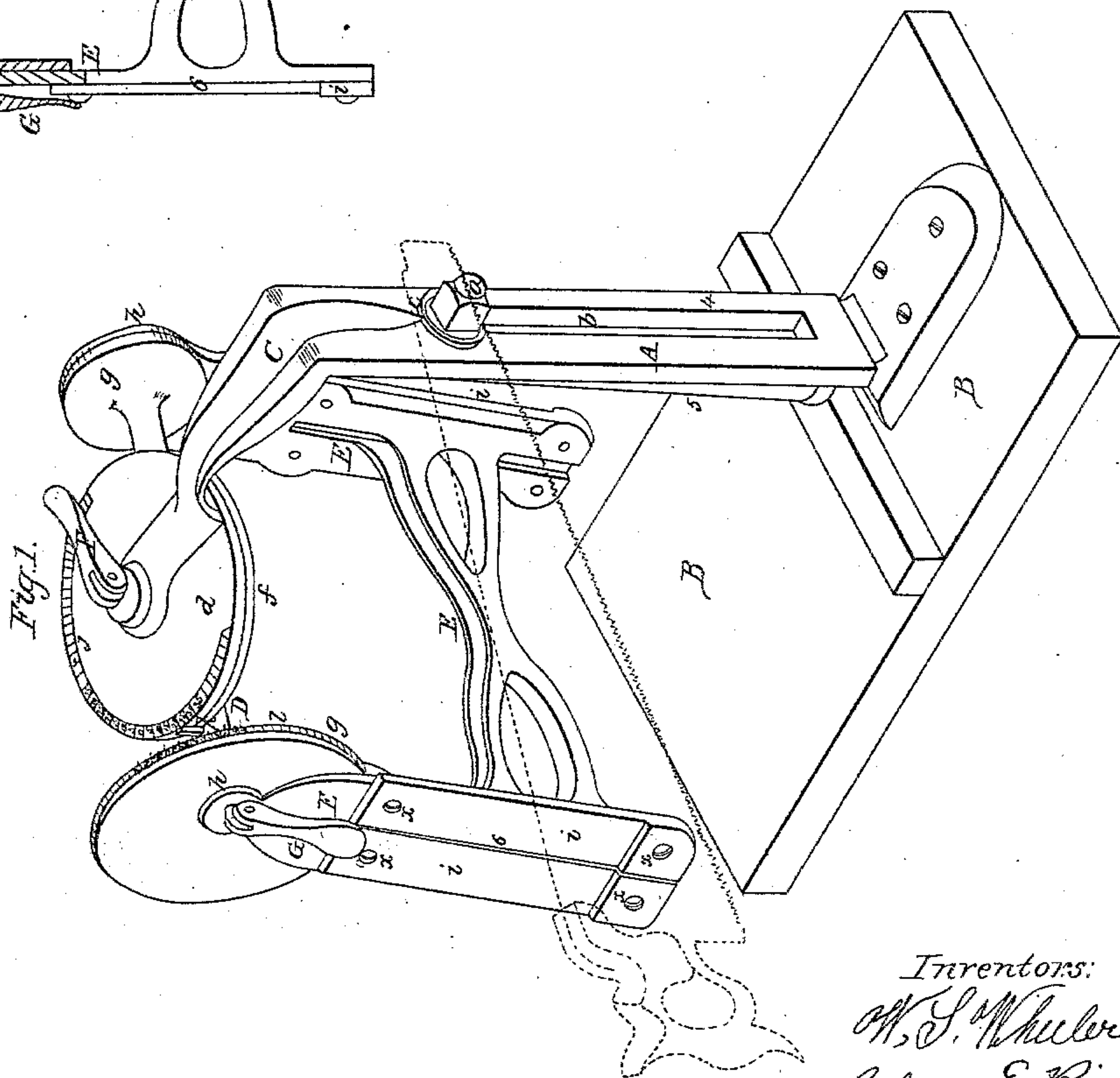
