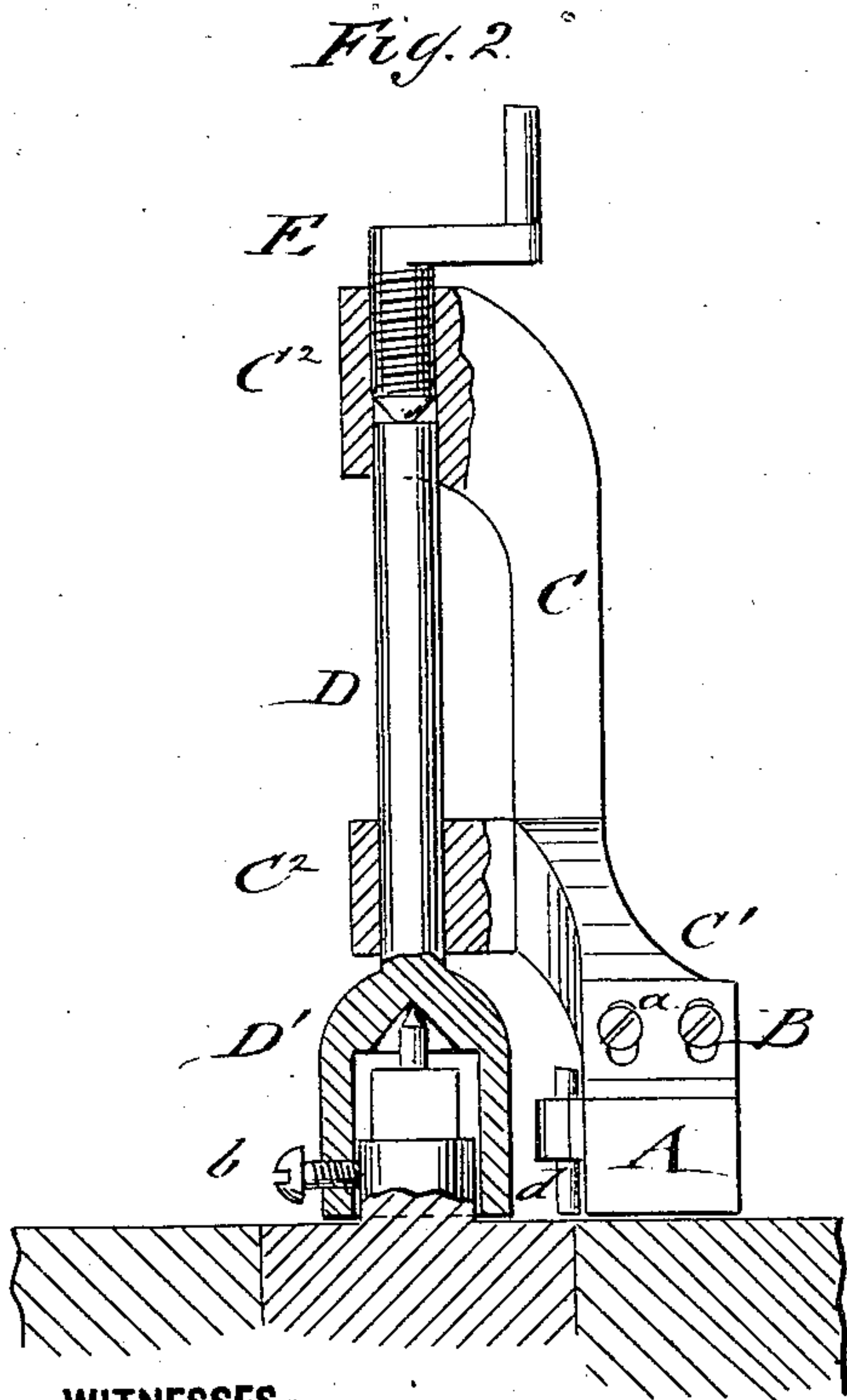
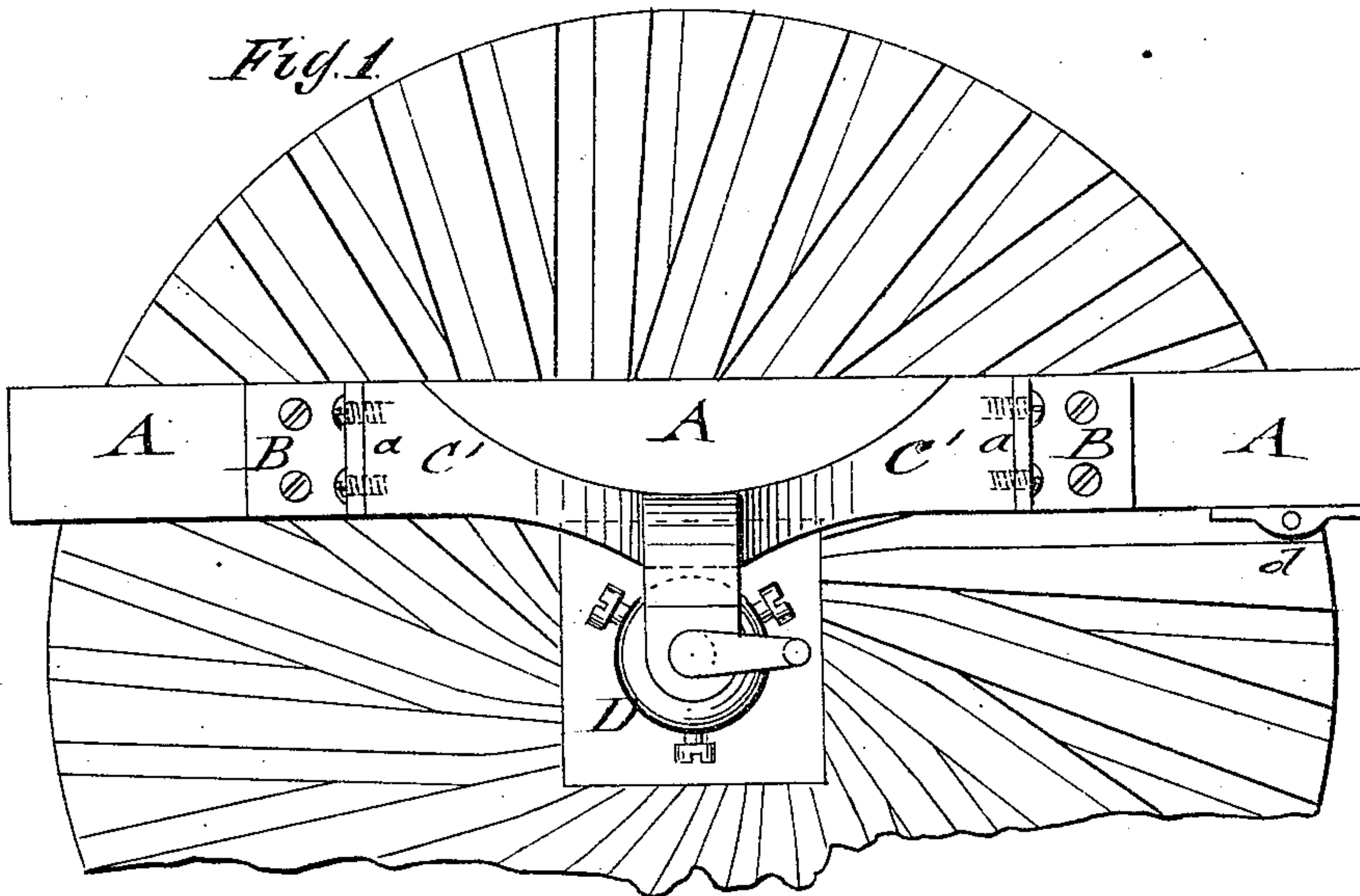


