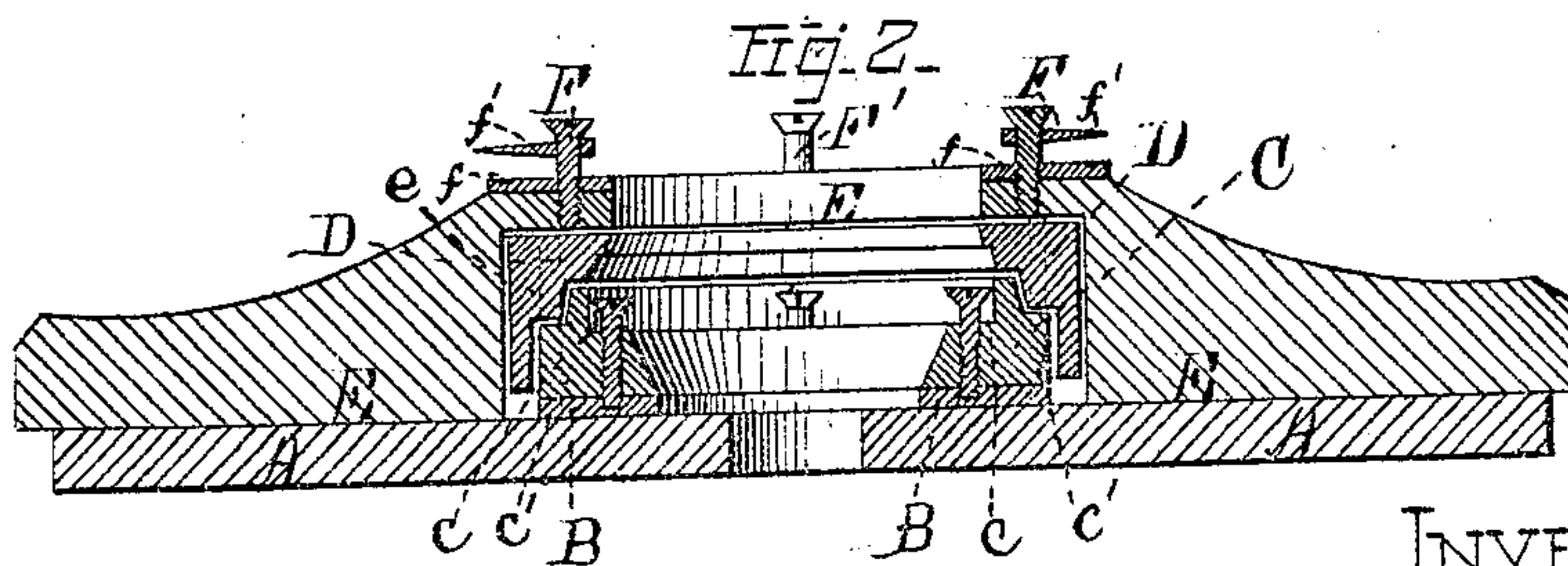
