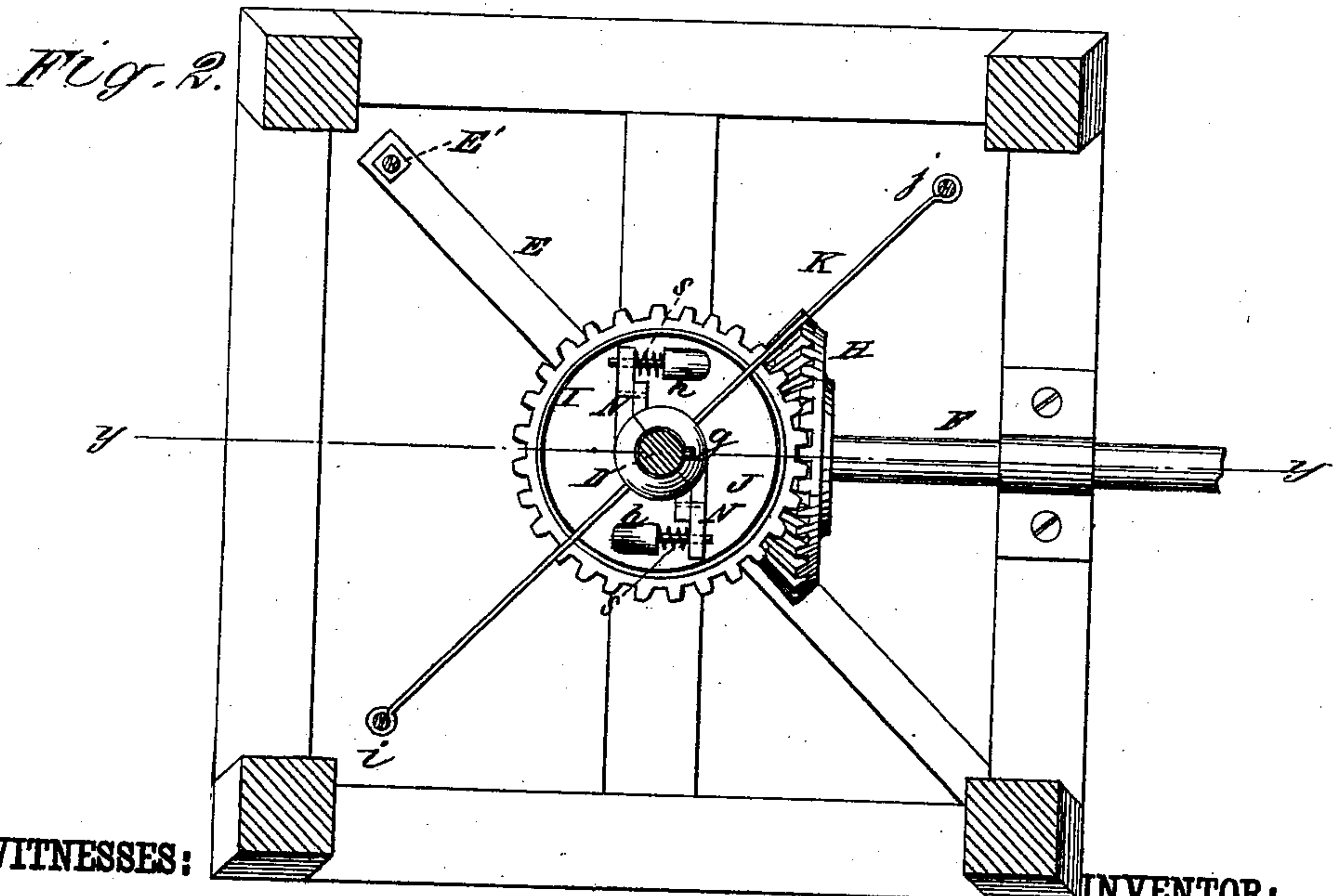
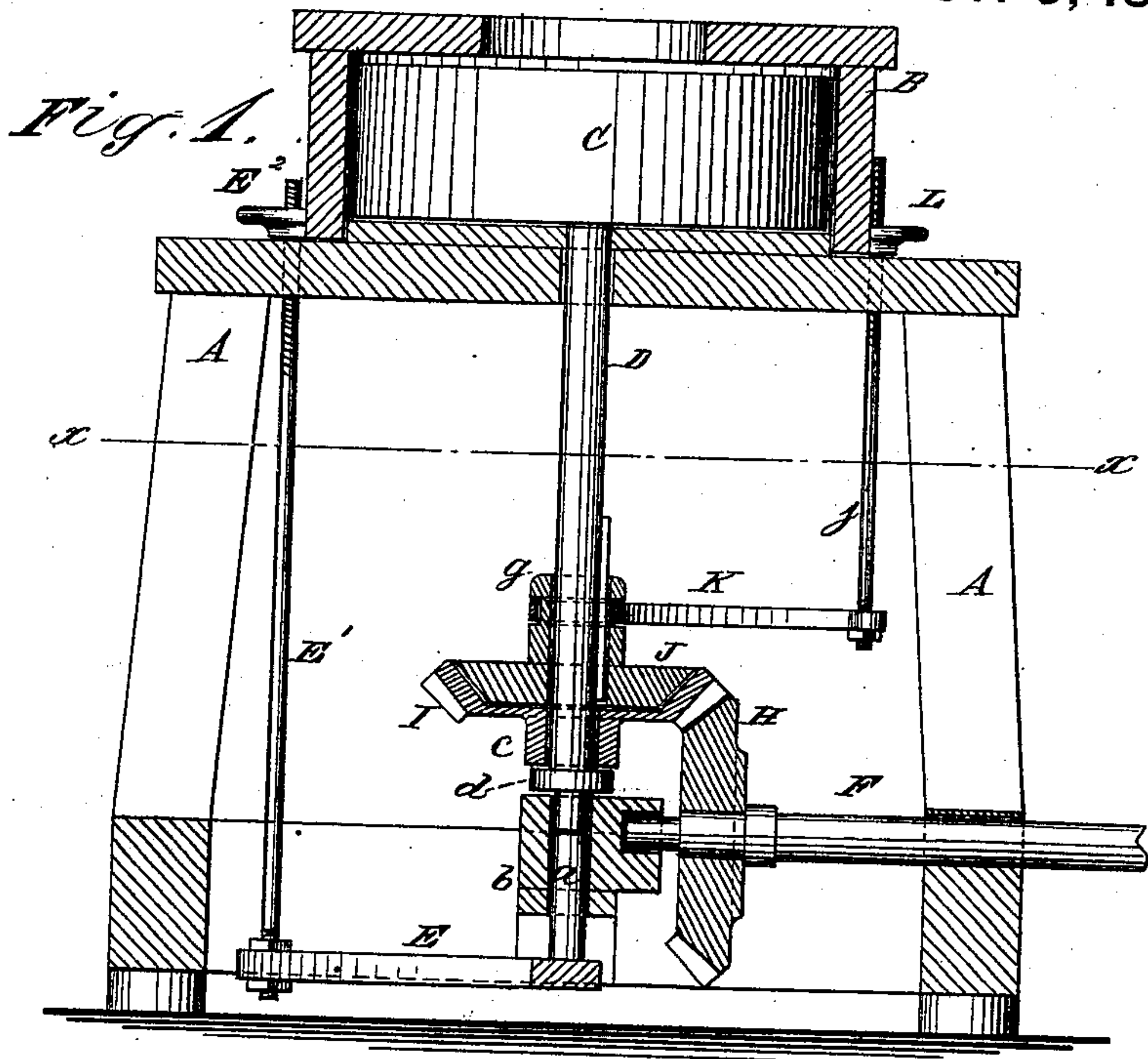


