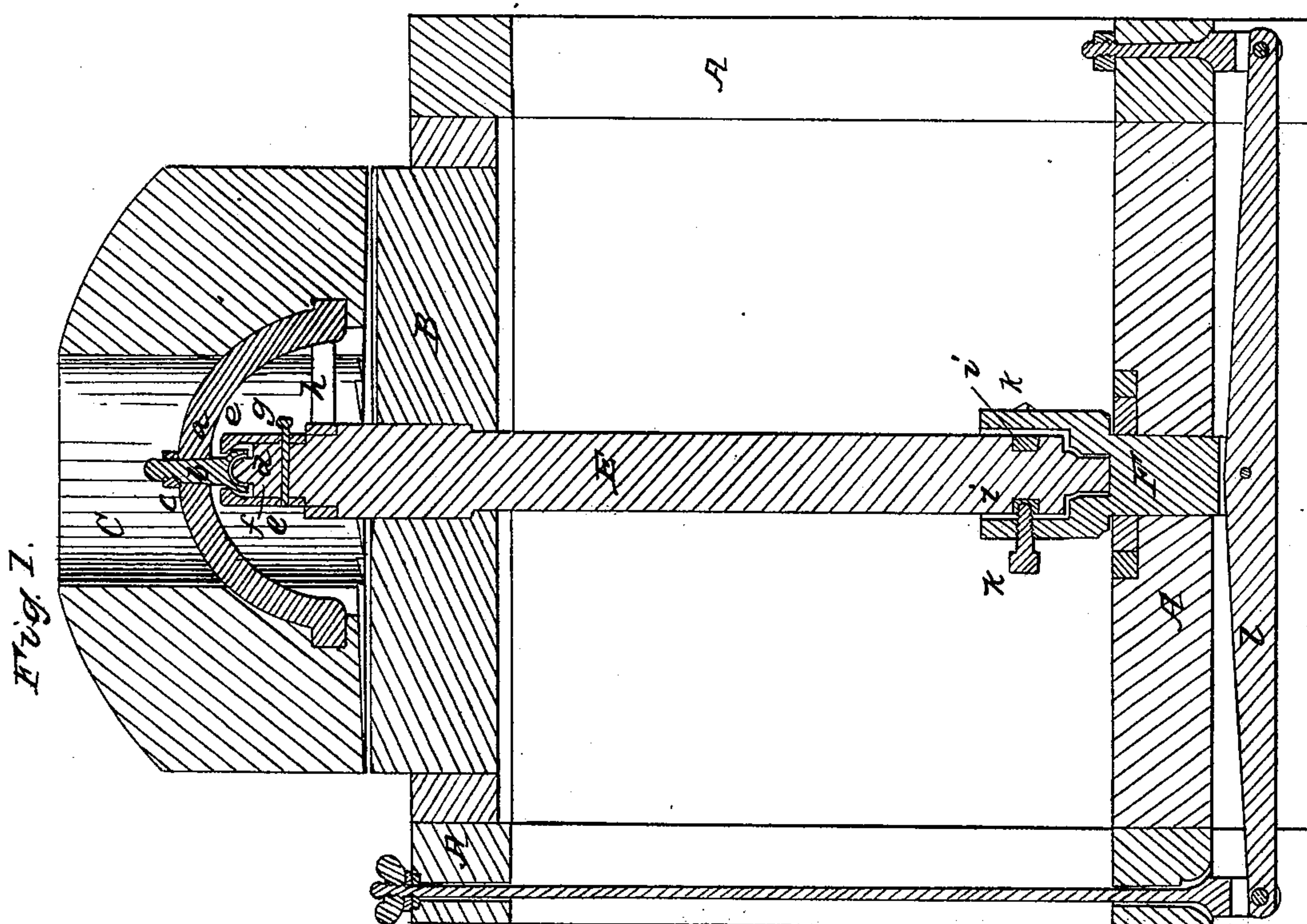
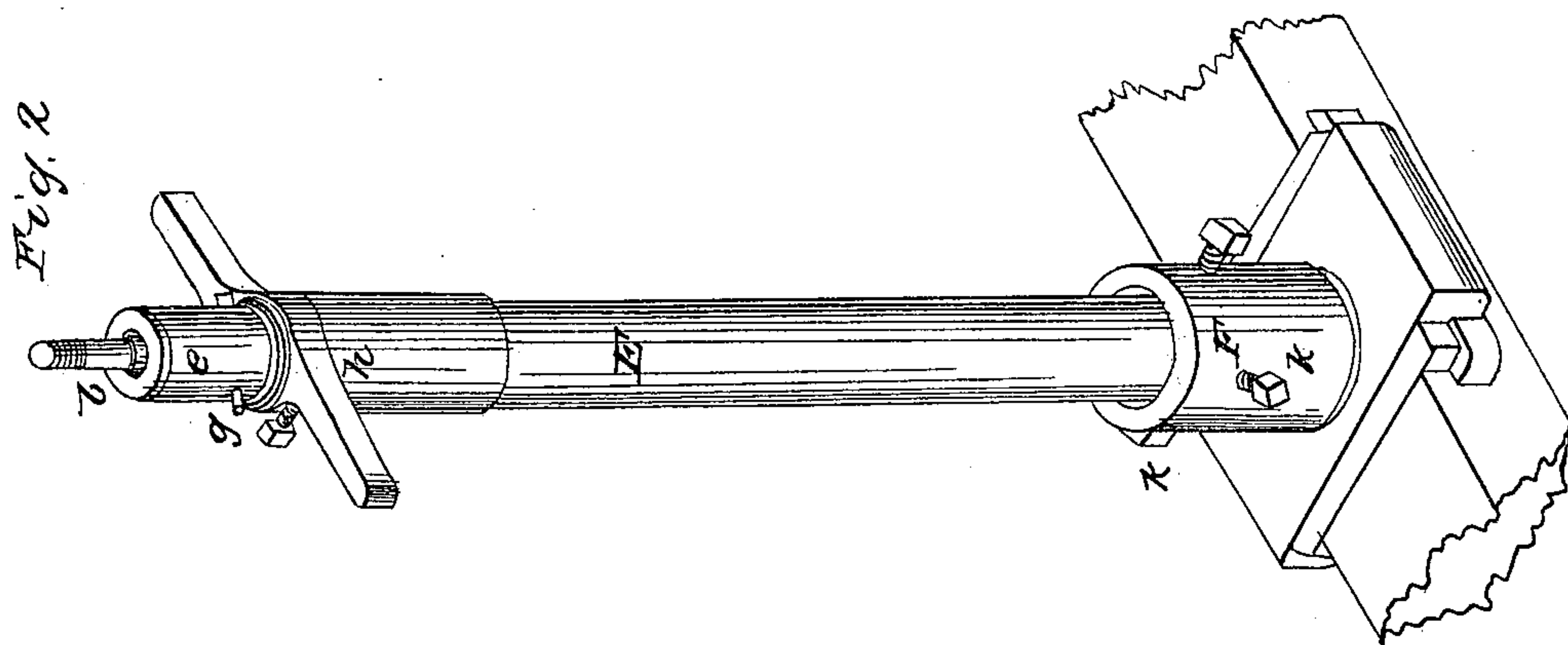