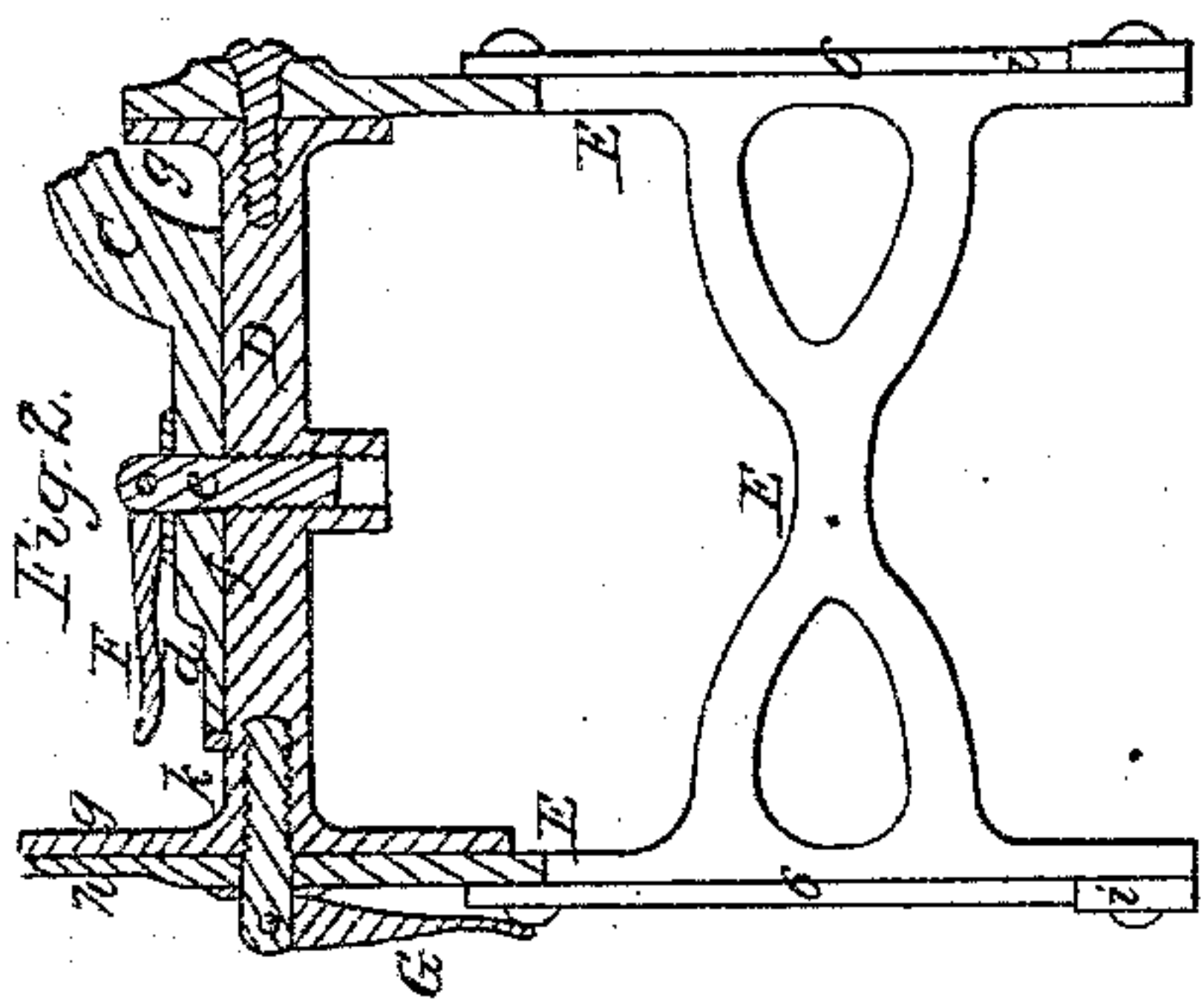
