

(No Model.)

J. W. PALMER.

SCALE BEAM.

No. 328,804.

Patented Oct. 20, 1885.

Fig. 1.

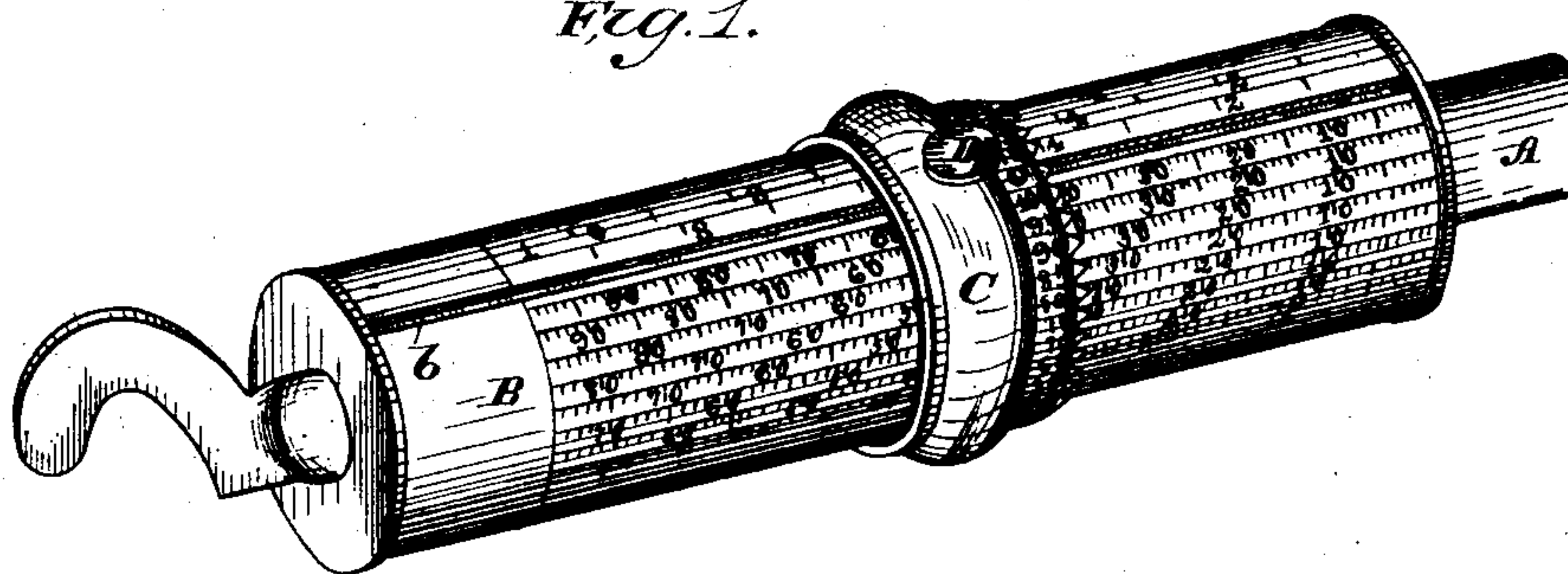
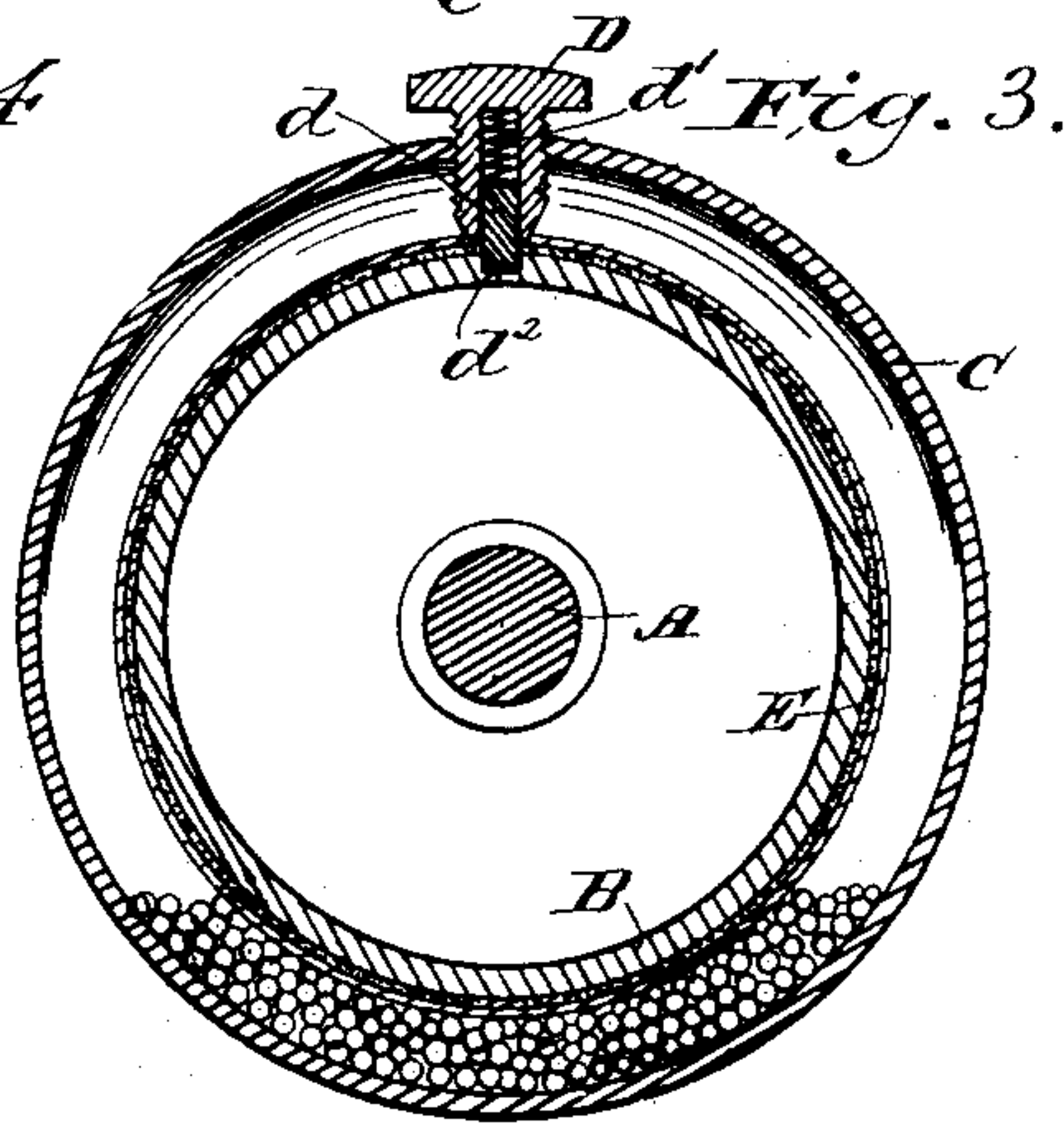
