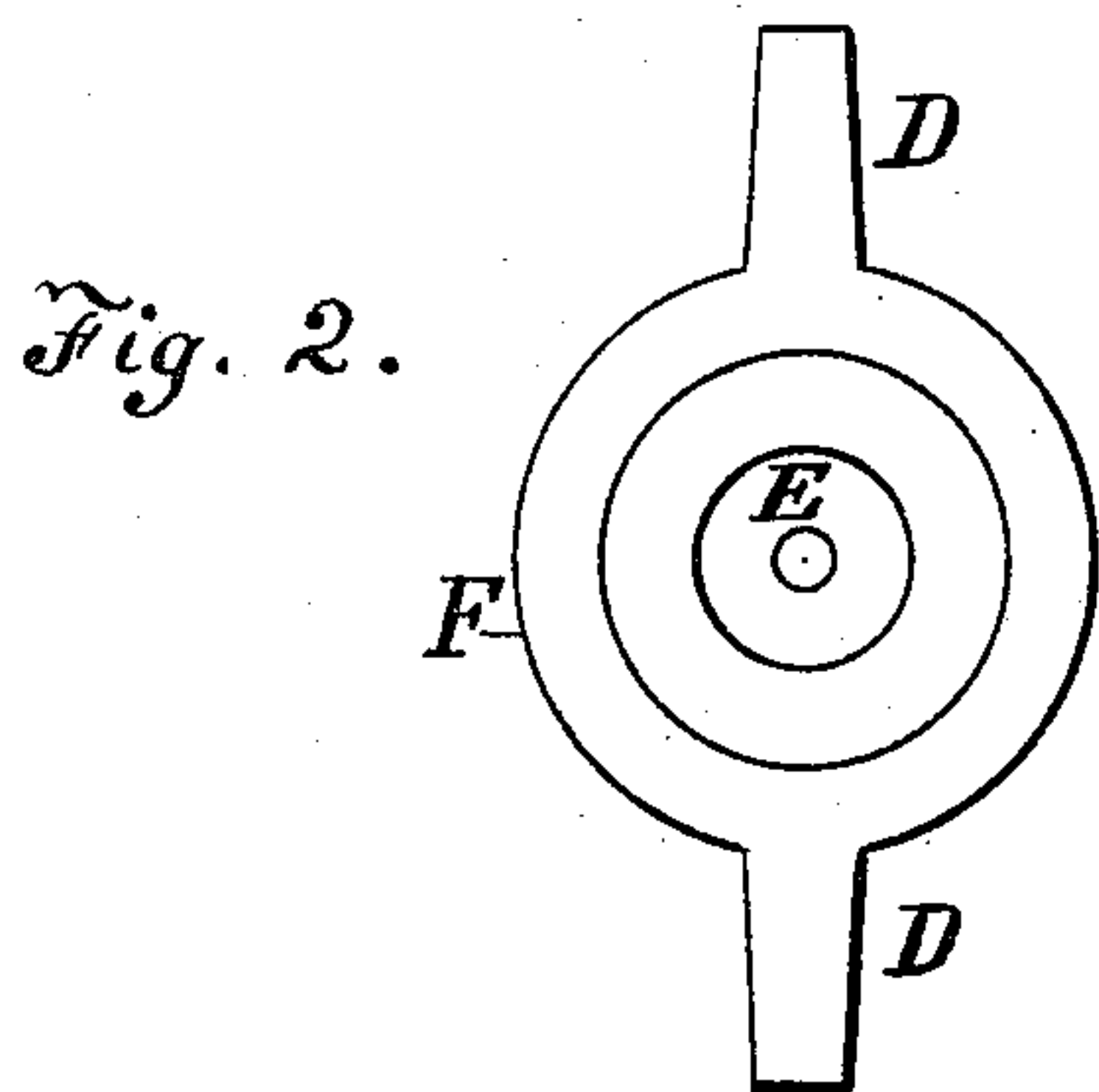
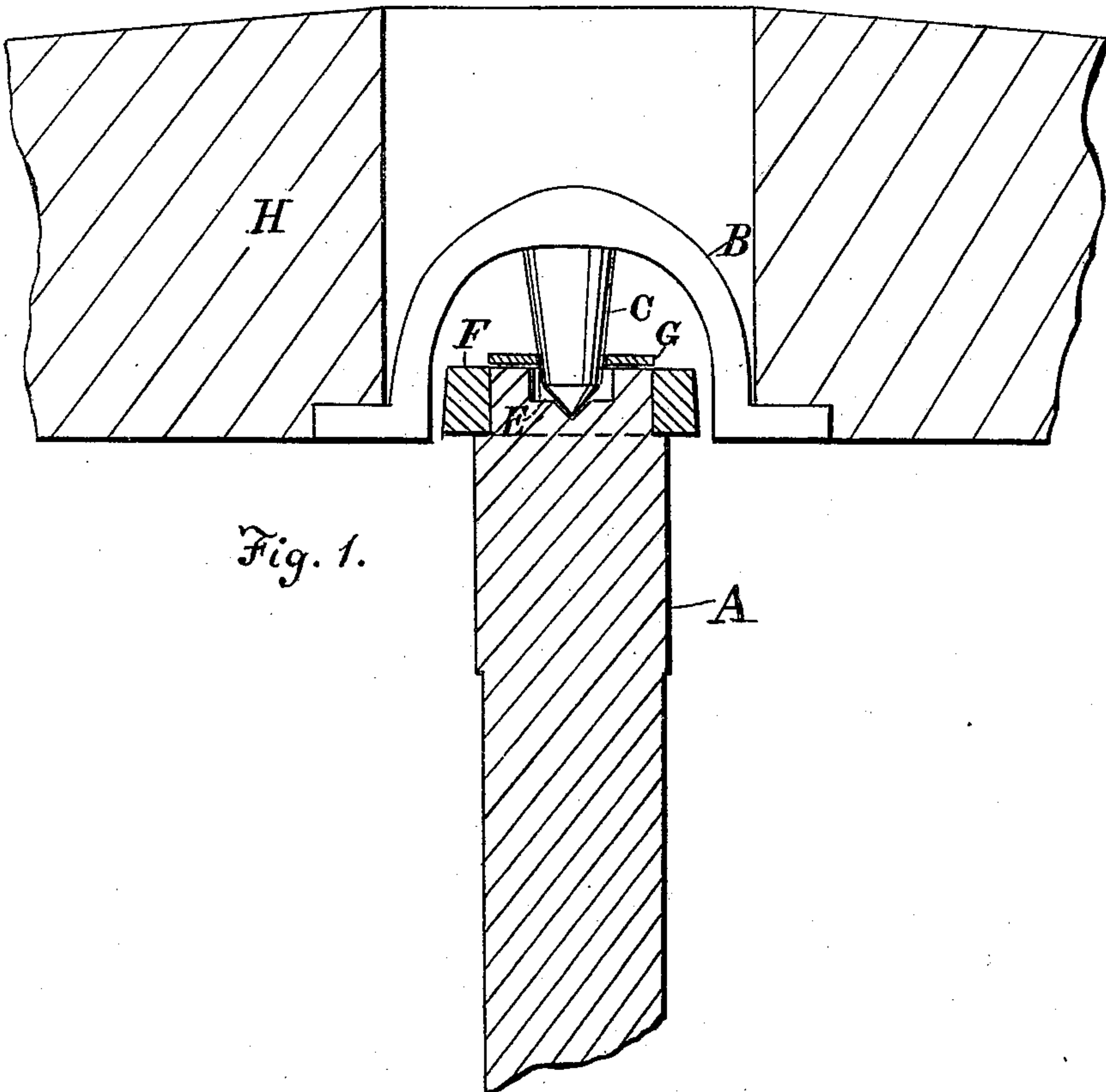


