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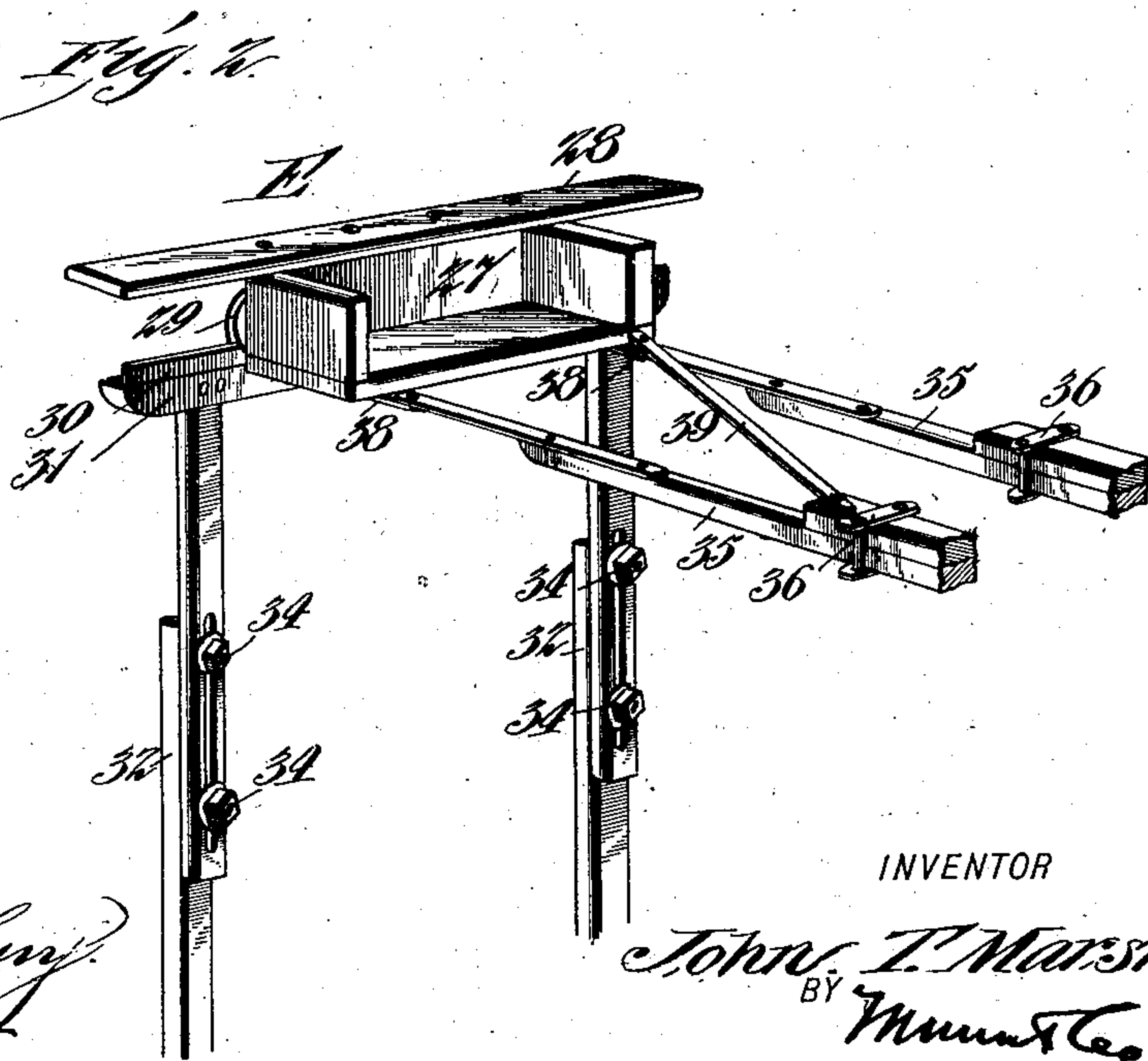
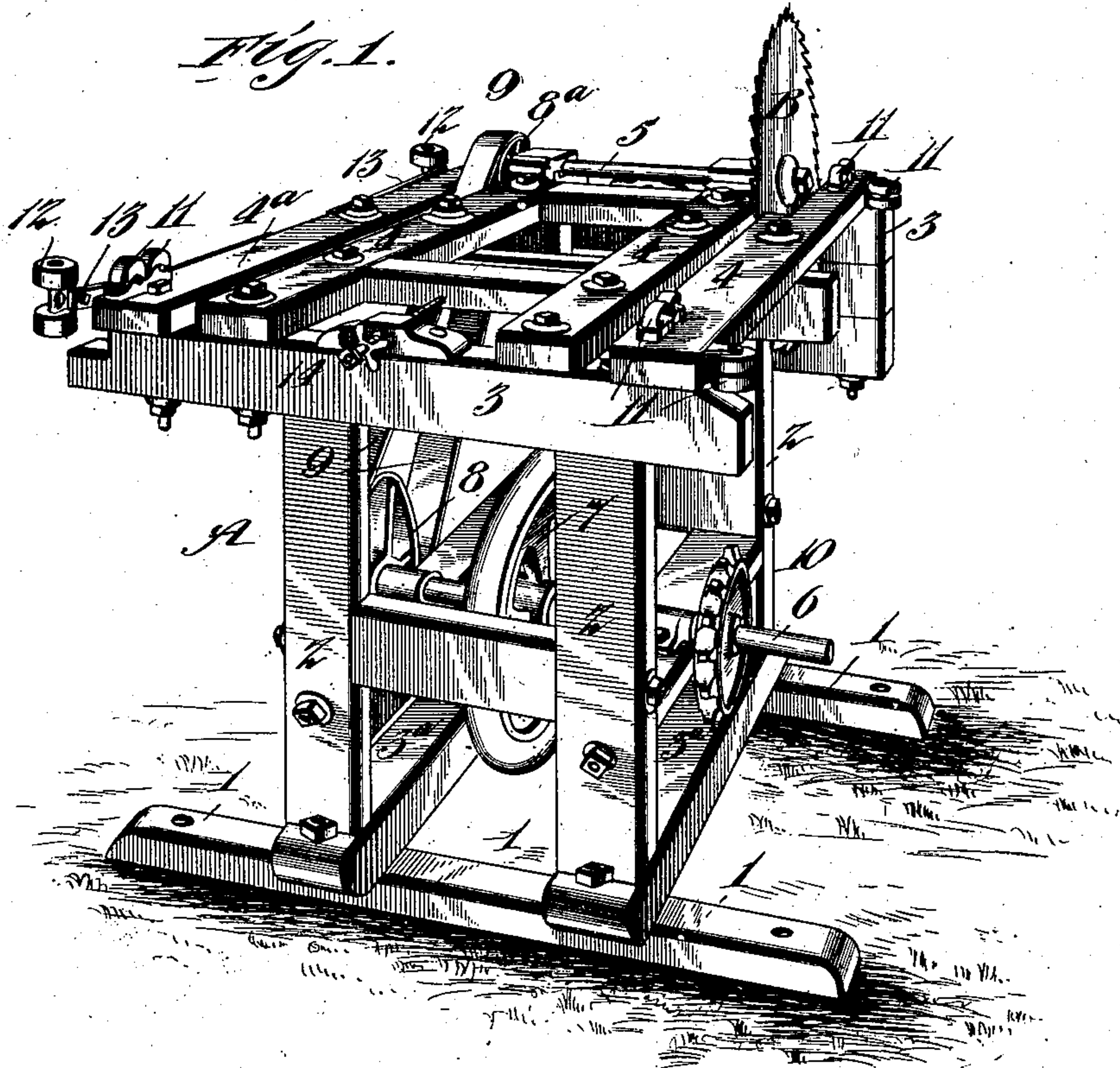
PATENTED MAY 26, 1903.

