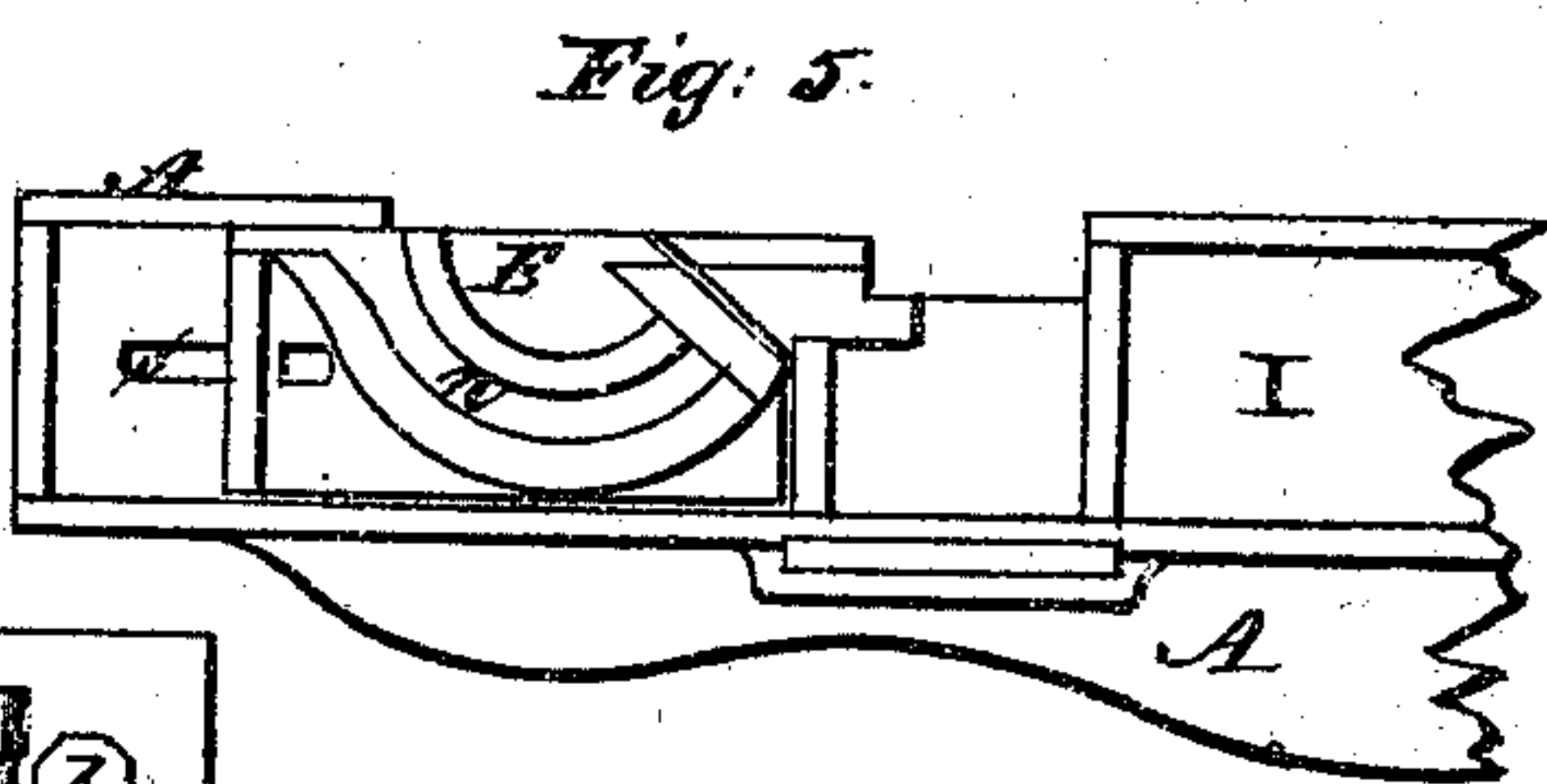
