

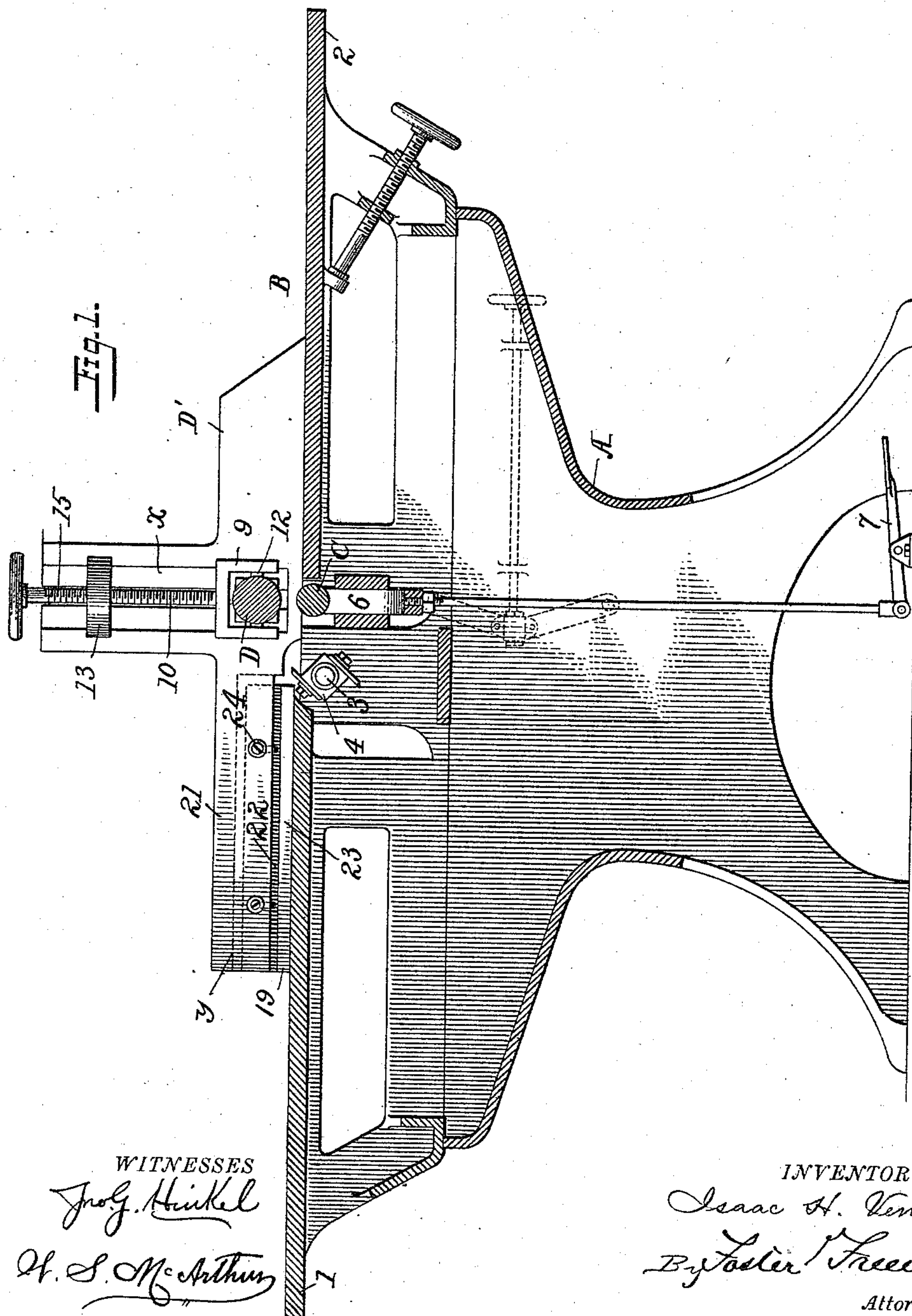
(No Model.)

2 Sheets—Sheet 1.

I. H. VENN.
PLANING MACHINE.

No. 470,404.

