

(No Model.)

F. J. BROWN & D. H. JAMES.

EXTENSION GAGE.

No. 379,361.

Patented Mar. 13, 1888.

Fig. 1

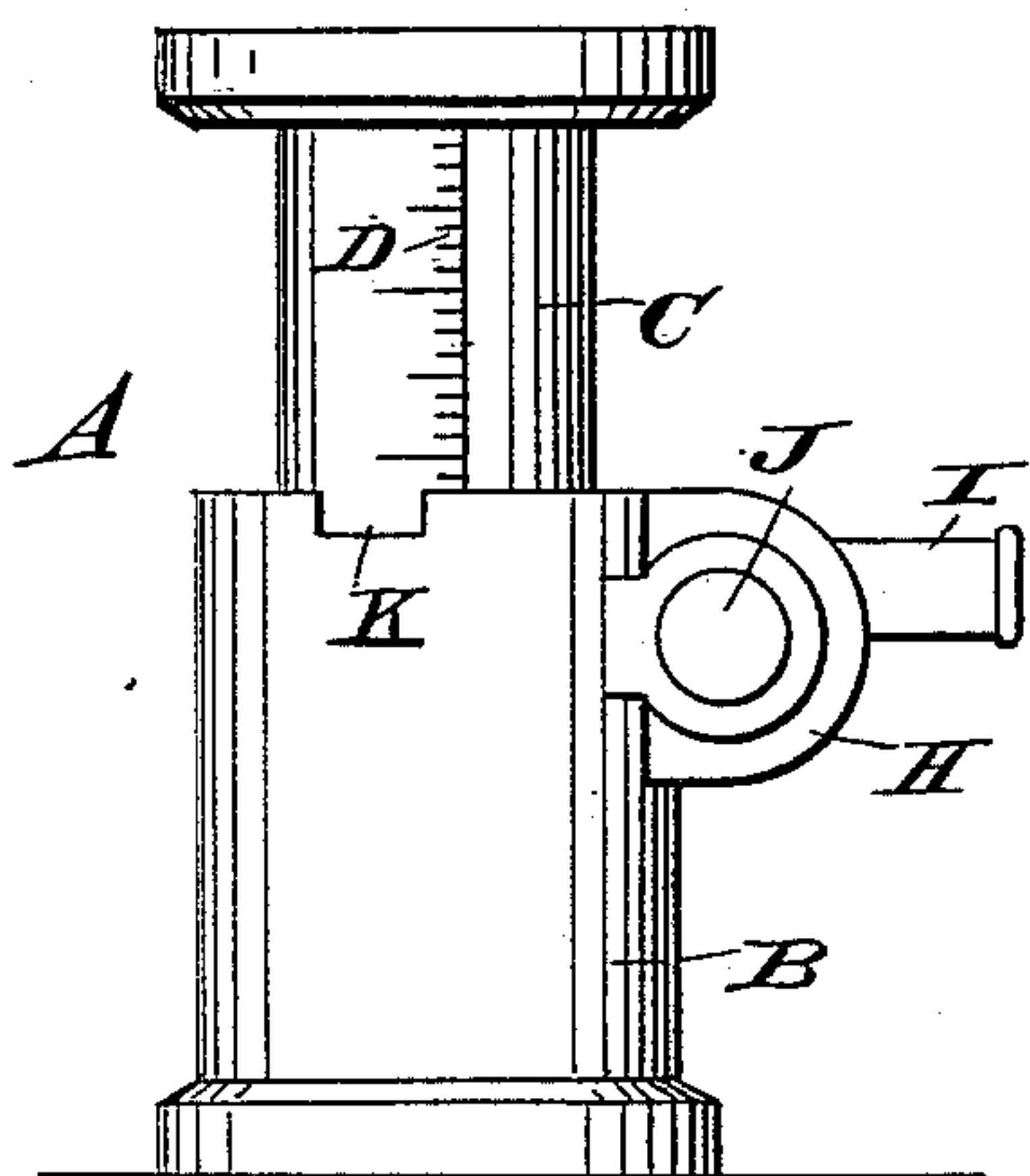


Fig. 2

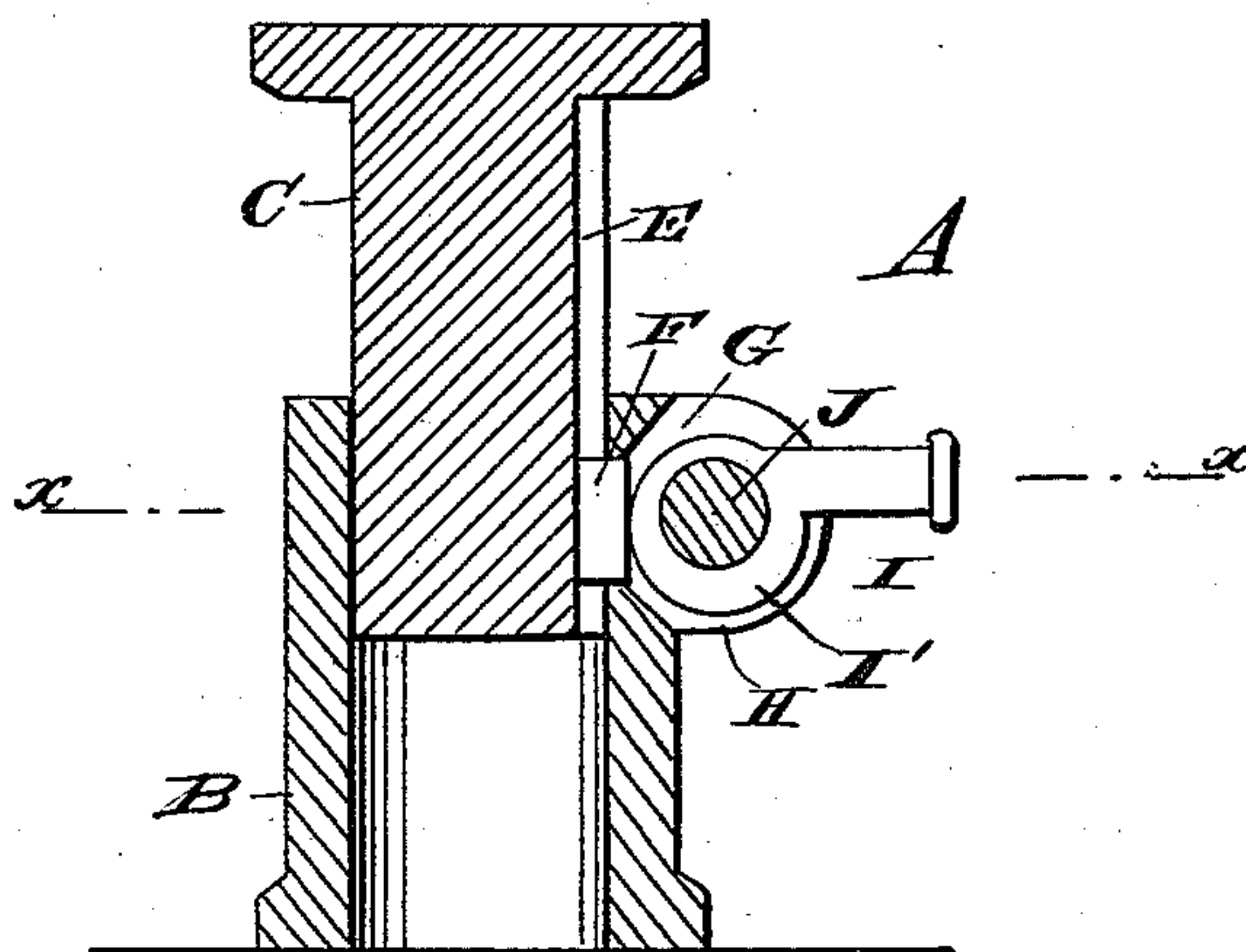
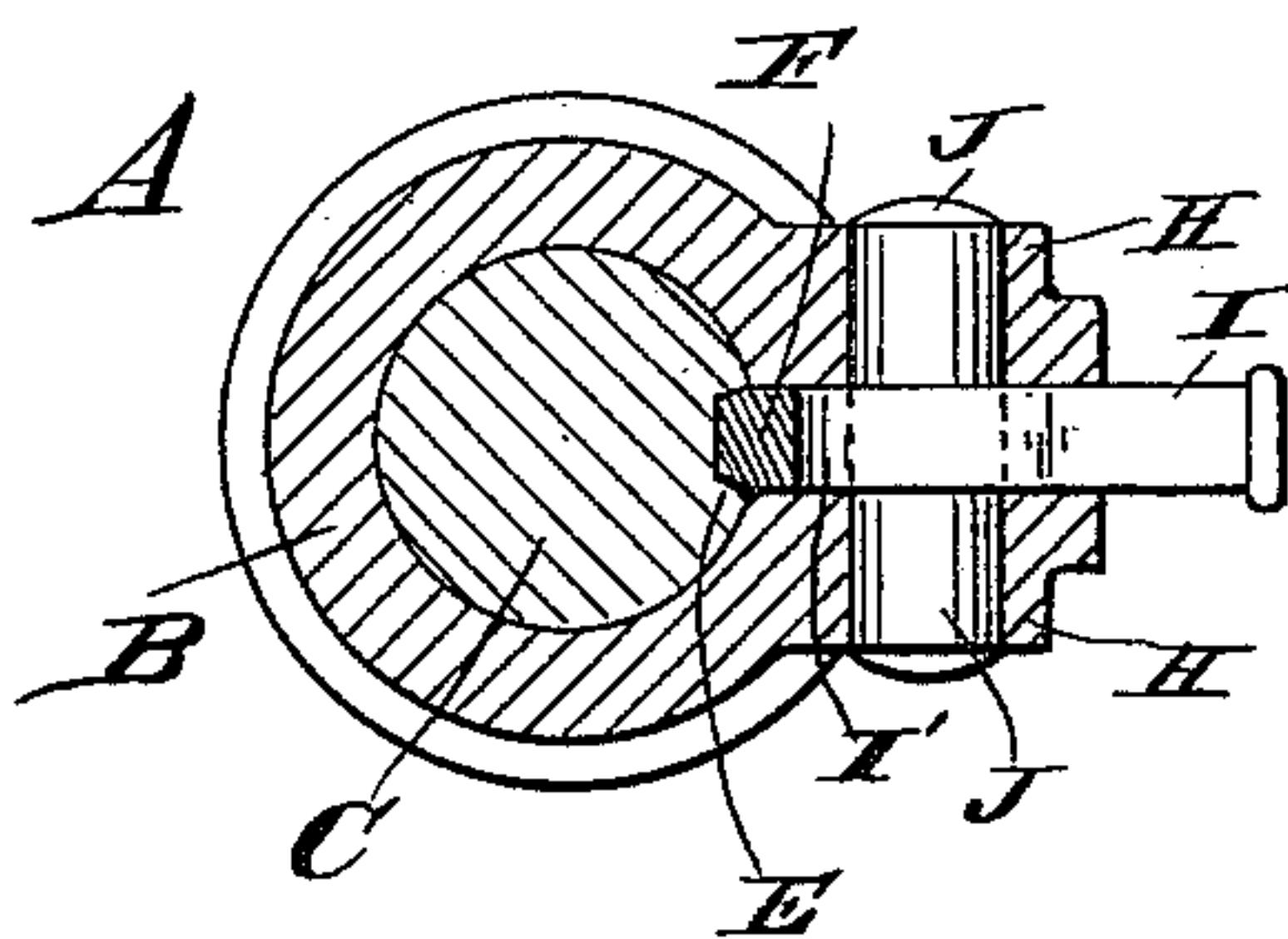