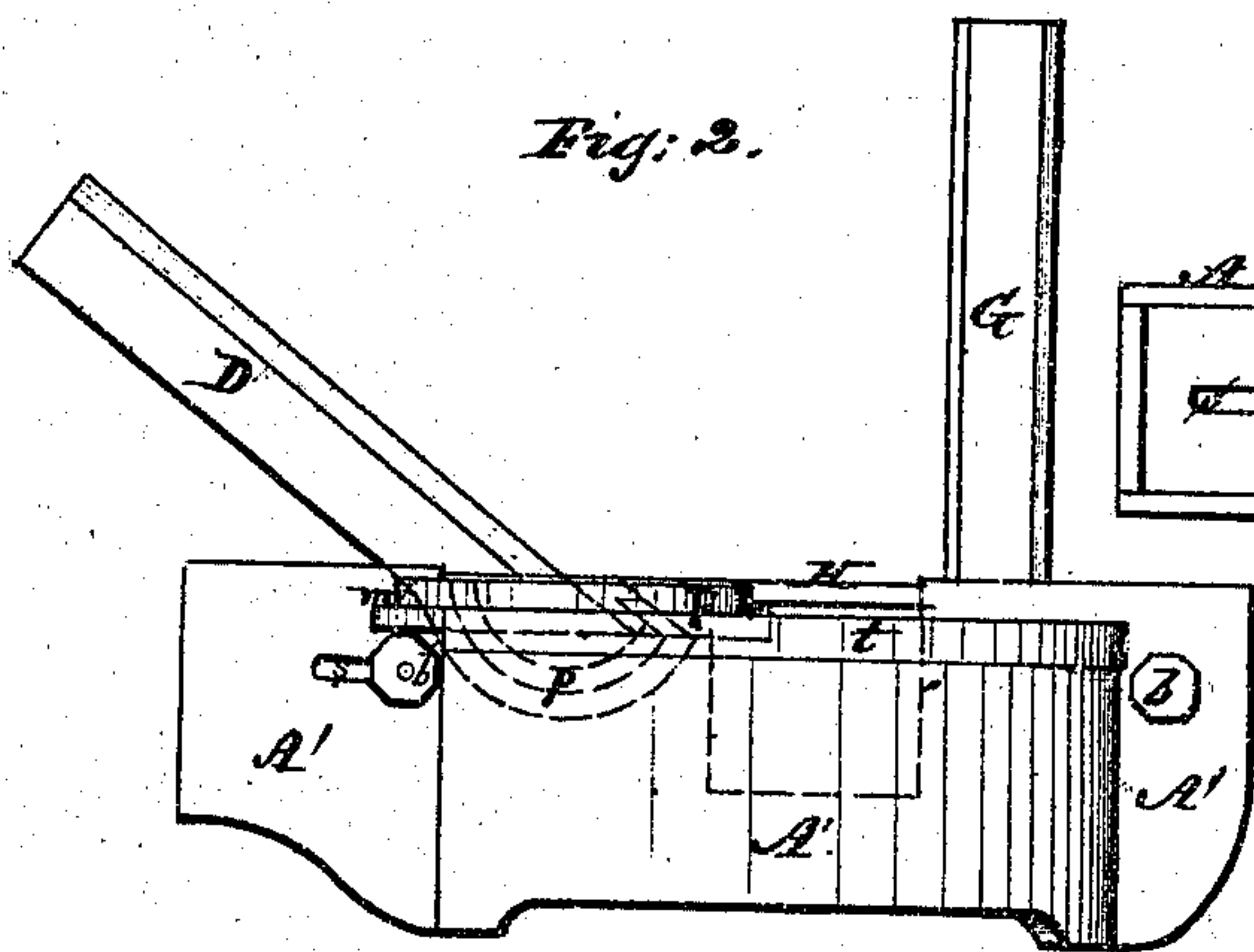