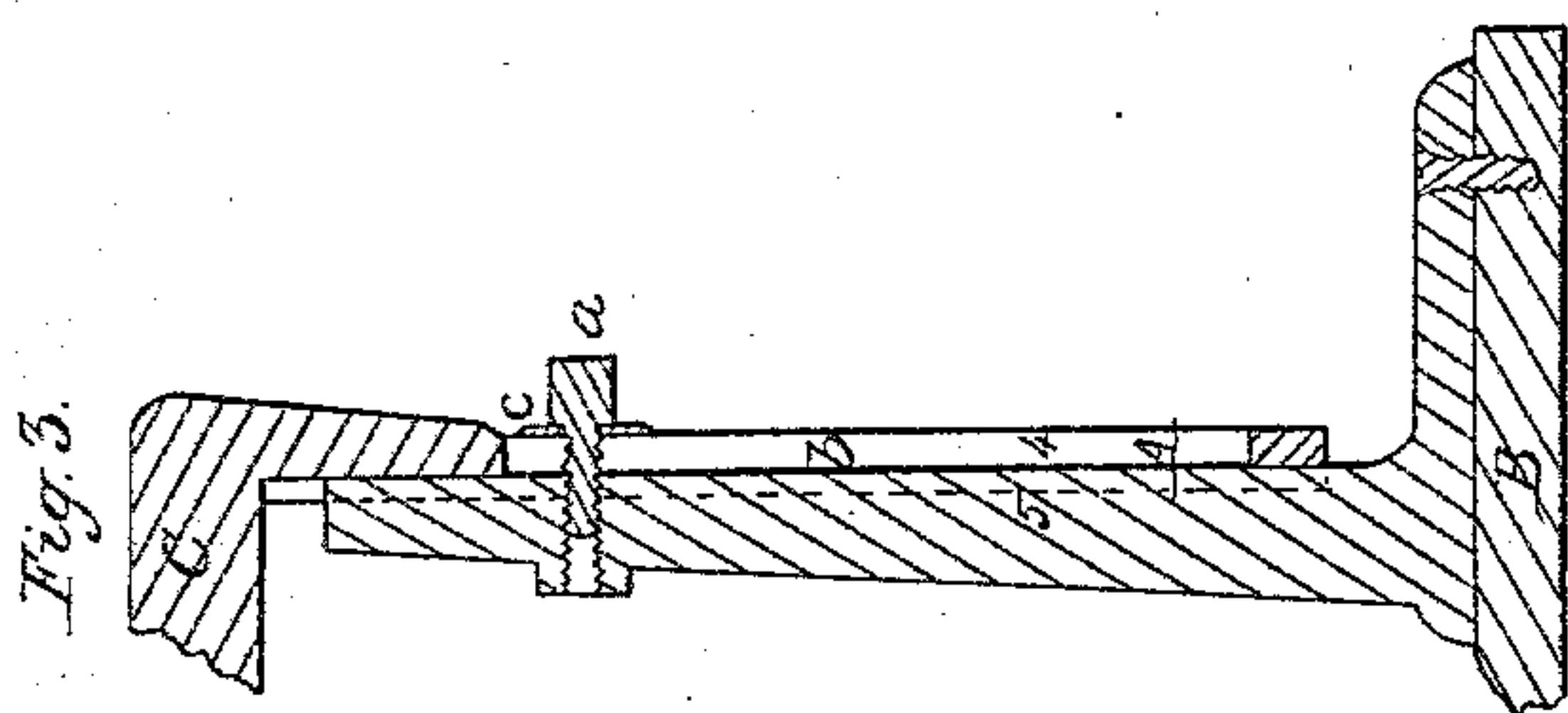


