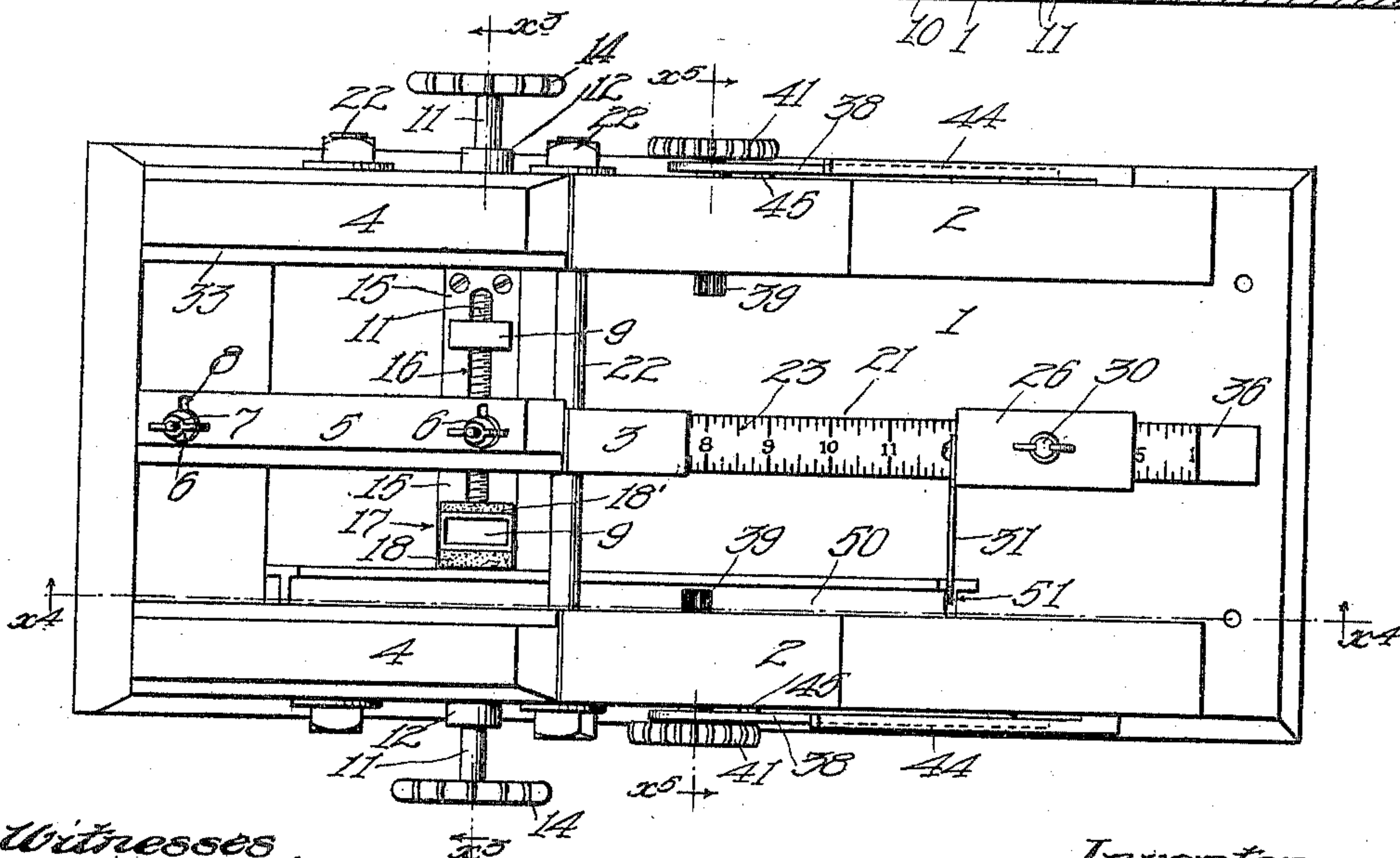