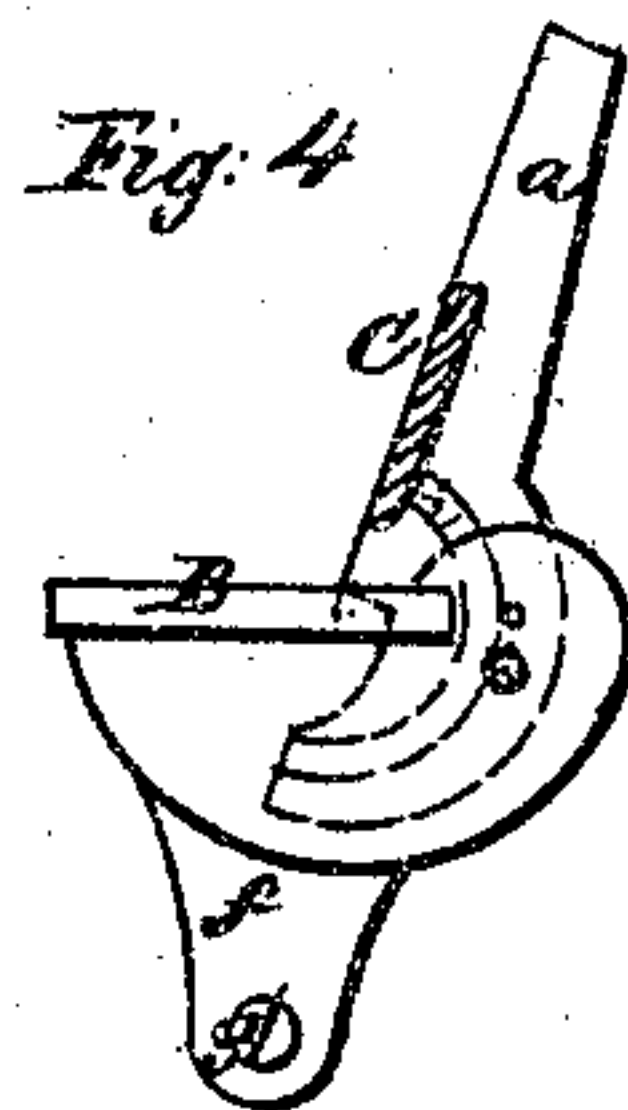
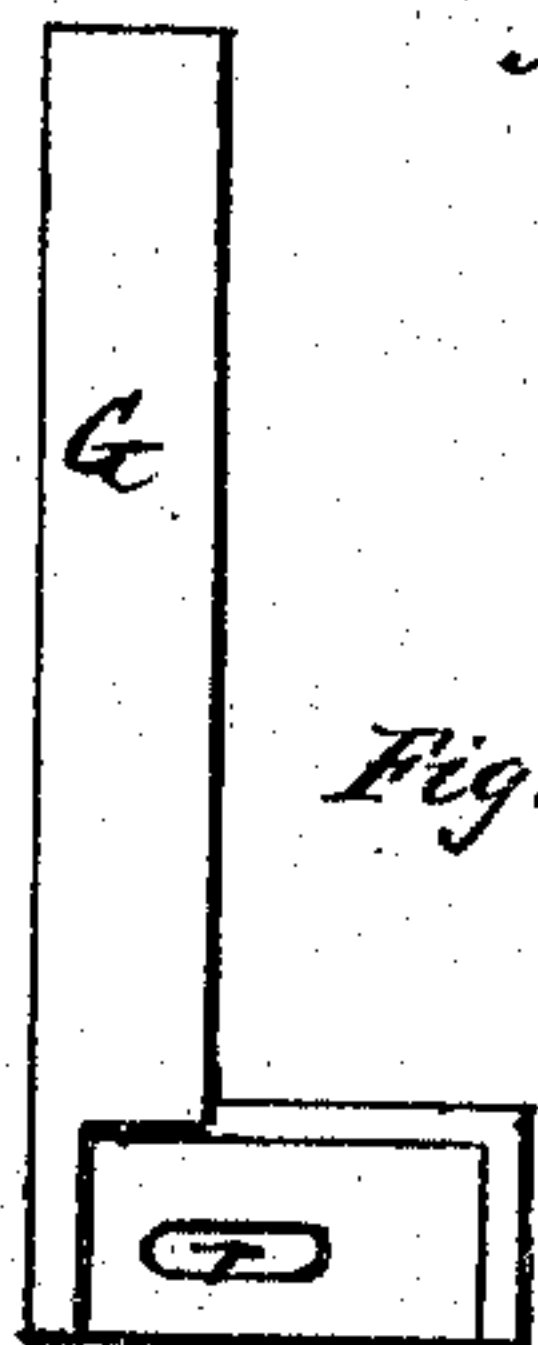