S. B. WILLIAMS.

Tram-Staff.

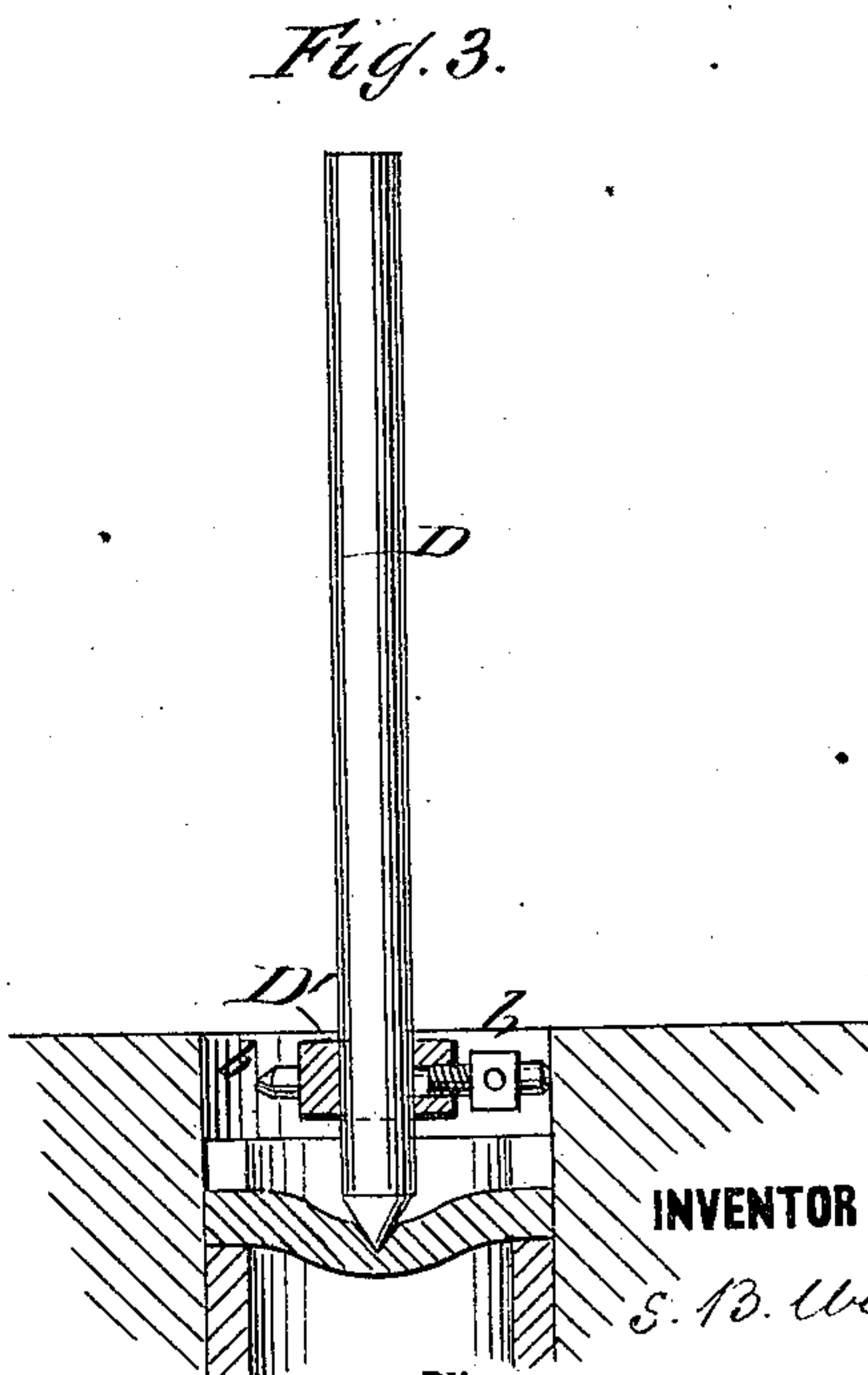
No. 164,355.