J. T. MARSH.
SAWING MACHINE.

APPLICATION FILED OCT. 29, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

Geo. P. Kingsbury
Amos W. Hart

INVENTOR

John T. Marsh
BY *Munn & Co.*
ATTORNEYS.

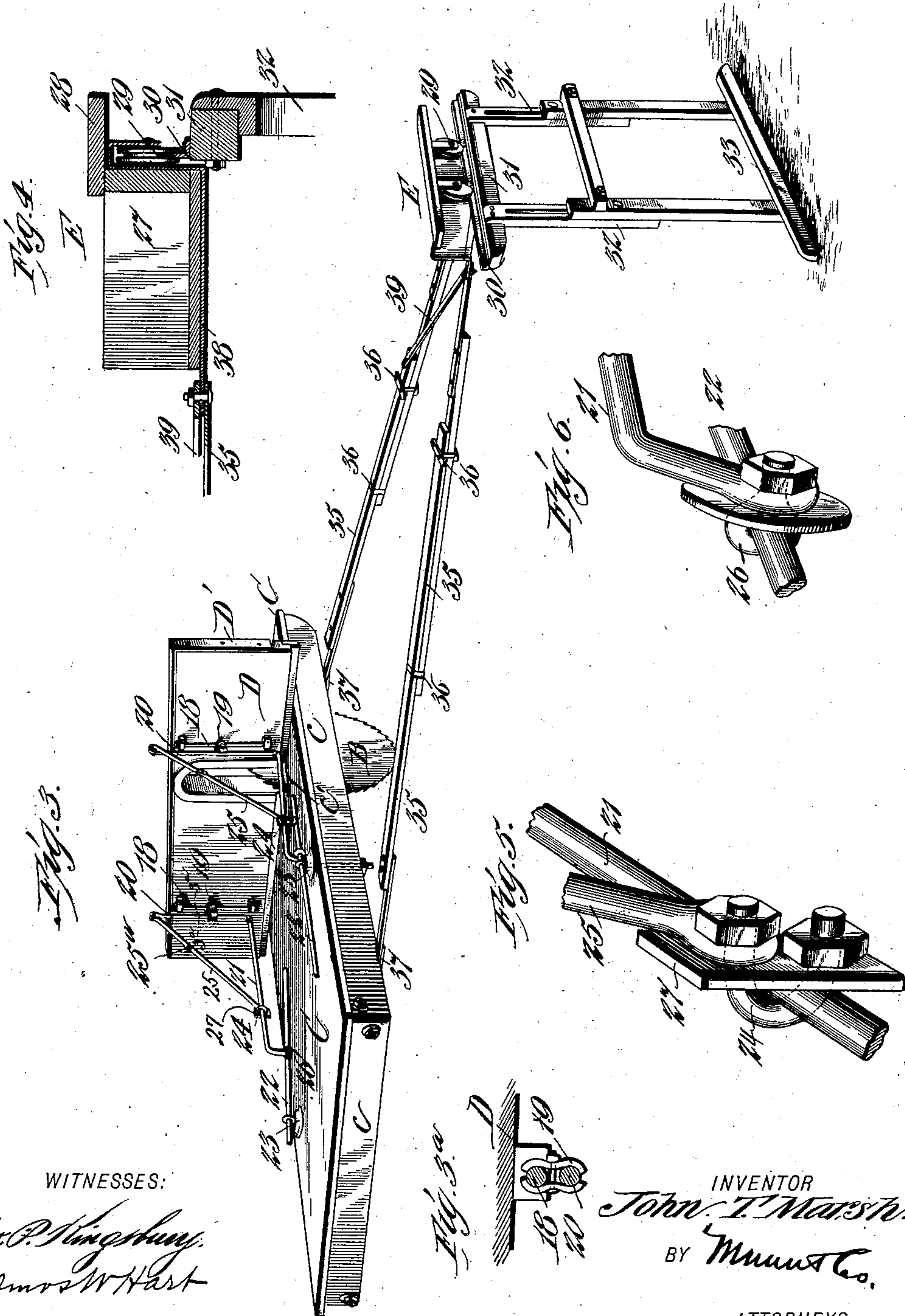
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