J. M. QUISENBERRY.
Mill-Spindle.

No. 205,504.

Patented July 2, 1878.



Witnesses :
John O'Donnoghue
E. H. Bradford,

Inventor :
J. M. Quisenberry
By H. J. Ennis
his Attorney

UNITED STATES PATENT OFFICE.

JOHN M. QUISENBERRY, OF SALEM, VIRGINIA.

IMPROVEMENT IN MILL-SPINDLES.

Specification forming part of Letters Patent No. **205,504**, dated July 2, 1878; application filed May 23, 1878.

To all whom it may concern:

Be it known that I, JOHN M. QUISENBERRY, of Salem, in the county of Roanoke and State of Virginia, have invented certain new and useful Improvements in Mill-Spindles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has relation to mill-irons for balancing the upper millstone or runner; and consists of a balance-rynd provided with a centrally-depending pivot, in combination with a spindle stepped in the center of its upper end and provided with driving-arms, for the purpose of permitting the upper stone to be properly and evenly balanced and driven above the lower stone, even when the spindle itself is out of the perpendicular, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings, similar letters of reference indicate like parts of the invention.

Figure 1 is a side elevation of my invention, partly in section. Fig. 2 is a top view of the spindle.

In the old method of balancing the upper stone the point of contact between the balance-rynd and the spindle was some distance within the eye of the stone, and whenever the spindle A became moved out of a perpendicular line, from any cause whatever, the upper stone would lose its balance and grind unevenly. To obviate this defect and keep the stone always in tram, I have provided the balance-

rynd B with the depending pivot C, which extends downwardly from the center of the balance-rynd B until it is almost or quite in line with the faces of the driving-arms D D and the grinding-face of the runner H.

I further provide a step or cockeye, E, in the upper end of the spindle A, at its center, and a collar, F, having the usual driving-arms D D.

The point of the pivot C rests in the step E, and a washer, G, may be employed, if desired.

When the upper stone, H, has been properly balanced, and the spindle A is perpendicular, the stone will, of course, run truly, even in the old method; but in this construction of mill-irons, even if the spindle A is several degrees out of perpendicular, the stone will automatically balance properly, and will consequently run evenly, even when one of the driving-arms D comes in contact with the balance-rynd B.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

The driving-spindle A, having the cockeye E and driver F, in combination with the runner-stone H and the balance-rynd B, provided with the centrally-depending balance-pivot C, whereby the suspension and driving points are brought to the line of the lower surface of the runner-stone, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

JOHN M. QUISENBERRY.

Witnesses:

JOHN M. EVANS,
F. H. CHALMERS.