G. W. SCHREURS
Mill Gearing.

No. 196,835.

Patented Nov. 6, 1877.



WITNESSES:

H. Rydquist
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INVENTOR:

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ATTORNEYS.

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UNITED STATES PATENT OFFICE.

GARRETT W. SCHREURS, OF MUSCATINE, IOWA.

IMPROVEMENT IN MILL-GEARING.

Specification forming part of Letters Patent No. **196,835**, dated November 6, 1877; application filed September 10, 1877.

To all whom it may concern:

Be it known that I, GARRETT W. SCHREURS, of Muscatine, county of Muscatine, and State of Iowa, have invented a new and Improved Mill-Gearing, of which the following is a specification:

This invention relates to millstone-gearing; and my object is to step and gear the spindle of the runner-stone in such manner that its motion can be instantly stopped at pleasure in the event of an accident, or for any cause it is desired to stop it, as will be understood from the following description.

In the annexed drawings, Figure 1 is a section taken vertically through the improved machine, in the plane indicated by dotted line on Fig. 2. Fig. 2 is a horizontal section taken in the plane indicated by dotted line, Fig. 1.

Similar letters of reference indicate corresponding parts.

The letter A designates the frame of the mill; B, the curb; C, the runner-stone, and D the spindle thereof. This spindle D is stepped upon a short bearing, *a*, in a journal-box, *b*, which bearing is vertically adjustable by means of a lighter lever, E, a vertical rod, E¹, and a hand-wheel, E². By these means the running stone is raised and depressed.

F designates the driving-shaft, on which is keyed a bevel-spur wheel, H, that engages with the teeth of a similar wheel, I, applied loosely on the spindle D. The hub *c* of the wheel I bears upon a collar, *d*, fixed to the spindle D when said wheel is in gear with the driving-wheel H. The wheel I has a concavity in its upper side, which has a beveled wall, as shown in Fig. 1.

J designates a beveled friction-wheel, which has a hub, *g*, formed on its upper side, also

lugs *h h*, that bear helical springs *s s*, held in place by studs fixed to said lugs.

The wheel J is applied on its spindle by means of a feather and groove, so that it can be moved vertically, whether it is being rotated or at rest. The upper part of the hub *g* of wheel J has an annular groove in it embraced by a band that is formed on a lever, K. One end of this lever K is adjustably applied to the lower end of a rod, *i*, and the other end of the lever is attached to a rod, *j*, which is adjustable vertically by means of a hand-wheel, L. I am, by these means, able to adjust the beveled friction-wheel J with relation to the spur-wheel I.

Fixed to the hub of the friction-wheel J are two driving-arms, N N, the outer ends of which are perforated to receive, loosely, the ends of studs on which are the helical springs *s s*. These springs *s s* afford elastic cushions between the driving-arms N N and the beveled friction-wheel. It is obvious that by adjusting the lever K, the beveled wheel or circular wedge J can be disengaged from the spur-wheel I, so that this wheel will no longer turn the spindle D.

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

In combination with the driving-wheel H and a wheel, I, which turns loosely on its spindle D, the vertically-adjustable friction-wheel J, drivers N N, springs *s s*, lever K and its adjusting devices, substantially in the manner and for the purposes described.

GARRETT W. SCHREURS.

Witnesses:

R. M. BAKER,
THOS. COLLINS.