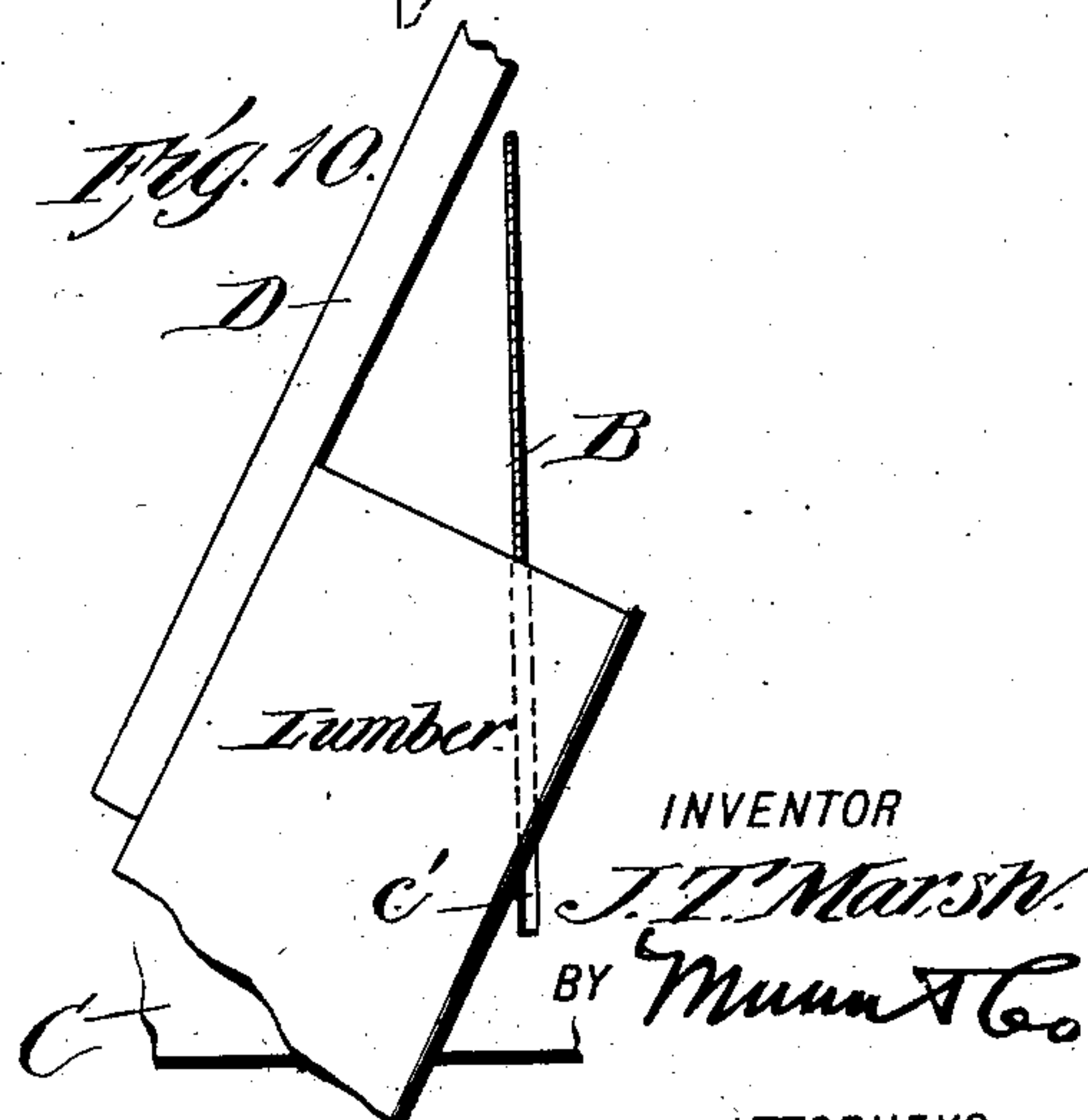
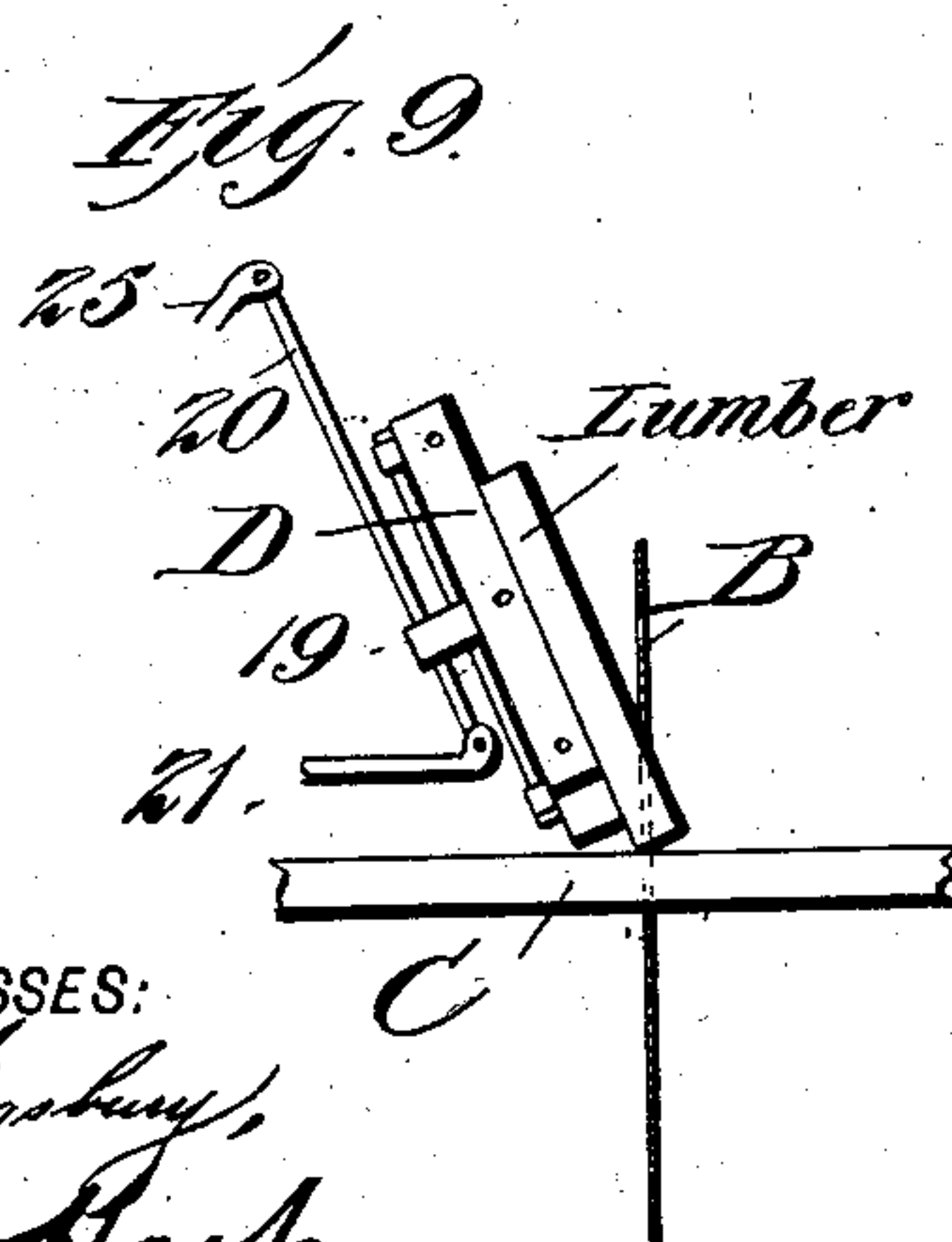
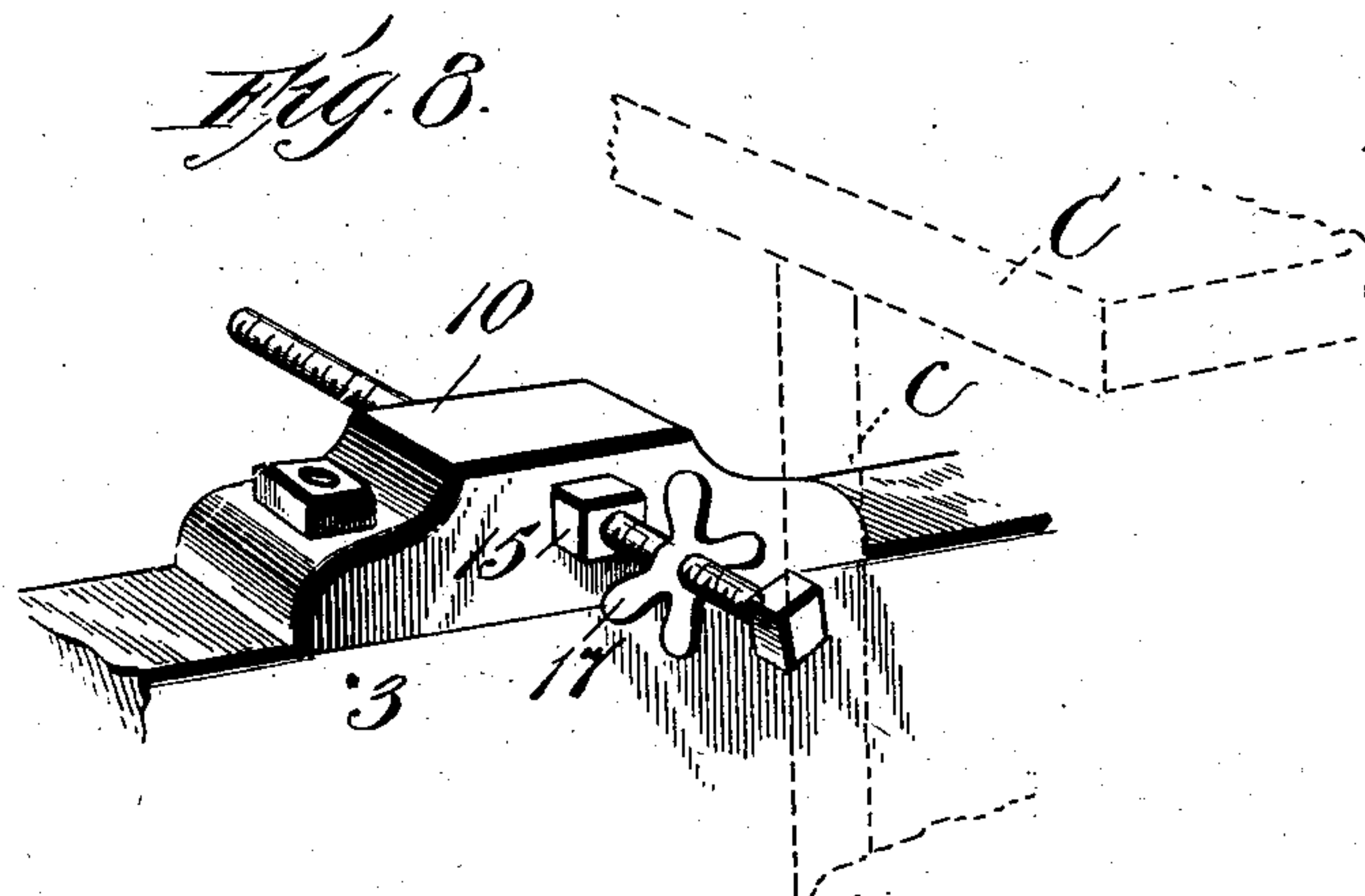
