

(No Model.)

J. A. McALLISTER.

BUSHING FOR MILLSTONE SPINDLES.

No. 290,904.

Patented Dec. 25, 1883.

Fig. 1.

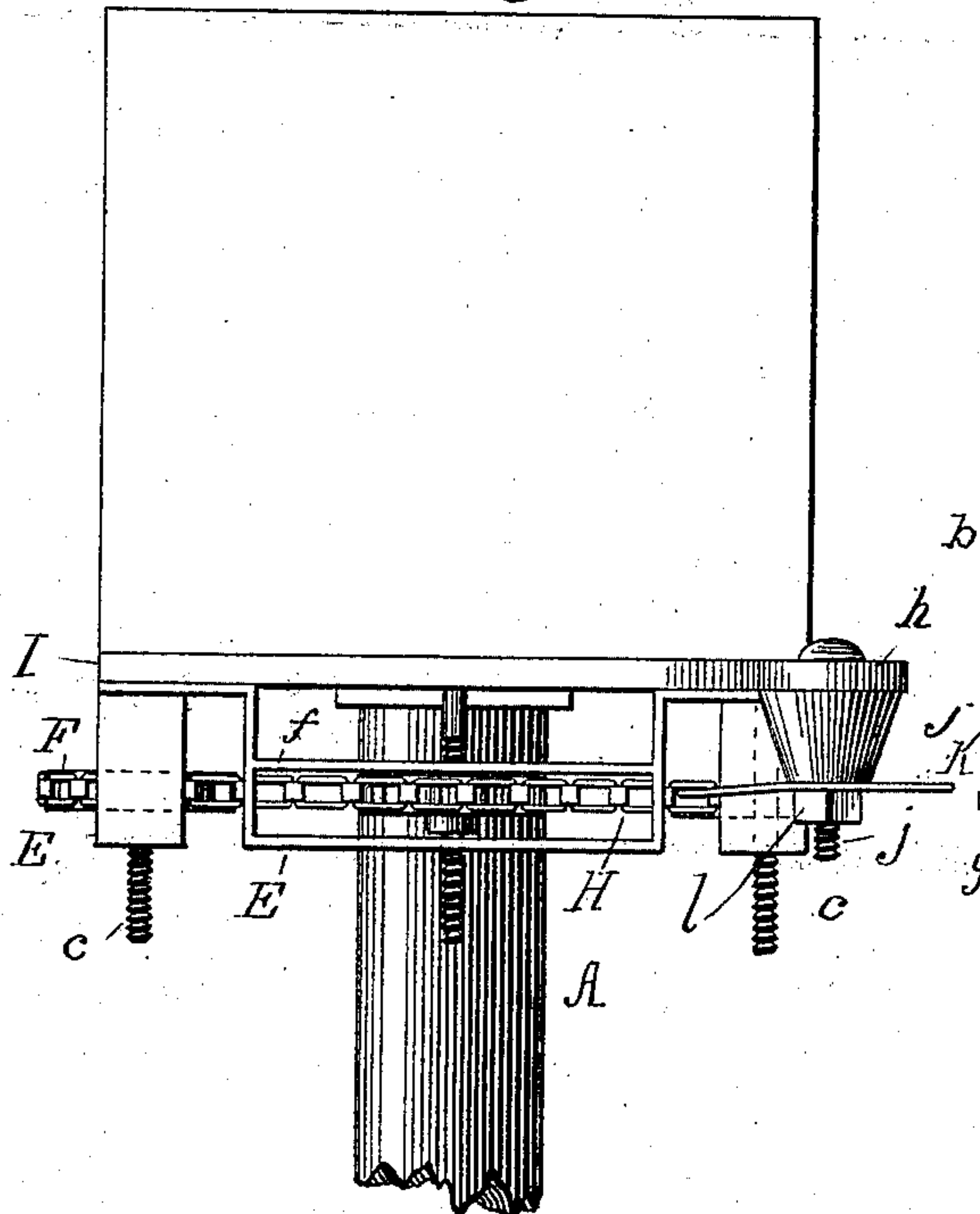


Fig. 2.