Patented Mar. 8, 1892.



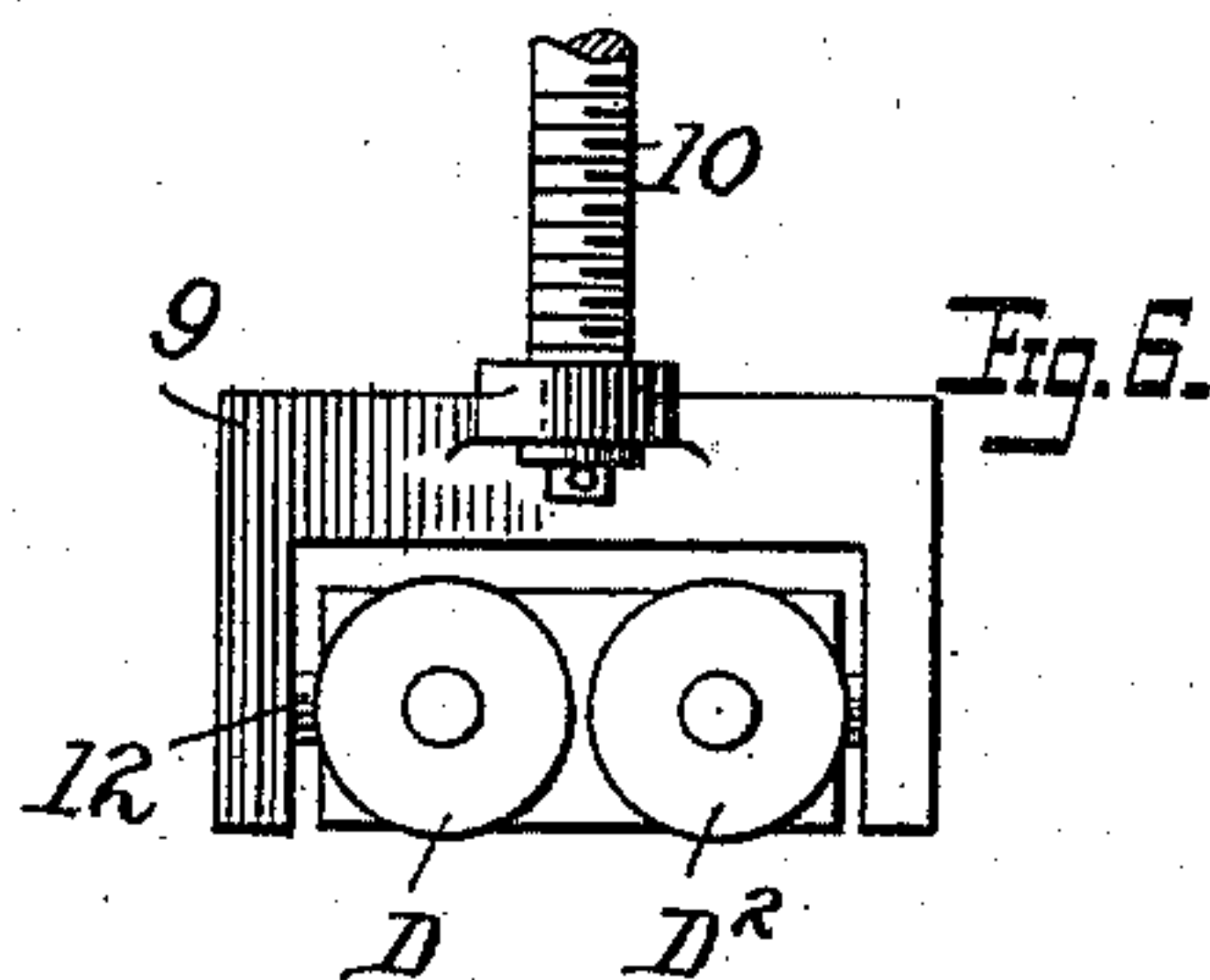