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDRICK J. BROWN AND DANIEL H. JAMES, OF MEADOW BROOK,
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EXTENSION-GAGE.

SPECIFICATION forming part of Letters Patent No. 379,361, dated March 13, 1888.

Application filed September 16, 1887. Serial No. 249,880. (No model.)

To all whom it may concern:

Be it known that we, FREDRICK J. BROWN and DANIEL H. JAMES, both of Meadow Brook, Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and Improved Extension-Gage, of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved extension gage, which is simple and durable in construction and very easily adjustable for measurement.

The invention consists of a graduated extension sliding in a cylinder in which it can be fastened at any desired point.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of our improvement. Fig. 2 is a central sectional elevation of the same, and Fig. 3 is a sectional plan view of the same on the line *x x* of Fig. 2.

Our improved gage A is provided with a cylinder, B, in which is held to slide the plunger or column C, provided with the graduations D in inches and subdivisions, or any other suitable system of measurement, such as metric, may be used.

In the column C is formed a groove, E, running lengthwise and parallel with the graduations D, and in this groove E fits loosely a block, F, held in a recess, G, formed in the cylinder B between the ears or lugs H near the upper end of the said cylinder.

Between the ears H is placed a cam-lever, I, turning on its trunnions J, having their bearings in the said ears or lugs H. The cam I' of the lever I operates with its rim against the outer face of the block F, so as to press the latter into the groove E, whereby the column C is held in place on the cylinder B when the cam-lever is moved into the position shown in the drawings.

The upper end of the cylinder is provided with a slot, K, near the graduations D, so as to enable the operator to read the graduations easily.

It will be seen that the column C is prevented from turning in the cylinder by the block F engaging the groove E and held in the said cylinder B. The latter, as well as the column C, has its outer face ground parallel, and generally somewhat enlarged, as shown in the drawings.

The tool is operated by throwing the cam-lever I upward with its handle, so that the cam I' disengages the block F. The column C can now be slid in the cylinder B until the distance between the outer faces of the column and cylinder measures the length or height desired and indicated by the graduations D. The operator now moves the handle of the cam lever I downward, so that the cam I' presses the block F firmly into the groove E, thus fastening the column C to the cylinder B.

Our improved gage is specially adapted for machinists' use, chiefly in planing and turning.

The column may also be fastened to the cylinder by a simple thumb-screw or other means; but we prefer the cam-lever on account of its quick adjustment.

The outer ends of the parts B C are made broad and flat and in parallel planes, so that the gage may be readily used in gaging grooves and setting tools to form a tongue to accurately fit the same, the broad flat ends preventing the gage from assuming an inclined position.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

The herein-described gage, formed of the outer section, B, formed with a broad flat outer end, and having a slot, K, in its inner end, the column C, sliding within the section B, formed with a broad flat outer end parallel with the outer end of the outer section and vertical graduations D, and the means for securing the column in its adjusted position.

FREDRICK J. BROWN.
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Witnesses:

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