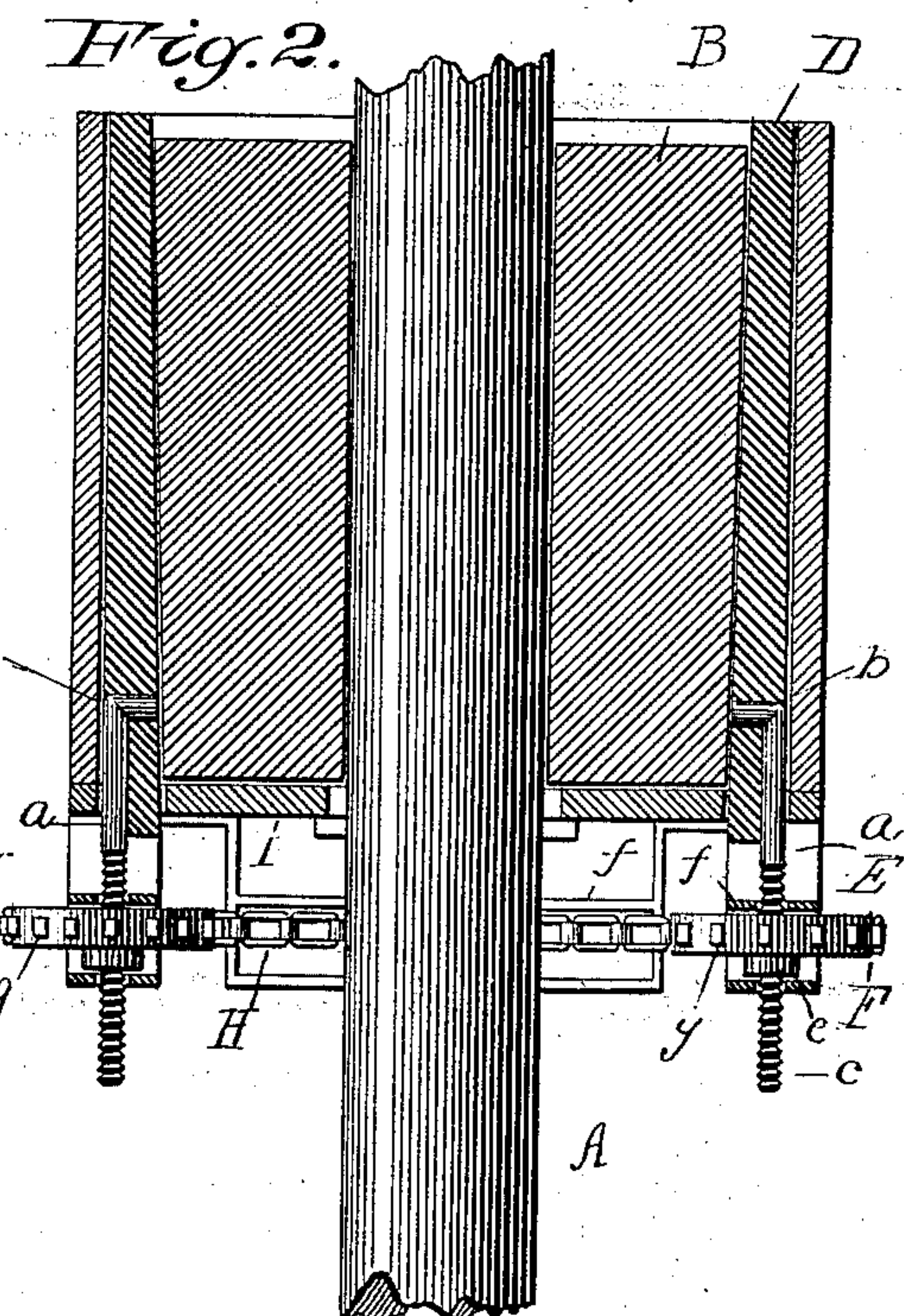