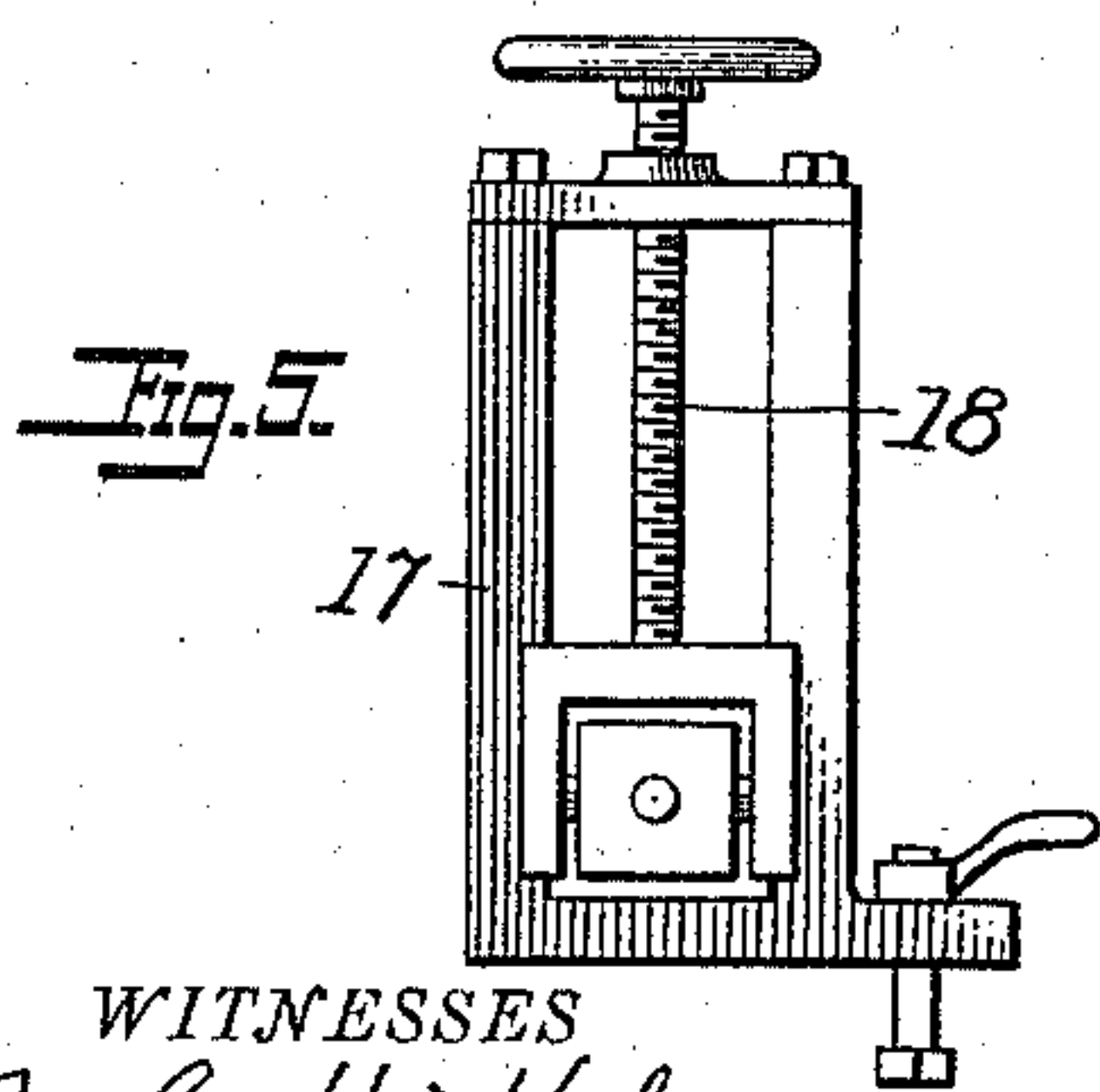
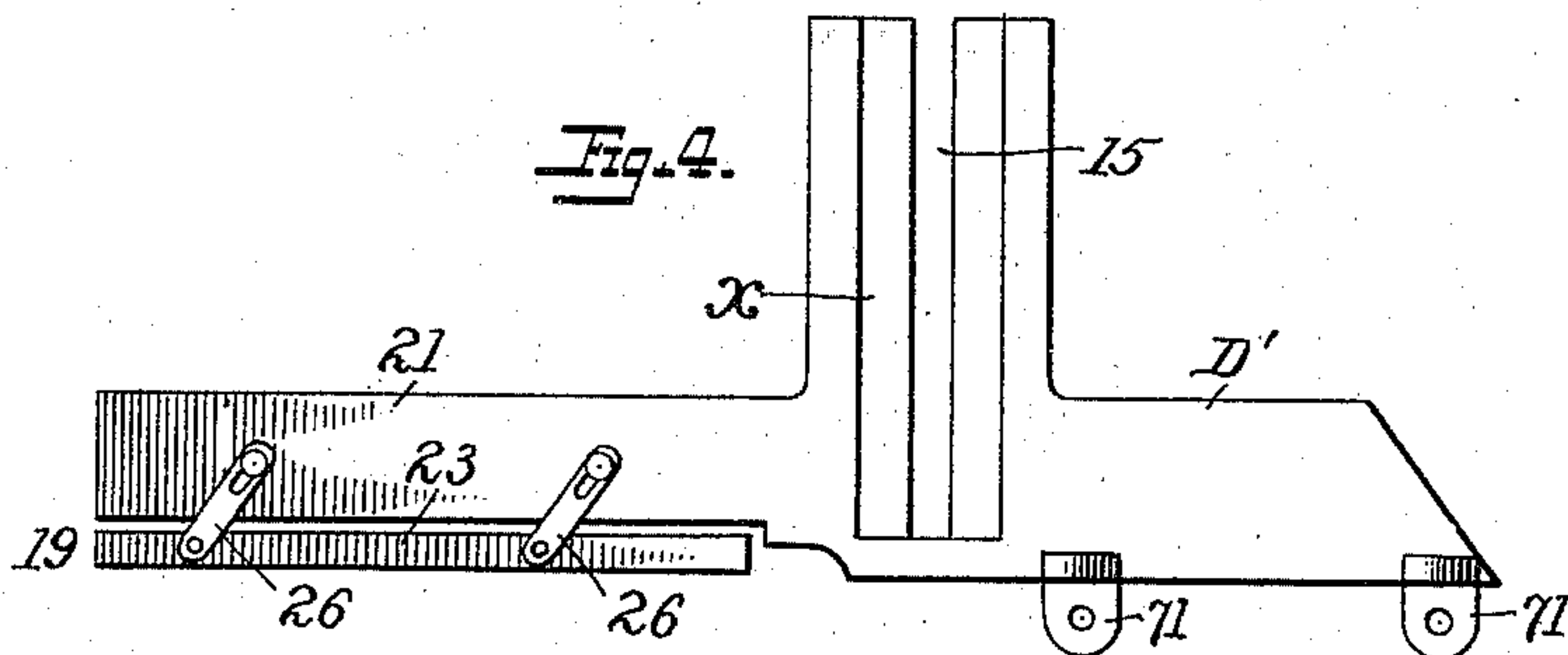