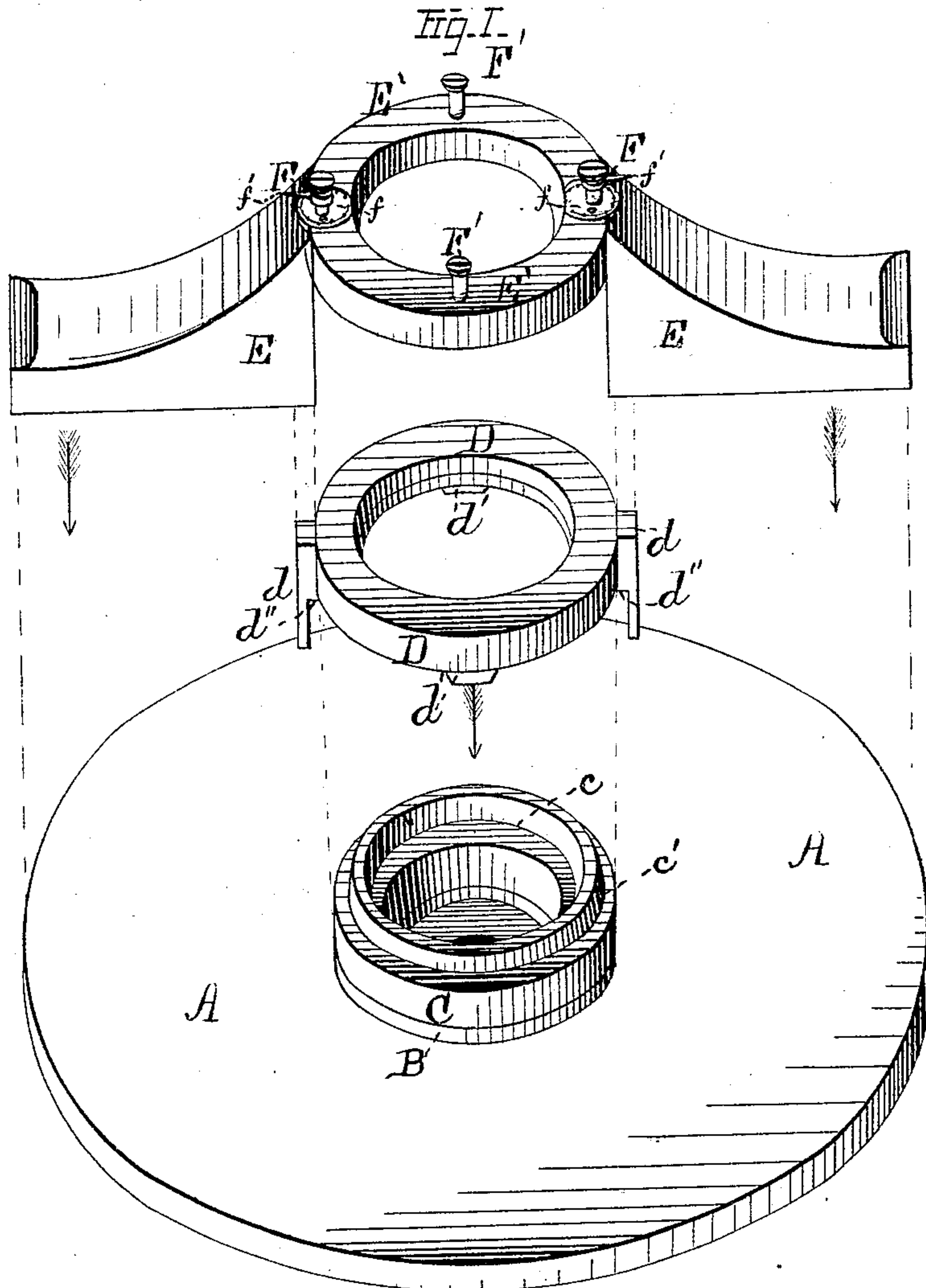