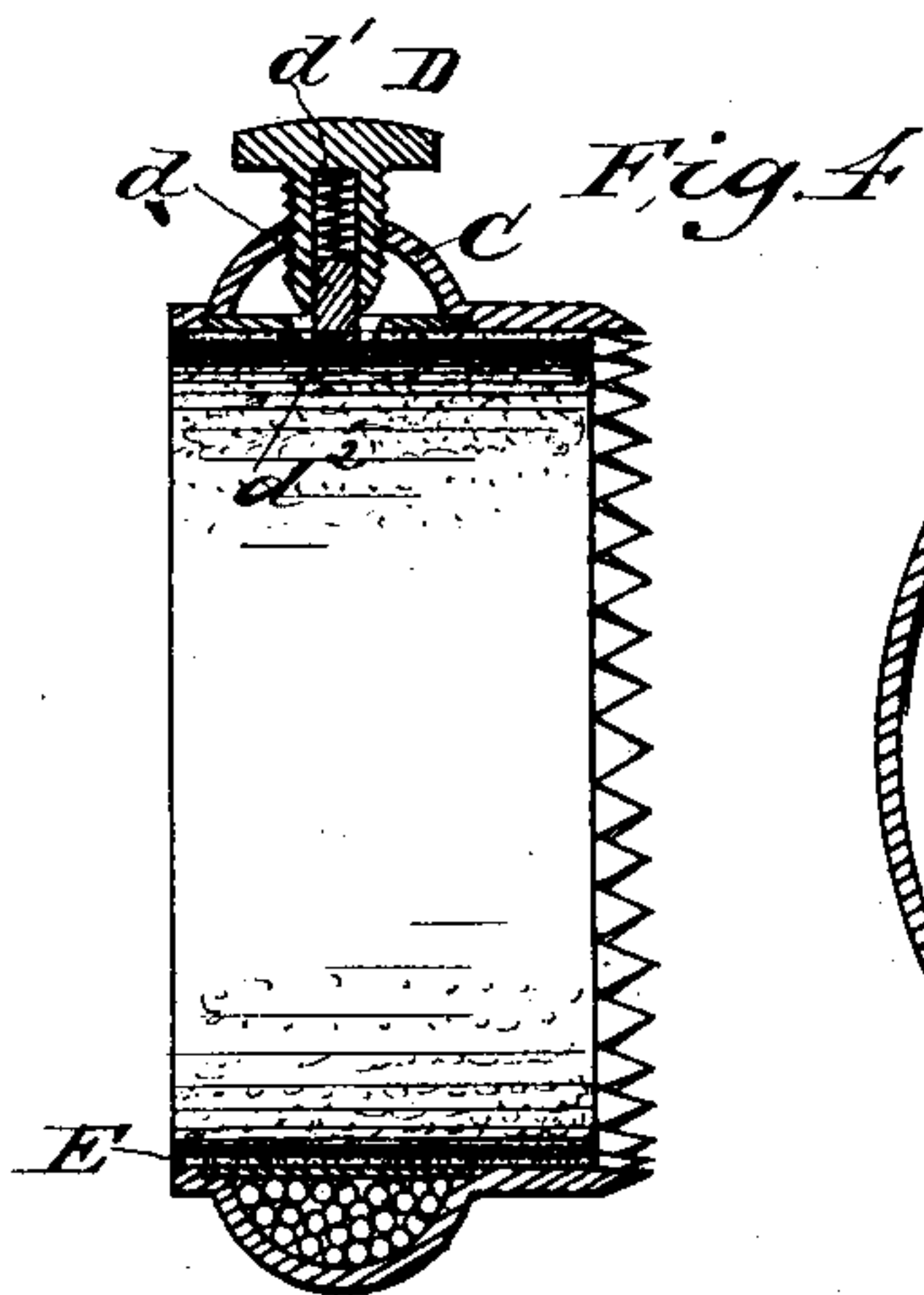
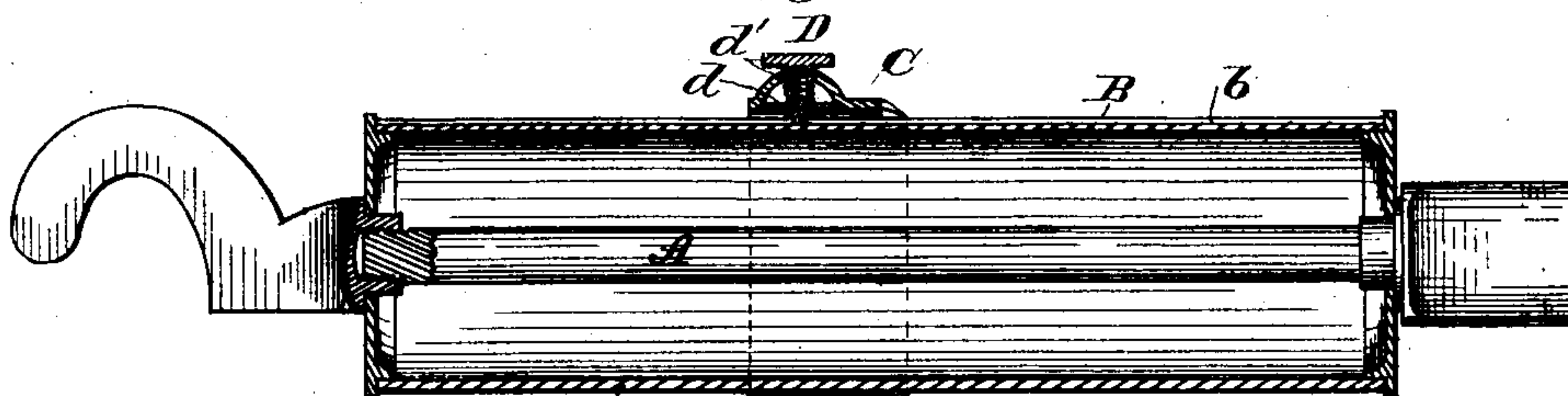