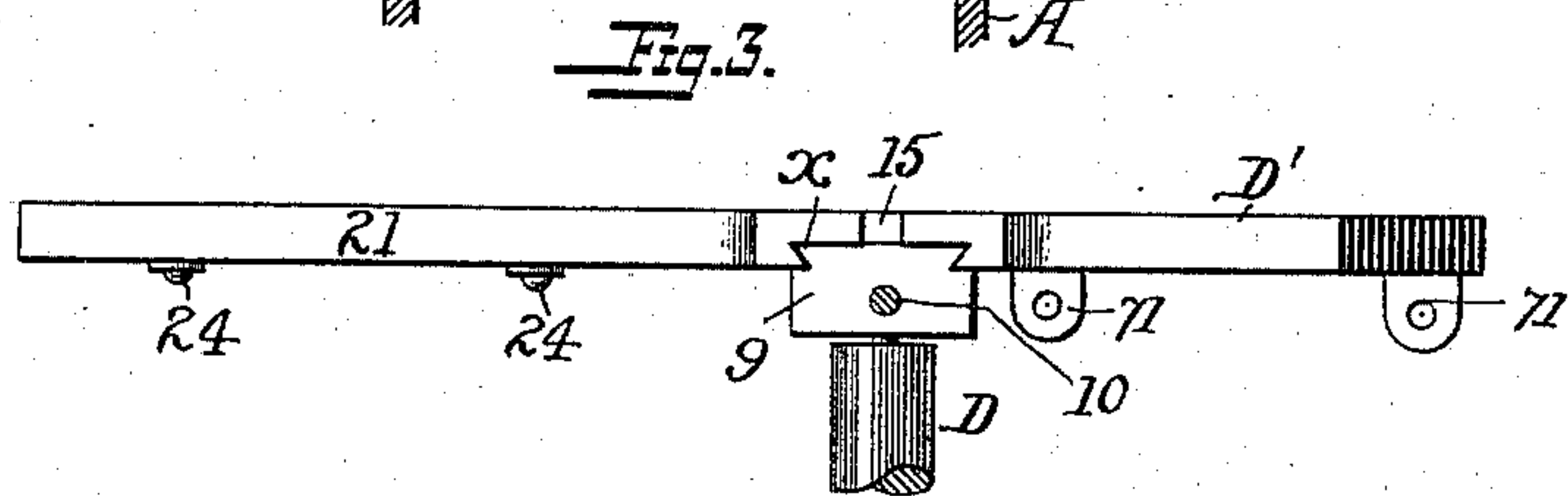
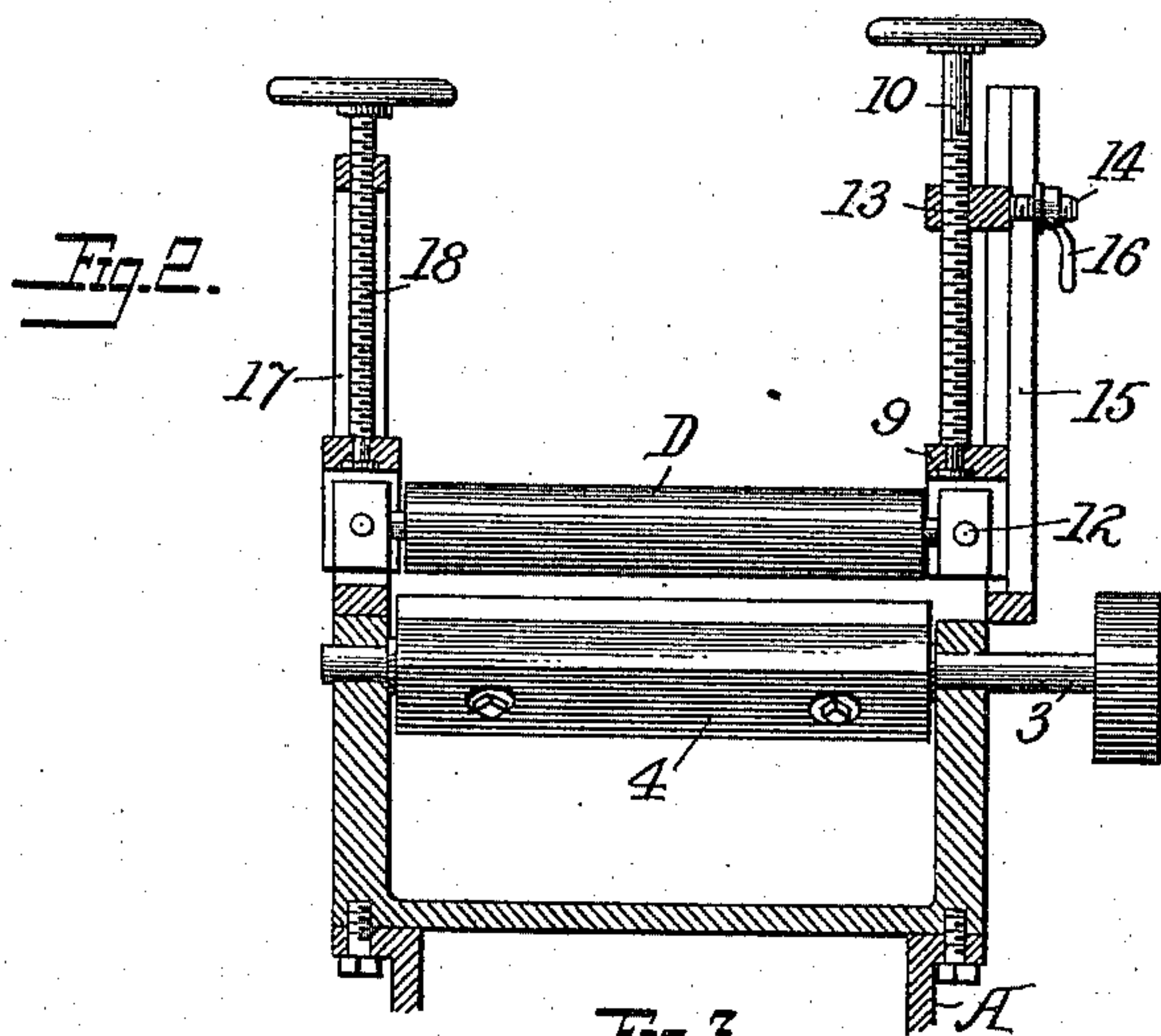
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2 Sheets—Sheet 2.