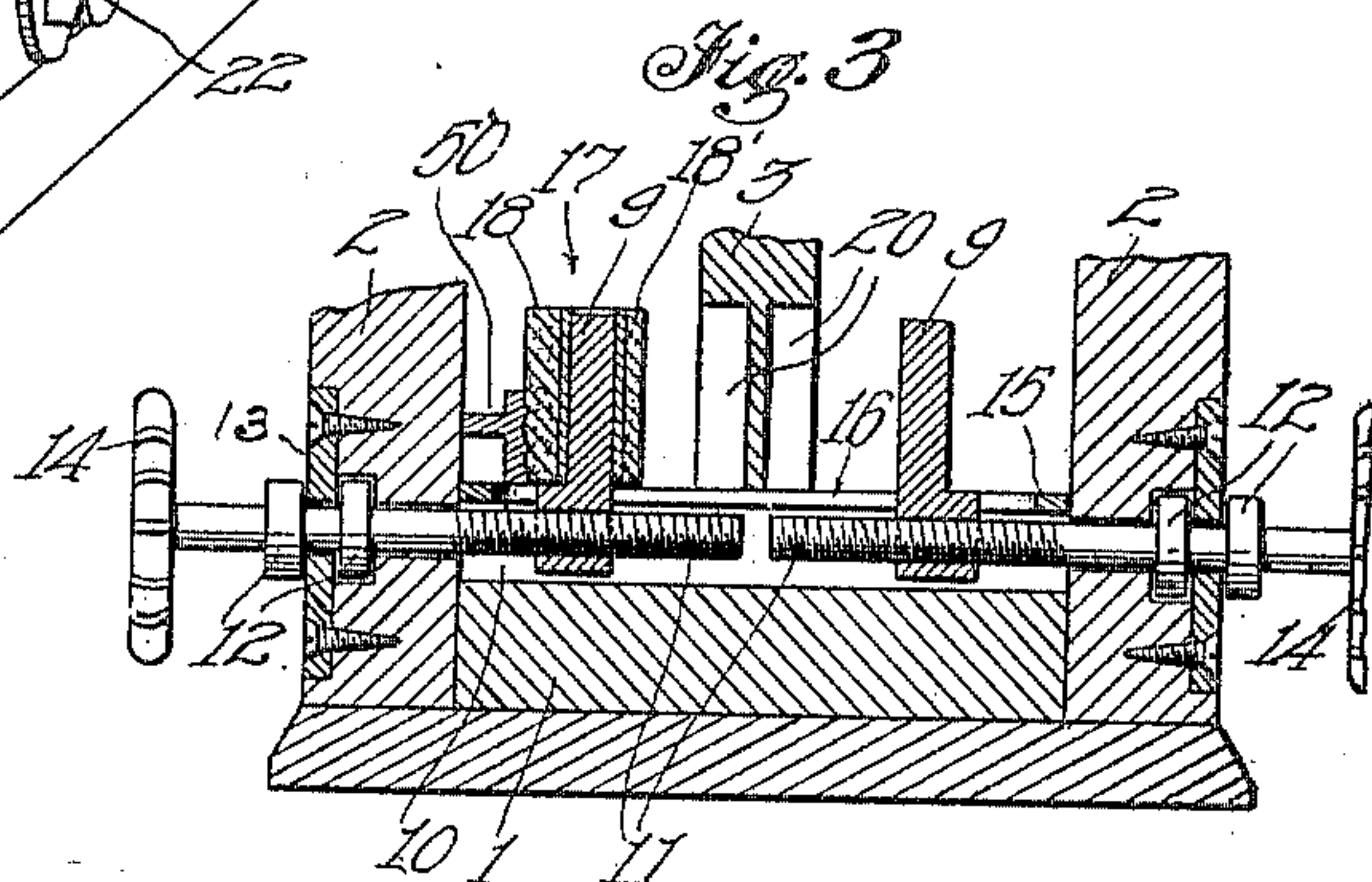
