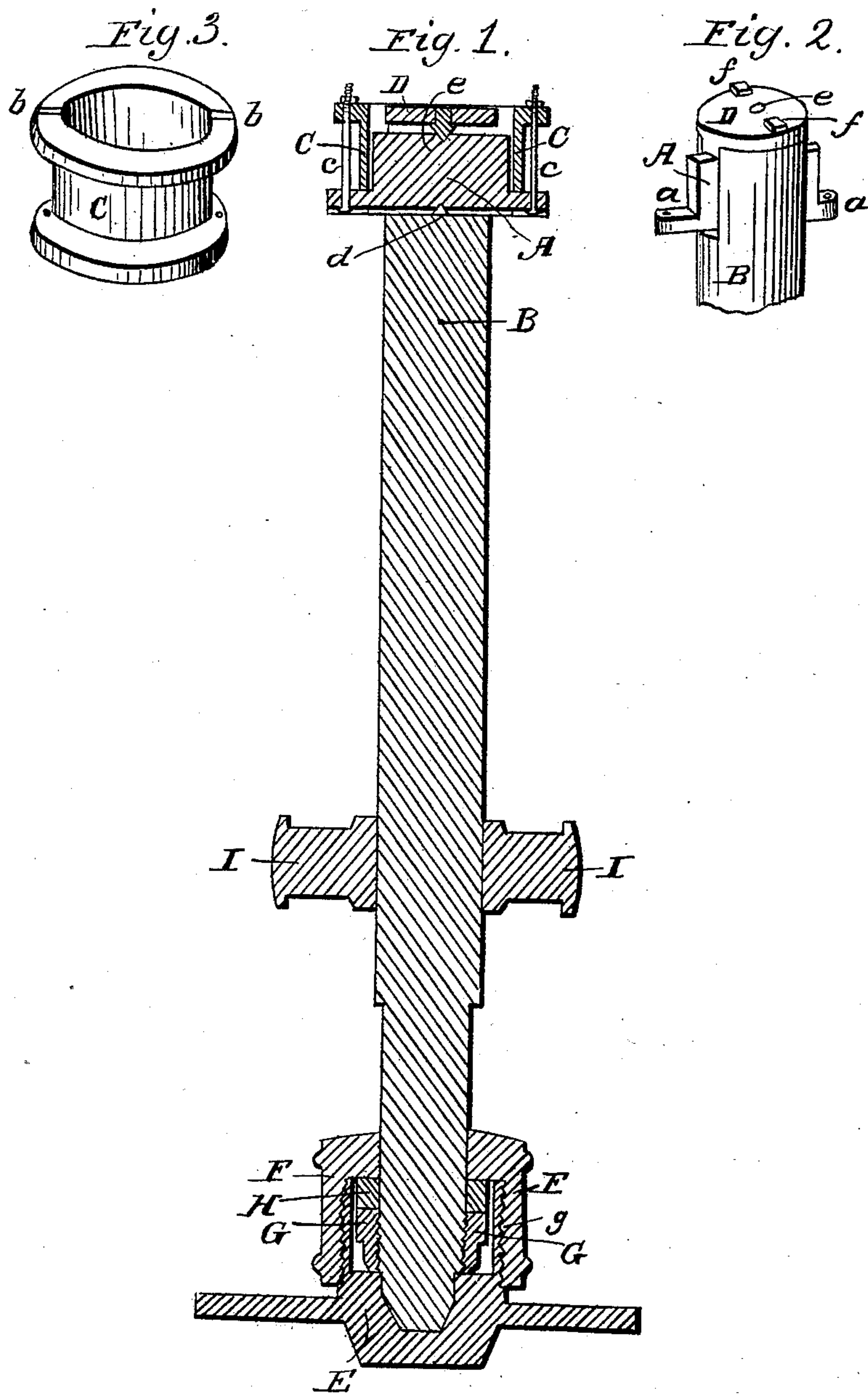


J. C. GENTRY.

Mill Spindle.

No. 1,340.