Patented June 8, 1875.



WITNESSES:

*E. Wolff*  
*H. Scarborough.*



INVENTOR:

*S. B. Williams*

BY

*Attorneys*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

SAMUEL B. WILLIAMS, OF BRIDGEPORT, OHIO, ASSIGNOR OF ONE-HALF  
HIS RIGHT TO SEYMOUR C. W. DUNLEVY, OF SAME PLACE.

## IMPROVEMENT IN TRAM-STAVES.

Specification forming part of Letters Patent No. **164,355**, dated June 8, 1875; application filed  
March 6, 1875.

*To all whom it may concern:*

Be it known that I, SAMUEL B. WILLIAMS, of Bridgeport, in the county of Belmont and State of Ohio, have invented a new and Improved Tram-Staff for Staffing Mill-Burrs, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view; Fig. 2, a sectional side elevation of my improved staff for staffing mill-burrs, as applied to a bed-stone; and Fig. 3 shows the mode of applying it to a runner.

Similar letters of reference indicate corresponding parts.

The invention will first be fully described, and then pointed out in the claim.

In the drawing, A represents a tram-staff or guide-bar, which is about equal in length, more or less, to the diameter of the mill-burrs, so as to extend fully across the same.

The staff A is attached by rectangular brackets or irons B to the ends of branch arms C<sup>1</sup>, of an upright standard, C, the angle-irons being slotted and provided with clamp-screws a, for the purpose of adjusting the staff on the standard. Sleeve-shaped projections C<sup>2</sup> at the central part of standard C, fit on a center shaft, D, that is either provided with a hollow bell or tripod shaped part, D', with set-screws b, to be applied to the spindle of the bed-stone, as shown in Fig. 2, or with a cylindrical or four-pointed part, D', with set-screws fitting the eye of the runner, as in Fig. 3.

The center shaft D is set into a perfectly vertical position to the face of the burrs by revolving the staff at some distance above the same, and adjusting a crank-screw, E, at the top of standard C until a regulating-quill or

piece of steel, d, at the outer end of the staff forms an even contact at the circumference of the burr. In this manner the center shaft may be set by the adjusting-screws b more readily into vertical position on the burrs than by any other method.

The crank-screw E is applied at the top of standard C, and seated conically or otherwise on the upper end of center shaft D, so as to raise or lower the standard C and staff A thereon. Staff A is lowered, after the vertical adjustment of the center shaft, until it comes in contact with the burr. The set-screws in the angle-plates B of the staff are then loosened, so that the staff may fit itself to the face of the burr, after which the set-screws are tightened again, the tram-staff attachment being then ready for use.

The straight staff extending across the face is more reliable and preferable than a short one, which has not the same degree of accuracy, while the independent working of the staff admits of a truer and more accurate staffing of the raised places, and, consequently, a more complete dressing of the burrs.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the tram-staff A, bracket B, standard C C<sup>1</sup> C<sup>2</sup>, shaft D D', and crank-screw E, all constructed and arranged substantially as and for the purpose specified.

SAMUEL B. WILLIAMS.

Witnesses:

J. B. ROWLES,  
F. C. ROWLES.