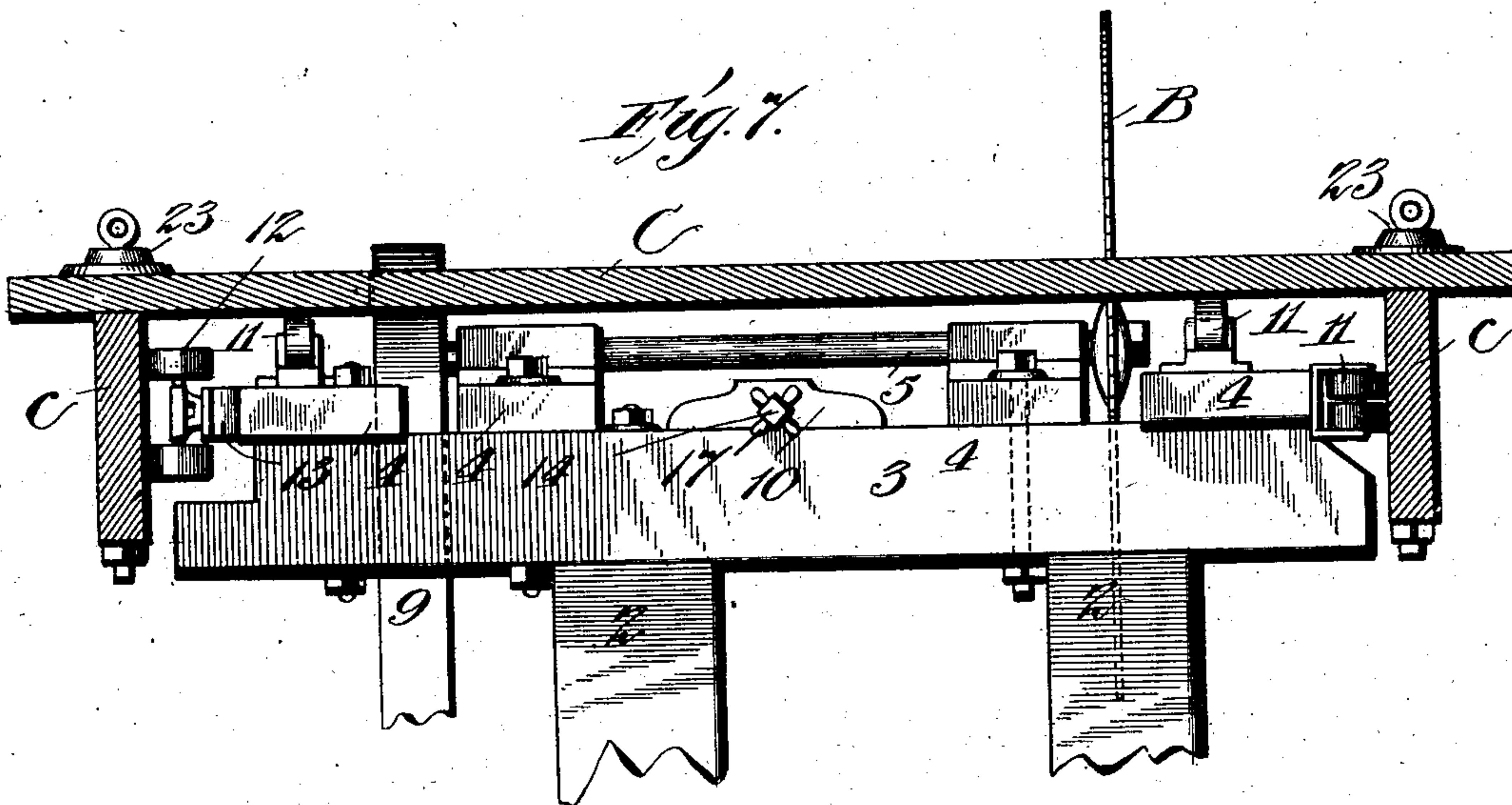
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3 SHEETS—SHEET 3.