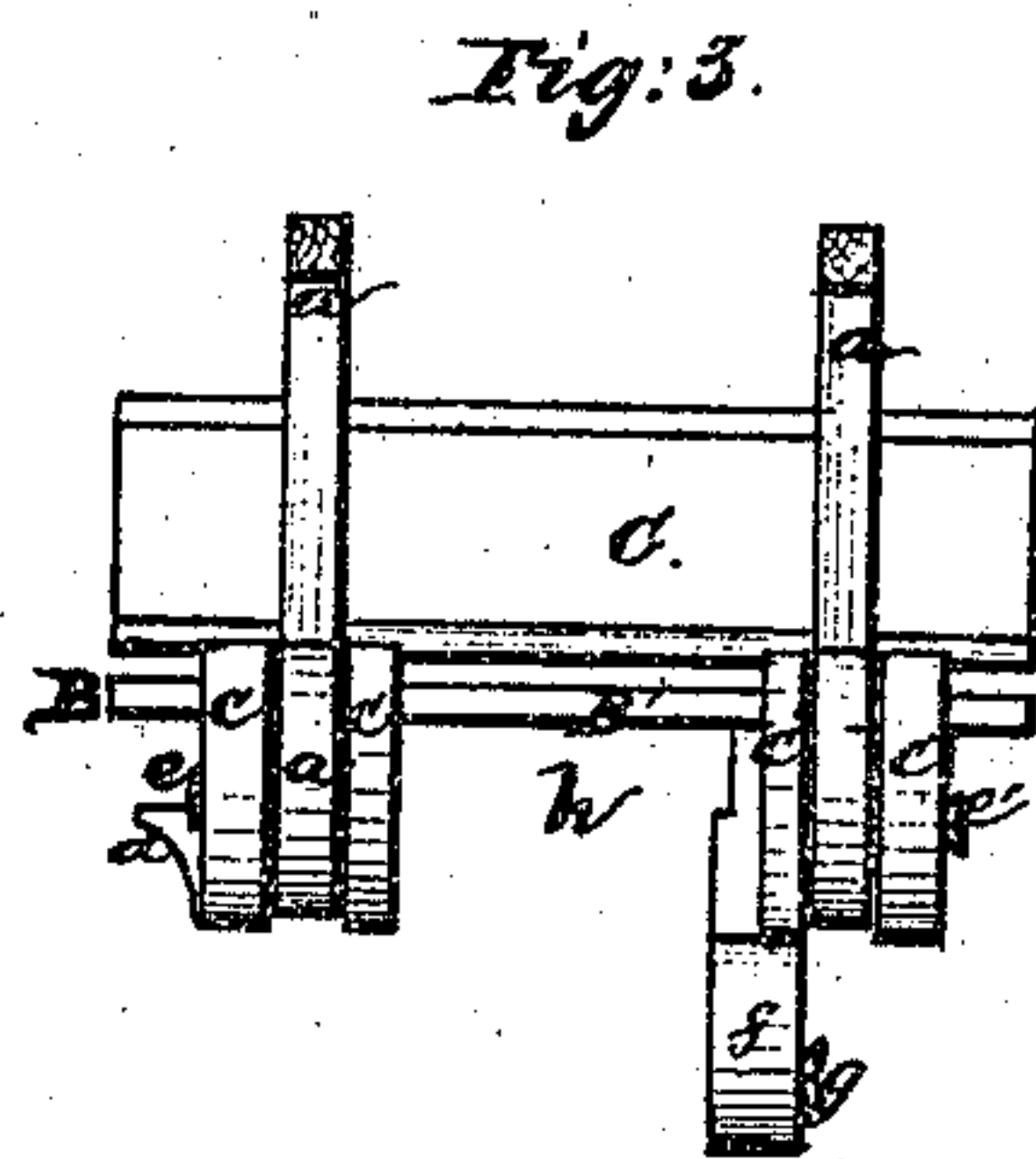