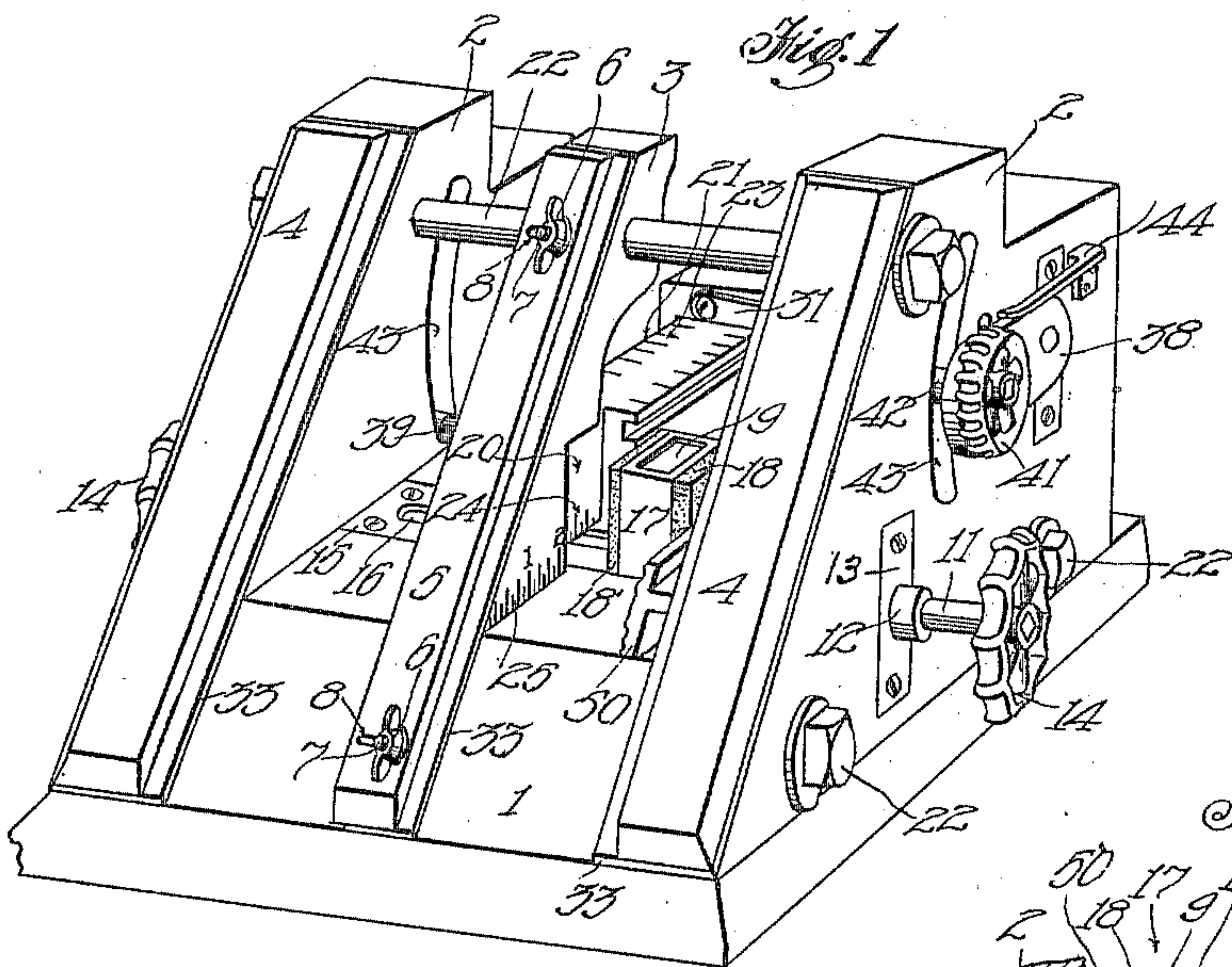