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PLANING MACHINE.

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WITNESSES
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UNITED STATES PATENT OFFICE.

ISAAC H. VENN, OF YONKERS, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN HENRY CARSON, OF SAME PLACE.

PLANING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 470,404, dated March 8, 1892.

Application filed January 6, 1891. Serial No. 376,881. (No model.)

To all whom it may concern:

Be it known that I, ISAAC H. VENN, a citizen of the United States, residing at Yonkers, Westchester county, New York, have invented certain new and useful Improvements in Planing-Machines, of which the following is a specification.

My invention relates to hand jointers and planers; and it consists in means whereby to insure the dressing of the opposite faces of the strips to true planes and out of wind, as fully set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional elevation of a jointer or hand-planer provided with my improvements. Fig. 2 is a transverse sectional elevation. Fig. 3 is a plan view of the side guide. Fig. 4 is a side view of said guide detached. Fig. 5 is a view of the opposite guide or bracket detached. Fig. 6 is a detached view illustrating a modification.

A represents the frame of a hand-planer, provided with an upper platform B, consisting of the fixed table 1 and the diagonally-movable table 2, and between the tables revolves the shaft 3, carrying the planer-head 4, as usual.

In using hand planers and jointers of the ordinary construction it is difficult to secure surfaces coinciding with flat planes when the boards are at all twisted, and this is specially the case when it is desired to plane the surfaces of boards that are thicker at one edge than at the other, and to overcome these defects I combine with the stationary and movable tables and cutter the parts which I will now describe.

Above the movable table or above the space between the two tables I mount, adjustably, a roller D, and I support the ends of this roller so that either or both ends may be elevated or depressed to any desired extent, so as to bring the bearing face or line of the roller to coincide with the plane of the upper surface of the board to be dressed. Thus if the two faces of the board are to be parallel and the board is to be an inch in thickness when dressed, the roller D is set so that its bearing edge will be exactly parallel to the table and one inch above the cutting-plane

of the knives, and the board is then passed along the table and subjected to the action of the knives, when its lower face will be cut to a true plane out of wind and absolutely parallel to the upper face.

If the board is to be cut tapering—that is, if one edge of the board is to be thicker than the other—the roller D is set at an angle to correspond to the plane of the upper face and at such a distance from the cutting-plane of the cutter as will correspond to the desired thickness of the dressed board. The board is then passed along the table, when it will be planed upon the under side and after being reversed will be planed upon the opposite side to the desired thickness, true to gage, and out of wind for its entire length.