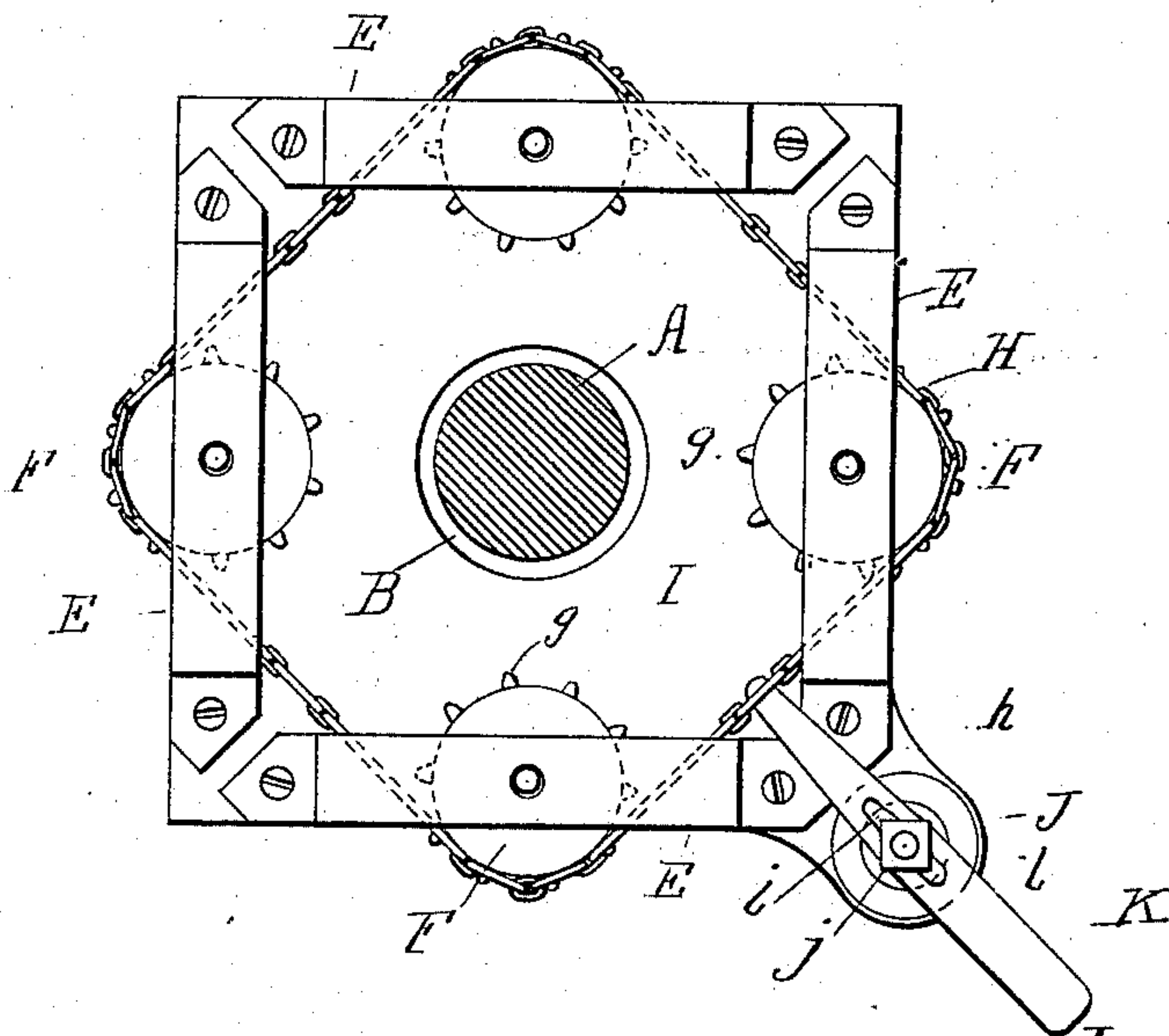