No. 817,466.

PATENTED APR. 10, 1906.

J. E. BRAGGINS.
PICTURE FRAME JOINTER.
APPLICATION FILED MAR. 25, 1905.

2 SHEETS—SHEET 1.



Witnesses
J. M. W. Field
A. P. Knight

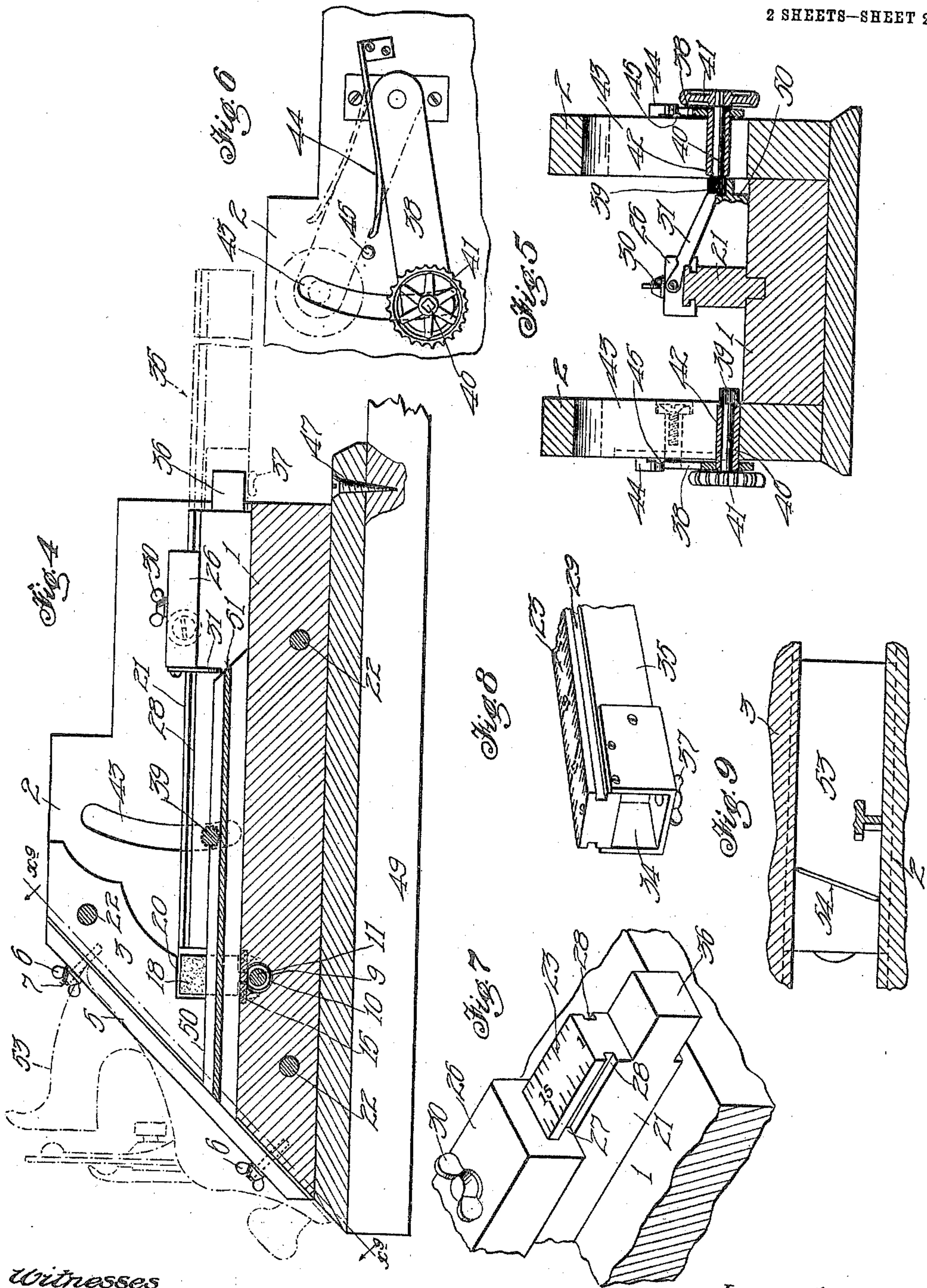
Inventor
John E. Braggins
By Townsend Bros
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his Attys

UNITED STATES PATENT OFFICE.