In order to keep the end of the board as it is passed toward the knives firmly in position against the bearing edge of the roll D, I make use of a presser-roll C, supported by a frame 6, movable vertically in suitable guides and connected to a treadle 7, so that the operator can by the pressure of his foot force the roll C upward against the under side of the board and hold the latter firmly against the roll D until the end of the board takes its bearing upon the platform 1. Any other desired means for lifting the pressure-roll C may be employed—as, for instance, a toggle and hand-screw, as shown in dotted lines, Fig. 1.

Any suitable means may be employed for supporting and adjusting the ends of the roll D, and I will now describe one arrangement which I have found to be effective. The machine is provided with a guide-plate D' at one side of the table, which guide-plate may be bolted to or form part of the main frame of the machine, or, as shown, may be connected to the movable table 2. In order to adapt my invention to machines already in use, the guide D' is preferably constructed with attachments in the form of perforated lugs or ears 7, or otherwise, for connecting it to the table of the ordinary machines. The guide D' is provided with a suitable support for a vertically-adjustable bearing for one end of the roller D. Thus a dovetailed channel α extends vertically along the inner face of the guide, and in this channel slides a re-

cessed block or frame 9, vertically adjustable by means of a screw 10, and in the said frame swings upon horizontal trunnions 12 12, a block receiving one of the journals of the roller D, said block accommodating itself to the inclination of the roller as the frame 9 is raised and lowered. The screw 10 turns in a nut 13, provided with a threaded stem 14, extending through a vertical slot 15 in the guide-plate and carrying a hand-nut 16, which serves to secure the device in any position to which it may be adjusted along the slot 15. The construction described permits the roller-bearing to be lifted to any desired extent or wholly detached, together with the roller when necessary. The opposite bearing of the roller is constructed in like manner to be vertically adjustable in a bracket 17 by means of a screw 18, the bracket 17 being preferably constructed for attachment to machines already in use.

As the elevation of the table 2 would lift the lower edge of the guide D' above the face of the table 1, I provide the guide D' with a movable section 19, which may rest upon the face of the table 1, whatever may be the elevated position of the other portion of the guide. Thus the arm 21 of the guide D' has a longitudinal vertical slot *y* to receive the web 22 of the section 23, bolts 24 passing through slots in the web and to the arm 21. Any other suitable means of connecting the movable section 19 with the arm 21 of the guide D' may be employed—as, for instance, pivoted links 26, slotted to receive the bolts 24, as shown in Fig. 4.

Instead of the single roller D, two rollers D², arranged in the same plane, may be carried by the movable end bearings, as shown in Fig. 6. This secures a better bearing for the strip or board.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. The combination, in a planing-machine,

of a revolving cutter turning in fixed bearings 45 below the table, and a transverse roller arranged adjacent to the cutter above the table, and means for independently adjusting positively the opposite ends thereof and for securing the same in fixed positions after adjustment to act as a guide to hold the board in its position in respect to the cutter, whatever may be the inclination of the upper surface of the board, substantially as set forth.

2. The combination, with the table, the bearing-roller, and the cutter of a hand-planer, of a guide D', supporting the vertically-adjustable bearing for one end of a transverse roller and having a vertical slot 15, a nut having a stem extending through said slot and means for securing the same in different positions, and a screw 10, extending through the nut and connected with the roller-bearing, substantially as set forth.

3. The combination of the bearing-roller, the cutter, the upper platform 1, the movable platform 2, and the guide D', connected with the movable platform and provided with a section vertically movable and bearing upon the other platform, substantially as described.

4. The combination, with the platform and the cutter of a hand-planer, of the supports on the opposite sides of the planer, an adjustable bearing on each side of the planer, mounted upon the said supports, and the two rollers D², arranged in the same plane and both on the same side of the board being planed and both rollers having their trunnions or shafts mounted in the same bearings, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC H. VENN.

Witnesses:

JAMES S. FITCH,
O. B. WARING.