R. LYTLE.

Gage-Staffs for Leveling Mill-Stones.

Patented April 21, 1874.

No. 150,063.



WITNESSES=

Jas. E. Hutchinson
 John R. Young

INVENTOR.

Robert Lytle, by
 Prindle and Seane, his Attys

UNITED STATES PATENT OFFICE.

ROBERT LYTLE, OF INDIANA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
HIS RIGHT TO J. R. SMITH, OF SAME PLACE.

IMPROVEMENT IN GAGE-STAFFS FOR LEVELING MILLSTONES.

Specification forming part of Letters Patent No. **150,063**, dated April 21, 1874; application filed
April 4, 1874.

To all whom it may concern:

Be it known that I, ROBERT LYTLE, of Indiana, in the county of Indiana and in the State of Pennsylvania, have invented certain new and useful Improvements in Apparatus or Guides for Leveling Millstones; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a perspective view of my apparatus, the parts being separated; and Fig. 2 is a central vertical section through the stone, rings, and "red staff."

Letters of like name and kind refer to like parts in each of the figures.

The design or purpose of this invention is to produce a suitable device or appliances whereby the perfect facing of millstones or burrs may be obtained; and to this end it consists in applying and adapting to the eye or central portion of the millstone movable and adjustable rings, whereon the red staff is rested, and upon which it may be moved horizontally over the face of the stone or burr to indicate the roughness or smoothness of the face thereof; and it further consists, in combination with the foregoing elements, of a register or registers placed upon the annulus or ring of the red staff, for the purpose of adjusting said staff with the greatest accuracy to discover any irregularities or inequalities on the face of the said stone, all as hereinafter more clearly and fully set out.

In the annexed drawing, A represents the burr or millstone. B is a thin annulus or ring, fitted to and upon the eye of the stone by a screw or by wedges passing through the same. C is another annulus, the lower face of which is smooth, so as to fit firmly and even upon the upper face of B. These parts may be united securely together by means of screws, which can be passed down through flange *c*, formed by the rabbet on the inner face of the ring C and into the ring B. Thus united they can, of course, be easily detached from each other, when necessary, by simply withdrawing the screws. The rabbet *c'* on the outer and upper edge of this ring C is turned or formed

perfectly true, and constitutes the bearings for and upon which the ring D rests, and over which it moves. This ring does not sit close upon this flange, but is supported upon said rabbet *c'* by means of points *d'* and shoulders *d''* of projections *d*. These points and shoulders are sufficiently numerous on the lower edge of this ring as to form reliable supports for the ring. The projections *d* are placed on opposite sides of the periphery of this ring, and extend outward from the periphery sufficiently far to form guides to move in the vertical slots *e e* on the inner face of arms E E of the red staff. These projections *d* are usually sufficiently long to extend as far down as the lower edge of ring C. Thus embracing the perimeter of this ring they serve to render the motion of the ring D in its revolutions upon ring C very steady and equable.

When the red staff E is placed in position upon ring D by means of the suitable adjustment of the slots, as aforesaid, on the inner face of its arms upon the projections *d*, it may be moved to and fro horizontally over the face of the stone, its central ring E' resting upon, and secured to, ring D, which, now, in its turn, serves as a bearing. This ring E' may rest flat upon the ring D, or it may be adjusted to any desired height above it on one side or all around by means of screws F, which are operated in the register-plates *f*. Each of said plates has degree-marks on the outer edges of its face to indicate, in a measure, the space or distance the register-finger *f'* may travel in the upward or downward movement of the screw, to which it is attached; or it may be adjusted simply by means of screws F', which are placed at convenient points in the annulus of the red staff.

Thus made and constructed the red staff will, in its motions to and fro, or over and upon the stone, be carried on perfectly true rings, and can be easily adjusted to and upon the face thereof, so as to show perfectly the inequalities or irregularities upon the face of such stone or burr which require leveling or dressing, the under side of its arms being smeared or covered with red chalk, or paint, or any suitable marking substance for this purpose, in the usual manner.

I am able by the peculiar construction of this device to so perfectly regulate its operations as to secure almost perfect accuracy of the adjustment of the several parts, and certainty in its operations, and can, by means of it, almost invariably dress the face of the stone true and perfect. This end is of great moment in flour-mills, as it secures the most complete and perfect grinding, of wheat particularly, and prevents all cutting up of the husks of the wheat-kernels, and thus enables the miller to obtain the flour in a more cleanly condition than is now practicable, and almost wholly free from bran and the impurities which come from imperfect grinding.

Having thus fully set forth the nature and merits of my invention, what I claim as new, is—

1. The adjustable staff E E', combined with the rings D and C, and applied to, and used upon, a millstone, in the manner and for the purposes set forth.

2. The combination of rings B, C, and D with staff E E', having an adjusting-register regulated by screws, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of April, 1874.

ROBERT LYTLE.

Witnesses:

R. C. CALHOUN,
FRANK. M. SMITH.