Fig. 3.



Witnesses.

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JAMES A. McALLISTER, OF SHELBYVILLE, ILLINOIS.

BUSHING FOR MILLSTONE-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 290,904, dated December 25, 1883.

Application filed April 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. McALLISTER, of Shelbyville, in the county of Shelby and State of Illinois, have invented a new and useful Bushing for Millstone-Spindles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

My invention relates to bushings for millstone-spindles; and it consists in the improved combinations of devices, hereinafter described and claimed, whereby a positive bearing for the spindle is secured, and the adjustment of the bushing, to either tighten or loosen the same, is readily effected.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a portion of a millstone-spindle and bushing therefor constructed in accordance with my invention or having my improvements embodied therein. Fig. 2 is a vertical section of the same, and Fig. 3 is an inverted plan.

The spindle A rests in the bushing B, between which and the casing, at each of the four sides thereof, is located a key-section, D, which is tapered from its bottom to its top, to exert a wedge-like action upon the bushing when moved vertically upward. Rods *a*, having heads *b*, bent to engage perforations in the lower portions of the keys, are threaded at their lower extremities, and depend through perforations in brackets E, secured to the under side of a plate, I, clamped to the under side of the bushing and case. Sprocket-wheels F have internally-threaded hubs *e*, through which pass the threaded ends *c* of the rods *a*. The bars *f* of the brackets E are perforated for the passage of the rods *a*, but are located above the sprocket-wheels F, to prevent any vertical movement of said sprocket-wheels upon the rods *a*. The studs *g* of the sprocket-wheels F engage a sprocket-chain, H, which passes around all four of the sprocket-wheels F, as clearly seen in Fig. 3. The plate I, at one of its corners, has an extension or ear, *h*, Figs. 1 and 3, perforated to receive the journal of a depending cone, J, against the lower face of which is fulcrumed

a lever, K, the said lever being provided with a slot, *i*, Fig. 3, through which passes the threaded extremity *j*, of the journal, and with which threaded extremity *j* of the journal engages a nut, *l*. The cone J permits the lever K to be swung in an arc of a circle upon the journal. By placing the forward end of the lever K within one of the links of the sprocket-chain H, and by swinging said lever upon its pivotal bearing, a limited movement of the sprocket-chain H is secured, and the consequent limited rotation of each of the sprocket-wheels F effected. The rotation of the sprocket-wheels F in either direction causes the ascending or descending movement of the rod *a*, and consequent elevation or descent of the keys D. The ascent of the keys D causes said keys to wedge themselves rigidly between the bushing B and the case C, thus affording a firm and positive bearing for the spindle A. The descent of the keys D results in the withdrawal of the wedging action of the same.

It will thus be seen that by employing a construction like that herein described a tightening and loosening adjustment of the bushing-boxes for mill-spindles can be quickly and easily effected with the expenditure of a minimum amount of power.

I claim—

1. The combination, with the bushing-box for mill-spindles and the bushing, of keys interposed between each side of the casing and bushing, having threaded depending rods, nuts through which said rods pass, depending brackets having supporting-bars, said nuts being located between said bars, and devices for effecting the rotation of the nuts, substantially as and for the purpose set forth.

2. The combination, with the bushing-box for mill-spindles, of the bushing, wedge-shaped keys having threaded depending rods, perforated brackets at each side of and below the bushing, sprocket-wheels having threaded portions through which said threaded rods pass, a sprocket-chain gearing with said sprocket-wheels, and devices for effecting the rotation of the chain, substantially as set forth.

3. The combination, with a bushing-box
for mill-spindles, of the bushing, keys hav-
ing rods *a*, secured to and depending there-
from, brackets E, having cross-plates, plate
5 I, sprocket-wheels F, located between the
cross-plates of the brackets, a sprocket-chain,
H, the cross-plates and sprocket-wheels being
perforated for the passage of the rods *a*, and

a lever fulcrumed as described, and adapted
to move the chain H, substantially as and for the
purpose set forth.

JAS. A. McALLISTER.

In presence of—

L. HIGGINBOTTOM,

W. W. HETT.