Fig. 2.



Witnesses:

E. J. Walker.

E. E. Masson

Inventor:

John W. Palmer
by his Attorney
C. E. Eick

UNITED STATES PATENT OFFICE.

JOHN W. PALMER, OF SYRACUSE, MISSOURI, ASSIGNOR OF ONE-HALF TO
MARCUS E. TAYLOR.

SCALE-BEAM.

SPECIFICATION forming part of Letters Patent No. 328,804, dated October 20, 1885.

Application filed January 29, 1885. Serial No. 154,340. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. PALMER, a citizen of the United States, residing at Syracuse, in the county of Morgan and State of Missouri, have invented certain new and useful Improvements in Scale-Beams; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of calculating scale-beams in which the beam carries a rotatable cylinder marked with graduated parallel longitudinal lines, and combined with a longitudinally-sliding weight having as many marked circumferential divisions or points as there are graduated longitudinal lines on the cylinder.

My improvement consists of certain features of construction and mode of mounting the sliding weight, which novel features are specifically pointed out in the claims at the close of this specification.

In order that my invention may be clearly understood, I have illustrated in the annexed drawings, and will proceed to describe, a practical form thereof.

Figure 1 is perspective view of my improved calculating scale-beam. Fig. 2 is a longitudinal sectional elevation thereof. Fig. 3 is a transverse section of the same. Fig. 4 is an axial section of the sliding weight. Figs. 3 and 4 are drawn on a larger scale than Figs. 1 and 2.

The same letters of reference indicate identical parts in all the figures.

The cylinder B is so mounted on the scale-beam A, preferably in the manner clearly shown in Fig. 2, that it may be freely rotated thereon, but cannot be moved longitudinally. The sliding weight C is a hollow band provided with a serrated circumferential flange, the several marked points of which point to the respective cross graduations of the longitudinal lines on cylinder A. The number of circumferential points on the sliding weight corresponds with the number of longitudinal lines on the cylinder. The points of the sliding weight may be numbered, and the longitu-

nal lines on the cylinder graduated and numbered, according to any known rule, to suit ordinary or special requirements. The sliding weight is connected with the cylinder, so that it cannot turn thereon, by a retaining-screw, D, which is screwed into a tapped hole in the outer wall of the weight, and projects with its foot through the inner wall thereof and into a longitudinal groove, b, of the cylinder.

The end of the retaining-screw may constitute the interlocking foot; but I prefer to use as such foot a piston, d, placed in a cavity in the screw and projected by a spring, d'. This spring-actuated foot will cause the sliding weight to frictionally bind on the cylinder, so that the weight may not too easily slide. The friction between the cylinder and weight can be regulated by adjusting the retaining-screw.

The foot or piston d of the screw may be shod with a rubber or leather shoe, d².

The cavity of the sliding weight serves as a receptacle for shot, by which its measure or quantity may be nicely adjusted to the common standard. The screw-hole gives access to the cavity of the weight for loading it, and the retaining-screw serves as a stopper in this connection.

In order that the sliding of the weight may have a polishing effect on the cylinder, I line the inner wall of the weight with leather or buckskin E, or with a similar soft polishing material.

Parts of my invention may be used without other parts thereof. For instance, the sliding weight may be solid instead of hollow; the leather lining of the sliding weight may also be omitted.

I claim as my invention—

1. The combination, substantially as before set forth, of the longitudinally-grooved cylinder of the scale-beam, the sliding weight, and the retaining-screw.

2. The combination, substantially as before set forth, of the longitudinally-grooved cylinder of the scale-beam, the sliding weight, and the retaining-screw carrying a spring-actuated piston.

3. The combination, substantially as before

set forth, with the cylindrical scale-beam, of the sliding weight lined with leather and fitting closely thereto.

4. The combination, substantially as before
5 set forth, of the longitudinally-grooved cylinder of the scale-beam, the hollow sliding weight, and the retaining-screw.

In testimony whereof I affix signature in presence of two witnesses.

J. W. PALMER.

Witnesses:

E. T. WALKER,
E. L. WHITE.