Wheeler & Bickford,

Miter Box,

Nº 62,910,

Patented Mar. 12, 1867.



Witnesses.
Daniel Barnard
Robt. W. Bennett.

Inventors:
W. S. Wheeler
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United States Patent Office.

WILLIAM S. WHEELER AND SOLOMON E. BICKFORD, OF FRANKLIN, NEW HAMPSHIRE
ASSIGNORS TO S. E. BICKFORD AND F. FLANDERS, OF SAME PLACE.

Letters Patent No. 62,910, dated March 12, 1867.

IMPROVEMENT IN MITRE-BOXES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, WILLIAM S. WHEELER and SOLOMON E. BICKFORD, of Franklin, in the county of Merrimac, and State of New Hampshire, have invented certain new and useful improvements in Mitre-Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of our improved mitre-box.

Figure 2 is a vertical section through the centre of the swinging saw-frame, and the end of the arm which supports it.

Figure 3 is a sectional detail to be referred to.

Our invention consists in a guide-frame for the saw, so attached and pivoted to a standard that it can be swung around on an axis vertical to the plane on which the work is placed, and clamped at any angle required; the guide-frame itself being also jointed so that it can be inclined to the said vertical axis and clamped in place, thus forming a convenient mitre-box of simple construction, in which two angles or "mitre" and "bevel" can be sawed at the same time.

To enable others skilled in the art to understand and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A is a post or standard, the foot of which is secured to a bench, B, or other suitable place. This standard is made in two pieces, 4 and 5, one of which, 4, is grooved and slides on the portion 5, being secured in position at the required height by means of a screw-bolt, *a*, which passes through a slot, *b*, (figs. 1 and 3,) and is furnished with a washer, *c*. From the portion 4 projects an arm, C, of the form shown in fig. 1, the outer end *d* being made circular in the form of a disk, and to this portion *d* is pivoted, by means of a screw-pin, *e*, the top bar D of the guide-frame E, which carries a similar disk, *f*. At each extremity of the bar D is formed a disk, *g*, to which are pivoted the side pieces of the frame E, the extremities *h* of which are of a form to correspond with that of the disks *g*. The guide-frame E is bifurcated for the reception of the saw, (seen in red in fig. 1,) pieces or guides *i* of wood, or other suitable material, being secured by screws *x* to the outside of the frame so as to leave slits *6* of a width to nearly correspond with the thickness of the blade of the saw. By removing these pieces *i* and substituting others of a different width, the width of the slits *6* may be varied for saws of various thicknesses; or if a saw with a "stiff back" is to be employed, pieces of a different form may be used, or the guide-pieces *i* may be provided with slots, for the passage of the screws *x*, so that the width of the slits *6* may be regulated without removing the guide-pieces from the frame. The guide-frame E can be raised or lowered, in accordance with the thickness of the stock to be sawed, by adjusting the height of the portion 4 of the standard, as before explained. To the upper end of the pin *e* is pivoted an eccentric clamp F, by depressing which the pin *e* is raised, bringing the disk *f* up against the under side of the disk *d*, thus firmly clamping the saw-frame E at the required angle for the mitre to be cut, which is determined by means of the graduated scale *j* on the edge of the disk *d*, and the pointer *k* on the bar D. It is evident that the scale may be made on the disk *f*, instead of on the disk *d*, if preferred. When it is desired to cut on a bevel, the saw-frame E is clamped at the required angle to a vertical line by means of a clamp, G, of similar construction to the clamp F above described, the edge of the largest disk *g* being furnished with a graduated scale *l* for the purpose of indicating the angle. This scale may be made at either end of the bar D, or on either of the disks *g* or *h*.

The mitre-box above described is simple in its construction and not liable to get out of order, and will be found extremely convenient for a great variety of work, as the blade of the saw can be guided with great facility by means of the bifurcated frame E, so as to cut at any desired angle a mitre or a bevel, or both simultaneously.

Claim.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The guide-frame E, so hung and pivoted to a standard, A, that it can be swung around an axis vertical to the work, and also inclined to the said vertical axis, whereby the proper direction can be given to the saw to cut a mitre or a bevel, or both simultaneously, substantially as set forth.
2. We also claim providing the frame E with an index or indices for fixing or adjusting its position around its vertical axis, or at the required inclination for a mitre or a bevel, in combination with a suitable clamp or clamps, or equivalent mechanical device for locking it when adjusted, substantially as set forth.

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SOLOMON E. BICKFORD.

Witnesses:

DANIEL BARNARD,
ROBT. W. BENNETT