JOHN E. BRAGGINS, OF LOS ANGELES, CALIFORNIA.

PICTURE-FRAME JOINTER.

No. 817,466.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed March 25, 1905. Serial No. 251,926.

To all whom it may concern:

Be it known that I, JOHN E. BRAGGINS, a citizen of the United States, residing at Los Angeles, county of Los Angeles, and State of California, have invented a new and useful Picture-Frame Jointer, of which the following is a specification.

This invention relates particularly to a device adapted for use in forming or finishing bevels on the ends of wooden strips or bars—for example, in beveling or mitering the ends of picture-frame strips or molding. The forming of such bevels by sawing leaves a rough and more or less uneven surface, which does not give a perfect joint; and the main object of the present invention is to provide a device whereby the surfaces of such joint can be made smooth and even, so as to give a true and substantially invisible joint. This is accomplished by providing a device wherein the beveled or mitered ends of the strip can be formed or finished by planing, the device comprising a box or holder in which the strip is held for operation thereon with a suitable plane, the said box or holder also serving as a guide for the operation of the plane.

A further object of the invention is to provide, in a device of this character, means for holding for the planing operation strips intended for opposite parts of the frame—for example, lower and upper strips.

Another object of the invention is to provide, in a device of this character, means for feeding or moving the strips forward or backward to bring them to the proper position for planing.

Another object of the invention is to provide in a device of this character means for gaging or setting the position of the strip so that it can be cut accurately to the proper length.

The accompanying drawings illustrate the invention.

Figure 1 is a perspective of the planing miter-box. Fig. 2 is a plan thereof. Fig. 3 is a section on the line X³ X³ in Fig. 2. Fig. 4 is a section on the line X⁴ X⁴ in Fig. 2. Fig. 5 is a section on the line X⁵ X⁵ in Fig. 2. Fig. 6 is a fragmentary side elevation showing the feeding device. Fig. 7 is a fragmentary perspective of the terminal portion of the scale device for gaging the position of the strip to be operated upon. Fig. 8 is a fragmentary perspective of the end of an extension scale device adapted for attachment to the scale

device aforesaid. Fig. 9 is a sectional view on the line X⁹ X⁹ in Fig. 4.

The box comprises a box or frame formed with a bottom or base 1 and side plates or walls 2, all of which may be of wood or other suitable material and may be fastened together by bolts or cross-bars 22. These parts 1 and 2 form at the corner where they meet a guideway or support for holding and guiding the strip whose end is to be planed. The forward ends of these parts are oblique, beveled, or inclined at the angle required for the joint of the pieces to be planed—for example, forty-five degrees. It is preferred to make the device in duplicate, or with parts respectively for right and left hand or reverse work, and for this purpose an intermediate member 3 is provided between the two side members or walls 2, said member 3 extending vertically from the base member 1 and having its forward surface oblique or inclined in the same plane as the forward surfaces of the side walls 2. The oblique forward surfaces of the members 2 and 3 constitute the means whereby the planing or cutting tool herein-after referred to is supported and guided at the proper angle to plane or cut the strip at the desired bevel. To guide the plane on these surfaces and prevent lateral displacement, guide-strips are provided, consisting of strips 4, fixed to the oblique ends of the side walls 2, and a strip 5, fastened to the oblique face of the intermediate member 3 by means permitting lateral adjustment, such means consisting, for example, of clamp-screw devices, such as butterfly-nuts 6, working on bolts 7, which extend upwardly from the member 3 through laterally-extending slots 8 in the said strip 5. By means of this lateral adjustment the guideways between the respective strips 4 and 5 can be adjusted in width to work properly with different widths of planes.

Wear-plates 33 may be fastened on the forward oblique faces of parts 2 and 3 to lessen the friction and wear of the plane thereon.

The strip or work to be operated on is placed in one or the other side of the frame or box against the side wall 2 at that side, being held against said wall by suitable clamp means, consisting, for example, of a clamp block or arm 9, whose lower end portion works in a transverse slot or groove 10 in the base-plate 1 and is formed as a nut engaging on a screw 11, which passes through said side

wall 2 and is provided with means for preventing endwise movement, for example, with collars 12, engaging on opposite sides of a plate 13, fastened to the said side wall 2.