W. H. NARACON.

## Mill Spindle.

No. 9,033.

Patented, June 15, 1852.





# UNITED STATES PATENT OFFICE.

WILLIAM H. NARACON, OF AUBURN, NEW YORK.

## HANGING MILL-SPINDLE.

Specification of Letters Patent No. 9,033, dated June 15, 1852.

*To all whom it may concern:*

Be it known that I, WILLIAM H. NARACON, of Auburn, in the county of Cayuga and State of New York, have invented a new and useful Improvement in Mill-Spindles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a vertical section, through the center, of a pair of millstones, and my improved spindle; and Fig. 2, a view in perspective of the spindle detached.

Like letters refer to like parts in both figures.

The nature of my invention consists in the use of linked sockets *b* and *e*, for holding the upper stone upon the pivot of the spindle, and of an adjustable collar-bush *i*, for holding the spindle to its step; constructed substantially as hereinafter set forth.

A is a frame, in which the stones are set.

B is the stationary lower (or bed) stone. C, the runner; and E, the spindle, passing through the lower stone B.

*a*, is a bail, by which the stone is poised.

*b*, is an inverted cup, or socket, whose shank passes up through the center of the bail *a*, and is firmly held therein by the nut *c*. Said cup, or socket, rests immediately upon the pivot *d*, on the upper end of the spindle E. The runner should be accurately balanced thereon.

*e*, is an inverted socket, which receives the shank of the socket *b*, through an aperture in its bottom, and fits over the shoulder *f*, of the spindle, being held firmly thereon by the pin *g*, or any suitable contrivance. The socket *b*, vibrates freely in the socket *e*, but cannot be drawn lengthwise through it in the least. By this arrangement the stone poises freely upon the pivot *d*, but cannot

be raised in the least without raising the spindle at the same time.

*h*, is a cross bar or driver which couples the runner to the spindle.

In order that the spindle may not be lifted from its bearing, I make use of a collar *i*, fitting closely around a neck on the lower part of the spindle. Said collar receives, into sockets in its outer surface, the adjusting screws *k*, *k*, *k*, &c., which hold it firmly to the step F, so that the spindle can not be raised or lowered only when the step is raised and lowered by the lever *l*, as desired. At the same time said collar forms an adjustable bush which allows the spindle to revolve freely.

With my improved spindle constructed and arranged as above described, the upper, runner, stone may be made very light, and consequently less power will be required to drive it; and a quick or varying speed may be given it. At the same time it is equally effective for grinding—my improved arrangement for keeping the stone down, being superior to any weight of stone however great.

What I claim as my invention and desire to secure by Letters Patent, is—

The combination of the bail or balance rine *a*, (of the usual shape,) with the cock-eye *d*, of the spindle, by means of the inverted bearing cup *b*, whose shank passes up through and is made fast in the center of the said bail, and whose head is enclosed in the inverted socket *e*, which rises above and is made fast to the top of the spindle, substantially as herein set forth.

The above specification of my improvement in mill-spindles signed by me this 13th day of January 1852.

W. H. NARACON.

Witnesses:

Z. C. ROBBINS,

J. S. BROWN.