Patented Sept. 25, 1839.



UNITED STATES PATENT OFFICE.

JOSEPH C. GENTRY, OF DAYTON, OHIO.

MILL-SPINDLE.

Specification of Letters Patent No. 1,340, dated September 25, 1839.

To all whom it may concern:

Be it known that I, JOSEPH C. GENTRY, of Dayton, in the county of Montgomery and State of Ohio, have invented certain improvements in the manner of constructing the spindles of that kind of grist-mill usually denominated the "portable grist-mill," the stones of which are ordinarily from about twenty inches to two feet in diameter; and I do hereby declare that the following is a full and exact description of my said improvements.

My first improvement is in the manner of constructing the driver, or balance rine, by means of which the upper, or running, stone is balanced and driven; and my second improvement consists in the manner of confining the lower end of the spindle to the bridge tree, and of constructing its step and oil box, so as to keep it constantly lubricated, and effectually to check the rising of the running stone.

In the accompanying drawing, Figure 1, is a section through the axis of the spindle and its appendages. Fig. 2, is a perspective view of the upper end of the spindle, with the driver and other parts connected therewith; and Fig. 3, is a metallic collar, or eye, which the manufacturer fastens into the stone at the time of making it.

The balance rine, or driver, is to be bolted into notches made in this collar, in a manner to be presently described. The eye, or collar, is represented in the drawing, Fig. 3, in an inverted position, the notches in it which receive the ends of the driver, being shown on its upper side. A, Figs. 1, and 2, is the balance rine, or driver, which is a flat piece of metal occupying a space formed by making a notch adapted to it in the upper end of the spindle B, as shown distinctly in Fig. 2; said notch allowing a small degree of play, laterally as well as longitudinally, for the proper balancing of the stone. *a, a*, are two projecting ends, or horns, of the driver, which enter two notches, *b, b*, in the eye, or collar C, Fig. 3, made to receive them, and secured there by means of the bolts *c, c*, which pass through holes in the ends of the driver, and in the upper rim, or flanch, of the collar.

The driver is sustained between two steel points, or centers, *d*, and *e*, the center *d* being fixed firmly in the spindle, and the center *e*,

playing loosely in the cap D; which cap is an iron plate screwed on to the upper end of the spindle by screws, *f, f*; the hole in the middle of the cap D, which receives the shank of the center *e*, is made tapering, being wider at the bottom than at the top, thus allowing to it a lateral motion in all directions, sufficient for the vibration of the stone, while it will prevent the tilting of the stone to any considerable distance when the spindle and stone are raised up.

The lower end of the spindle is sustained upon a bridge tree, which is to be raised and lowered by a screw, in the ordinary manner.

E, is a step of metal which is to be securely bolted on to the bridge tree, its upper part *g, g*, forming an oil cup within which the lower end of the spindle revolves.

F, F, is a cap which is screwed, or otherwise securely fastened, on to the step E, as it is to constitute the entire check to the rising of the runner.

G, G, is a steel nut which screws on to the spindle; and H, a washer, or collar, which is passed on to the spindle when the nut is removed for that purpose; said nut, when returned to its place, constituting a projecting shoulder beneath the washer.

Through the upper part of the cap F, there is a hole through which the oil, with which the cup is to be kept filled, is supplied.

I, I, is a whirl upon the spindle, by which motion may be communicated to it.

Having thus fully described the manner in which I construct my improved mill spindle, what I claim therein as of my invention, and desire to secure by Letters Patent, is—

1. The placing the driver, or balance rine, A, within a notch, or opening, in the upper end of the spindle, with its lower edge bearing upon a fixed point *d*, while its upper edge is sustained by the point *e*; which point is free to play, to a small distance, in the cap D, as set forth.

2. I claim, also, the manner of forming the spindle step, and oil box, by means of the screw nut G, the washer H, and the cap F, connected and combined with the step E, and operating, substantially, in the manner described.

JOSEPH C. GENTRY.

Witnesses:

THOS. P. JONES,
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