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Amos W. East

INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN THOMAS MARSH, OF FARMER CITY, ILLINOIS.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 729,374, dated May 26, 1903.

Application filed October 29, 1902. Serial No. 129,280. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMAS MARSH, a citizen of the United States, and a resident of Farmer City, in the county of Dewitt and State of Illinois, have made certain new and useful Improvements in Sawing-Machines, of which the following is a specification.

It is the object of my invention to provide an improved sawing-machine, adapted for ripping, cross-cutting, beveling, mitering, &c.

A special feature of the machine is the provision of a gage-board, which is so applied to the movable top of the machine by peculiar mechanism that it is adapted to be set at different vertical and horizontal angles as required for different kinds of work.

Another special feature of novelty and improvement is the provision of a traveling carrier for supporting the free ends of long boards or other pieces of lumber while being sawed, the carrier and top being so connected that they move together. The carrier is adapted to be extended at different distances from the movable top of the machine to adapt it to accommodate lumber of different lengths.

The details of construction, arrangement, and operation are as hereinafter described with reference to the accompanying drawings, three sheets, in which—

Figure 1 is a perspective view of the main frame of my improved machine. Fig. 2 is a perspective view of the movable carrier. Fig. 3 is a perspective view of the movable top provided with the adjustable gage-board and the lumber-carrier connected with said top. Fig. 3^a is a detail section, enlarged, on line 3^a 3^a of Fig. 3. Fig. 4 is an enlarged cross-section of the lumber-carrier. Figs. 5 and 6 are perspective views of clamps forming part of the mechanism for adjusting and holding the gage-board at different angles. Fig. 7 is a vertical cross-section of the machine, the line of section being in front of one end of the main frame. Fig. 8 is a perspective view of one of the adjustable stops for limiting the movement of the sliding top of the machine. Figs. 9 and 10 are respectively end and plan views illustrating the adjustment of the gage-board.

Referring in the first instance to Fig. 1, A indicates the main frame of my sawing-machine, the same comprising horizontal sills