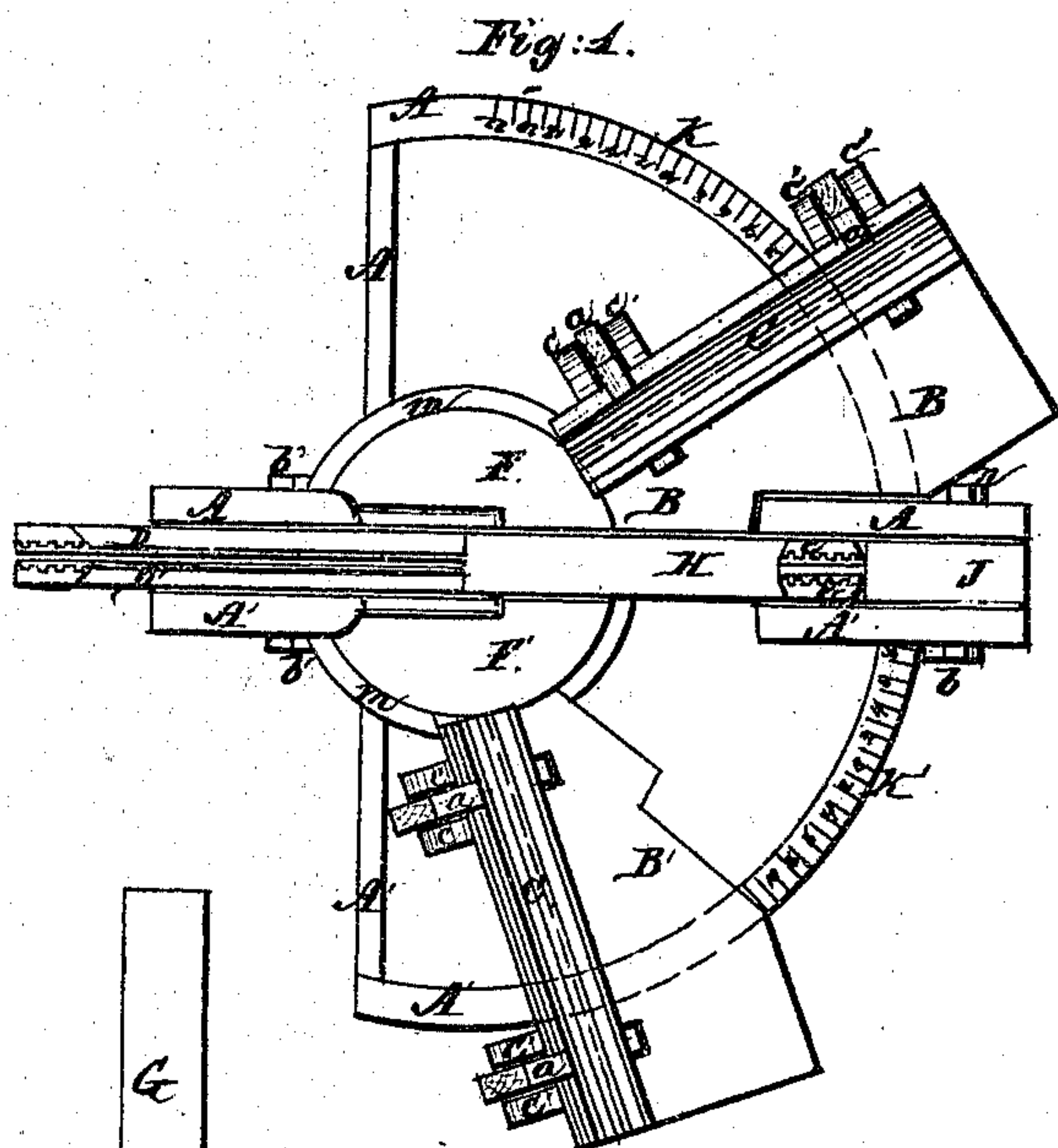