5 The outer end of the screw 11 carries a handle or hand-wheel 14, whereby the screw may be operated to cause the head or block 9 to travel inwardly or outwardly, as may be required. A metal guide-plate 15 is desirably se-

10 cured to the bottom plate 1 over the slot 10, said guide-plate being formed with a slot 16, which is traversed by a block 9, said block fitting and sliding in said slot, so as to work forward and backward with a minimum of

15 friction. The two screws 11 on the respective sides of the device are desirably in line with one another, the blocks 9 working in the same slots 10 and 16, which extend across from side to side, or practically so.

20 A clamp-jaw, preferably formed as a cap or sleeve 17, is desirably provided for fitting over either one of the clamp-arms 9, said cap or sleeve having two opposite faces formed of different thickness, as shown at 18 and 18', so

25 that by reversing said cap or sleeve on the arm the jaw-face which is nearest to the adjacent side wall 2 may be brought closer to or farther from said side wall. Said cap or sleeve is preferably faced with leather or

30 some other somewhat yielding material adapted to tightly grip or clamp the strip to be operated on without injury thereto, it being understood that the face of the said strip which is next to the clamping device will gen-

35 erally be molded and more or less fragile. The intermediate member 3 is desirably inset at each side, as shown at 20, to allow full travel of these clamping devices.

A scale or gage device is provided, preferably consisting of a strip 21, attached to the

40 base-board 1 and extending in a longitudinal direction substantially in line with the intermediate member 3, provided with graduations or inch-marks 23, preferably on its up-

45 per face. The said graduations are continued, as at 24, on the faces of the inset portions 20 aforesaid and also, as indicated at 25, on the side faces of the member 3 forwardly to the meeting-point of the beveled faces of

50 the members 1 and 3. A gage block or device 26 is arranged to slide on the gage or scale member 21, the said block having in-turned flanges 27 running in grooves 28 on the respective sides of the said scale member

55 and a clamp-screw 30 being provided in the block for engagement with the scale member to clamp the block tightly in any desired position. Said block has an arm 31 extending laterally therefrom, said arm being prefer-

60 ably pivoted midway of the width of the said block, so as to swing to one side or the other of the device, and being preferably pointed at its free end, so as to turn down to exactly the desired point of the rabbet or strip to be op-

65 erated upon—for example, to the corner or

chamfer of the rearward end of the strip, as shown in Fig. 4.

In case the work or strip to be planed is longer than the box or frame 1 2 an extension-piece (shown in Fig. 8) may be used to

70 lengthen the scale, so that such longer strips may be accurately placed and planed. Such extension-piece is similar in form to the main scale member 21, having similar grooves 29 and inch-marks 23, and is provided with

75 means for attachment to the main scale member or to the frame, such means consisting, for example, of a socket or box 34, adapted to fit over a lug or tenon 36 on the end of the scale member 21. Said socket may

80 be formed of a U-shaped metal plate fastened to the scale extension member 35, the latter being recessed in its lower portion to form, in conjunction with said U-shaped plate, a rec-

85 tangular socket or mortise adapted to fit over the square dowel-pin or tenon 36 on the member 21. A clamp-screw 37 may be provided in the socket-plate for clamping the extension-piece in place.