1, uprights or standards 2, top and bottom bars 3 3^a, and longitudinal bars 4 4^a, secured upon the bars 3. A circular saw B is mounted on an arbor 5, which is driven from the shaft 6, having its bearings in the lower portion of the frame. The said shaft 6 is provided with a fly-wheel 7 and a large band-pulley 8, from which a band or belt 9 runs to a similar pulley 8^a on the saw-shaft 5. A sprocket-wheel 10 is applied to the drive-shaft 6 to provide for the application of power. A rectangular table or top C (see Figs. 3 and 7) is applied to the top of the frame A. It is held in due position and is adapted to be moved easily or with the application of very slight force by the provision of antifriction-rollers 11 and 12—that is to say, such rollers are arranged on the upper side of the top longitudinal bars 4 and 4^a, also on the outer side of the bar 4, while the rollers 12 are journaled at the ends of plate-springs 13, which are suitably attached to the bar 4^a. It will be understood that the side rollers work in contact with the pendent flange *c* of the top C and that the springs 13 provide an easy bearing for the rollers 12 and hold the top C in close working contact with the side rollers 11. By compressing the springs 13 the lateral pressure on the flange *c* of the top is relieved, so that the top may be removed without difficulty whenever occasion may require. The top C is provided with an extended lengthwise slot *c'* (see Fig. 3) for accommodation of the saw B, and I provide each end of the top frame with an adjustable stop 14 (see Figs. 1 and 8) for limiting the lengthwise movement of the top C. Said stops consist of headed screw-bolts, which work through nuts 15, secured in a cleat 16, forming an attachment of the top bars 3. The said screw-bolts are provided with radial fingers or hand-wheels 17 for rotating them. It is obvious that this device may be easily and quickly adjusted as required to limit the movement of the top C in order to prevent the saw striking the ends of the slot *c'*.

The means for supporting and adjusting the gage-board D upon the top C (see Fig. 3) are as follows: Two rods or bars 18 are journaled in suitable holders or bearings in vertical position on the rear side of the board D. The central portions of these bars 18 are pro-

vided with clamps 19, (see Fig. 3^a,) which serve to hold other vertical bars 20. The lower ends of the rods 20 are connected by right-angular rods 21 with another rod 22, which is
 5 slidable in an eye 23, forming a fixed attachment of the top C. The rod 21 (see Fig. 6) is secured to the rod 22 by clamp 26, consisting of a screw-eye and nut. The upper end of the rod 20 is connected with the horizontal
 10 rod 21 by a diagonal rod 25, whose lower end is secured adjustably by a clamp 24, (see Figs. 3 and 5,) the said clamp consisting of a U-shaped screw-bolt and nuts applied to its threaded ends, a washer 27 being arranged between the rods 21 25. The diagonal rods 25
 15 are jointed at 25^a, as shown in Fig. 3. It will be seen that this mechanism is adapted to be easily and quickly manipulated for adjusting and supporting the gage-board D at different
 20 vertical and horizontal angles, as indicated in Figs. 9 and 10. To illustrate, the gage-board D may be inclined at a vertical angle, as shown in Fig. 9, for the purpose of enabling the machine to be used for cutting bevels on
 25 edges of boards, for which purpose the rods 22 are slid back in the clamps 23, attached to the top C, and the diagonal brace-rods 25 may be adjusted backward on the rods 21 by loosening the clamps 24, and, if required, the
 30 clamps 26 may also be slid back on the rods 22. Thus by adjustment of the clamps 23 24 26 a great amplitude of adjustment is provided for. It will be understood that for a slight adjustment it will only be necessary to
 35 move the clamp 24 backward on the angle-rods 21.

The joint 25^a of rods 25 also allows the latter to be bent at a greater or less angle to hold the board D more or less inclined. When
 40 the rods 25 are so bent, the clamps 24 will hold them securely in such position.

If it be desired to move the gage D bodily backward from the saw to accommodate board or lumber of increased width or to
 45 make a deeper cut in the lumber, the clamps 26 are loosened and slid back on the rods 22, or, if necessary, the rods 22 may be also slid backward in the clamps 23. Again, if it be desired to set the gage D at a horizontal
 50 angle to the plane of the saw, as illustrated diagrammatically in Fig. 10, then the adjustment is effected by manipulation of one of the two sets of adjusting devices, the other being allowed to remain in its original position and the gage swung on one of the rods
 55 20 as a center. In this manipulation or adjustment the rods 20 and 18 turn together, being held together by the clamps 19.

It commonly occurs that the lumber being
 60 sawed requires to be supported at its outer or free end, and for this purpose I provide the wheeled carrier E. (See Figs. 2, 3, 4.) The same comprises a box 27, adapted for receiving the end of the board or other piece of
 65 lumber, a top or rest board 28, and wheels 29, which run upon a horizontal track 30, that forms an attachment of a cross-bar 31, sup-

ported by adjustable legs or standards 32. Said standards are fixed in a suitable base 33 (see Fig. 3) and are adapted for vertical ex-
 70 tension by means of screw-bolts 34 passing through slots, as shown best in Fig. 2. The carrier proper, 27, is connected with the sliding top C of the machine (see Fig. 3) by means of extensible bars 35. Said bars are formed
 75 of two parts, one lapping upon the other and secured together adjustably by means of clamps 36, which allow one part to be slid lengthwise upon the other. The said bars 35
 80 are permanently attached to the machine-top C on one side thereof by means of bolts passing through lugs 37, (see Fig. 10) and are similarly secured to bars 38, forming an attachment of the carrier E. A diagonal brace-
 85 bar 39 (see Fig. 3) is applied to the extensible bars 35 at a point adjacent to the carrier E. Said brace 39 is pivoted to one of the extensible bars 35 at one end and has an adjustable attachment at its other end and with the op-
 90 posite extensible bar 35. Such adjustment is provided for by means of a bolt and slot, as shown. It will be seen that this construction and combination of parts adapts the carrier E to be set at any height that may be
 95 required, also to be adjusted at any angle to the machine-top C and gage-board D which may be desired. When the board is to be supported by the carrier E, its free end is first laid upon the top 28 and allowed
 100 to rest there until the exact adjustment and length are ascertained. When the board is to be cut at a different length, the distance of the carrier E from the saw will be accurately determined by means of the usual
 105 measuring-pole. Then the free end of the board will be laid in the box E, so as to abut the vertical wall or end of the same. As shown in Fig. 4, the parts 38 to which the extensible bars 35 are bolted extend beneath the
 110 carrier-box 27 and up the outer side of the same, where they are again bent at right angles to adapt them to form bearings for the grooved rollers 29. This construction and arrangement of parts are at once strong, simple, and durable.
 115