H. N. Burr,

Miter Box.

No. 105,421.

Patented July 19, 1870.



Witnesses

W. H. Howard,  
A. Bradley

Inventor

H. N. Burr  
By his Attorney  
Chas. F. Mansbury



# United States Patent Office.

HORATIO N. BURR, OF MANSFIELD, OHIO.

Letters Patent No. 105,421, dated July 19, 1870.

## IMPROVEMENT IN MITER-BOX.

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

To all whom it may concern:

Be it known that I, HORATIO N. BURR, of Mansfield, in the county of Richland and State of Ohio, have invented a new and useful Miter-Box; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a top view or plan of my improved miter-box;

Figure 2 is a side elevation of the same; and

Figures 3, 4, and 5 are detail views of some of the parts.

The same letter indicates the same part wherever it occurs.

The nature of this invention consists in the peculiar construction of a miter-box, admitting of a variety of convenient adjustments, and combining devices for guiding the saw, holding and guiding the lumber, determining the lines and angles of section, and adjusting the supports to the angles of the various surfaces of the lumber to be operated on, all as hereinafter more particularly set forth.

To enable others to make and use my improved miter-box, I will proceed to describe its construction and operation.

The frame, which is semicircular in outline, is formed in two symmetrical parts, A A', which are bolted together by the bolts b b'. The upper edge of the frame forms the graduating arcs K K'. The radii of these arcs intersect at the center of the circular piece F F', with reference to which the angles are laid off, which are measured on the graduated arcs.

Between the two segments A A' of the frame, and on a line with the center of the circle F F', are placed the adjustable saw-guides D D' and G G'. The guides G G' have the form represented in fig. 6, and are made to slide back and forth, as may be required, in recesses I, in the inner faces of the frame. They are fixed in position by tightening the nut n, on the end of bolt b, which bolt passes through a slot, r, in the lower part of the guide.

The guides D D' are attached to slides E, which move back and forth in recesses in the faces of the frame. These slides have curved grooves or mortises in their inner faces, which receive curved ribs p, projecting from the sides of the lower portion of guides D D', and permit a radial motion to said guides, so that they can be thrown out of the perpendicular position to any extent required by the work, as, for example, to the position shown in fig. 2.

The slides E are fixed in any desired position by tightening the nut b<sup>2</sup>, on the end of bolt b<sup>1</sup>, said bolt passing through slots s, in the frame, and through slots in the slides E.

The saw-guides are lined with wood, and the bed H J, against which the saw descends, is formed of wood. The remaining portions of the miter-box I design forming of metal.

Tables B B' rest upon the top of the box, their inner edges supported upon the shoulder m of the circle F F', and their outer edges upon the upper edge of the semicircular arc of the frame. The form and construction of these tables are shown in figs. 1, 3, and 4, fig. 1 being a top view, fig. 3 a rear elevation, and fig. 4 an end view.

To the bottom of the table B B' are attached lugs c c', c' c', which receive between them the lower ends of arms a a, which have curved ribs upon them, working in grooves in the inner faces of said lugs.

The arms a have the supports C attached to them, and can be set at any desired angle with the table B, and fixed at such angle by the set-screws e e'.

The cleat d, attached to the side of lug c, fig. 3, forms, with the end of table B, a recess to receive the edge of the circle F F', the end of table B being cut to a circular arc, to correspond with the edge of the circle, and resting upon the shoulder m, while the cleat d passes under the bottom of the circle F F'.

The outer side of the table B works upon the flange t of the semicircular portion of the frame. This flange is received between the lug c and the triangular rib h, fig. 3, both cut to an arc corresponding with that of the flange t, so that the table can traverse readily upon it.

A set-screw, g, in the lower end of the long arm f of lug c enables the table to be fixed in any desired position on the frame.

The angle of section can be fixed in advance, by the position of the tables relatively to the scales on the frame. A similar scale may be used on the arms a a to regulate the angle between the table B and the support C.

The operation or mode of using the miter-box is obvious from its construction. It embraces every adjustment needed to adapt it with accuracy to every modification in the character of the work it is required to perform.

Having thus fully described my invention,

What I claim and desire to secure by Letters Patent is—

1. The table B, traversing on the graduated arc K and the circular piece F F', and having the adjustable supports C connected to it, in the manner shown and described, and for the purpose specified.

2. The saw-guides D D', constructed as described, and having both vertical and horizontal adjustments, as set forth and shown.

The above specification of my said invention signed and witnessed at Mansfield, this 17th day of March, A. D. 1870.

H. N. BURR.

Witnesses:

O. C. CLARK,  
WM. SHERMAN.