Means are provided for feeding or moving

90 the strip, rabbet, or molding to be planed forward or backward in the way or guide therefor, formed by the bed-plate 1 and adjacent side wall 2, the object of such feeding means being to give a closer or more accurate

95 adjustment or setting than could be effected by direct operation by the hand. For this purpose levers 38 are pivoted to the respective side walls 2—for example, on the outside thereof—each lever 38 having a feed-pinion

100 39 journaled therein near its free end, the shaft 40 of said pinion carrying an operating hand-wheel 41, whereby the pinion may be turned, and said shaft extending through a

105 boss or lug 42 on the lever 38, said lug traversing a slot 43 in the side wall 2, so that the pinion which is carried at the inner end of the shaft 40 extends on the inside of the wall 2 in position over the path of movement or

110 location of the strip to be operated upon, so as to engage the upper edge of said strip. The weight of the lever 38 and connected parts will serve to press the same onto the said strip, and this action may be reinforced

115 by a spring 44, attached to the side wall 2 and bearing on said lever. A stop-pin 45 projects slightly from the outside of wall 2 in position to be engaged by the lever when the latter is raised, so that by pushing the lever

120 over toward the wall its downward movement will be arrested by the said stop-pin, holding the feed-pinion up to permit of easy insertion of the strip to be planed.

The device is used as follows: The box or frame 1 2 is preferably secured to a suitable

125 support, being, for example, secured by screws 47 to a bench-top or other fixture, (indicated at 49.) The strip, molding, or piece to be planed is assumed to have first been sawed in a miter-box or otherwise to approx-

130

imately the proper length and angle and is inserted in the track or way formed by the meeting inner faces of the base member 1 and the side wall 2, it being understood that the side strip or molding part (indicated at 50) will be placed in one or the other side of the box, so that the two flat faces of said strip or molding will come, respectively, against the base member and against the inner face of the wall 2. The feeding device 39, which has been elevated during this insertion of the strip 50, is now brought down onto the strip, and the hand-wheel 41 is turned in one direction or the other until the strip is brought to the desired longitudinal position, as determined by reading on the scale 21 with reference to the gage-block 26. Thus the jointer gage-block 26 is set rearward on the scale to a reading corresponding to the internal length of the strip, plus the allowance for the bevel or chamfer at the end, as will be well understood, and the strip being then fed or moved longitudinally until its chamfer or corner (indicated at 51) registers with the pointer or arm 31. The strip is then ready for clamping, and for this purpose the cap or sleeve 17 is slipped over the block or jaw 9 at that side of the machine with either its thinner or thicker face toward the strip, according to the thickness of the latter, a thinner strip requiring more space to be taken up, so that the thicker side of the said cap or sleeve will be placed toward the same. By means of the hand-wheel 14 the jaw or block 9 is then drawn toward the strip or molding-piece and the latter clamped firmly against the side wall 2. The plane (indicated at 53) is then placed in the guideway between the guide-strips 4 5 and is operated along said guideway to plane or cut the end of the strip. The most satisfactory results are obtained by using a skew-plane—that is to say, a plane wherein the bit 54 extends obliquely or at an angle to the direction of movement of the plane, as shown in Fig. 9.

What I claim is—

1. A jointer for picture-frame moldings comprising a base member having a transverse slot, and wall members, the forward faces of said members being oblique to said base member, a clamp-arm movable in said slot in the base member and extending upwardly into the space between the wall members, a screw in said slot engaging said clamp-arm to adjust the same toward a wall member for clamping a molding, handle means on said screw, a lever pivoted to one of the wall members, a shaft journaled on said lever and having a hand-wheel thereon for operating the same, the said wall member being slotted for the passage and movement of said shaft, and a rotary feeding device on the inner end of the shaft extending into the space between the said wall member and the intermediate member to engage and feed the molding.

2. A device for the purpose set forth comprising a base member, two side-wall members, an intermediate member, the forward faces of all of said members being oblique to the base member, clamp-arms movable transversely in the space between the intermediate member and the side-wall members, means for adjusting said clamp-arms toward and from the side-wall members, and jaws fitting over said arms, said jaws having faces of different thickness on opposite sides.

3. In a jointer for picture-frame moldings a base, two walls projecting therefrom, a scale member between such walls, a gage device slidable upon such scale member, a pointer pivoted upon such slidable gage and adapted to be swung toward either wall.

In testimony whereof I have hereunto set my hand, at Los Angeles, California, this 15th day of March, 1905.

JOHN E. BRAGGINS.

In presence of—

ARTHUR P. KNIGHT,
GEORGE T. HACKLEY.