It will be seen that the vertical frame supporting the carrier E must be adjusted at different angles to the side of the machine-top C in case the piece of lumber which the carrier supports is being sawed at an angle.
 120

The top C is readily detachable from the frame of the machine and the gage D and its adjusting mechanism are easily removable from the top C. The carrier E and its extensible bars are also adapted for convenient attachment from the top, so that but little time is required to adapt the machine for sawing
 125 short or long pieces of lumber.

What I claim is—

1. In a sawing-machine the combination
 130 with a frame and saw mounted therein and a horizontal slidable top applied thereon of a traveling lumber-carrier which is arranged laterally from said top and means for con-

necting it with the latter whereby both move together and a support for said carrier substantially as shown and described.

2. In a sawing-machine the combination
5 with a frame having a saw mounted therein and a top adapted to slide thereon, of a traveling-carrier having a suitable support upon which it is adapted to move, and extensible
10 devices connecting the carrier and top whereby the carrier may be set at different distances therefrom substantially as shown and described.

3. In a sawing-machine the combination
15 with the frame and saw and a slidable top mounted on the frame of the lumber-carrier having a box or receptacle for the free end of the lumber and extensible bars connecting
20 the carrier with the top whereby both are readily connected and adapted to move together and a support for said carrier substantially as shown and described.

4. In a sawing-machine the combination
25 with a frame, a top therefor and a saw of a lumber-carrier having wheels, a track on which said wheels are adapted to run, a frame upon which the said track is supported the
30 said frame being vertically adjustable, and means for connecting the carrier with the top substantially as shown and described.

5. The combination with the frame, a saw
35 and a top which is movable on said frame of a lumber-carrier and a suitable support therefor, extensible bars connecting the carrier with the top and means for locking the said
40 bars so that the carrier may be held at different angles substantially as shown and described.

6. The combination with a frame, a saw,
45 and a top adapted to slide on said frame of the lumber-carrier and means for supporting the same so it may travel laterally and means for connecting the carrier with the top and for
50 securing the carrier at different horizontal angles to the saw substantially as shown and described.

7. The combination with a frame and saw
55 and a movable top applied to said frame of a lumber-carrier arranged laterally from the top two bars connecting it with the top and a diagonal brace pivoted to one of said bars
60 and having an adjustable connection with the other whereby the carrier may be shifted and held at different horizontal angles to the saw substantially as shown and described.

8. The combination with a frame and saw
65 and a movable top mounted on the frame of a lumber-carrier arranged laterally from the

top, means for connecting the carrier with the top so that they move together, a horizontal track upon which the carrier runs and stand-
70 ards supporting said track and adapted for vertical extension whereby the track may be adjusted higher or lower according to conditions of work substantially as shown and described.

9. The combination with the frame, the saw
75 and a movable top mounted on the frame of a lumber-carrier comprising a top-rest extended horizontally and a lower box or keeper for the end of the lumber, a support upon which the
80 carrier travels laterally and means for connecting the carrier rigidly with the top substantially as shown and described.

10. The combination with the saw, the frame
85 and a top adapted to slide on the latter of the lumber-carrier having wheels and a track whereon the wheels run of right-angular bars secured to the bottom and outer end of the carrier and forming bearings for the wheels and
90 bars connecting the carrier and top, the same being detachably secured to the aforesaid right-angular bars substantially as shown and described.

11. The combination with the frame, the saw
95 and a movable top of the lumber-carrier the removable and portable support therefor upon which it travels and means for connecting the carrier with the top which are detachably secured to both substantially as shown and described.

12. The combination with the saw and frame
100 having side and top rollers of the movable top having a pendent flange and springs attached to the frame and carrying rollers at their free ends which work in contact with one of the
105 side flanges of the top substantially as shown and described.

13. The combination with a frame, a saw
110 journaled therein, and a gage-board and means for adjusting it at different horizontal angles on said top, of the movable lumber-carrier and a support whereon it travels, and longitudinally-adjustable devices which rigidly connect the carrier with the table-top,
115 whereby the carrier and top move together and the former is adjustable at different angles to the top corresponding to different angles of the gage-board, as shown and described.

JOHN THOMAS MARSH.

Witnesses:

SOLON C. KEMON,
AMOS W. HART.