(No Model.) 2 Sheets—Sheet 1.

C. A. WALTER & S. E. FOWLER.

MITERING MACHINE.

No. 565,652. Patented Aug. 11, 1896.

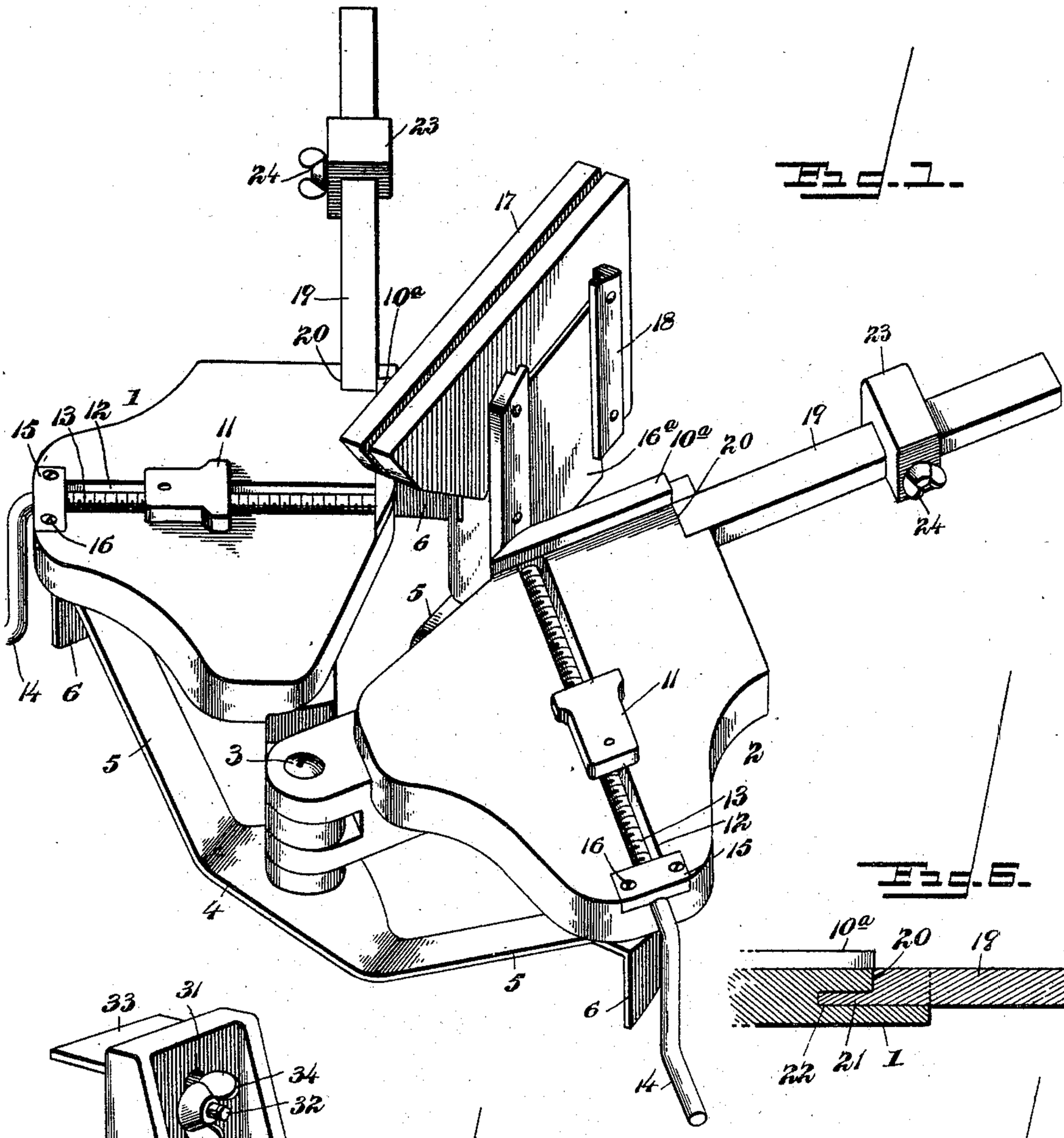

Fig. 1.

Fig. 6.

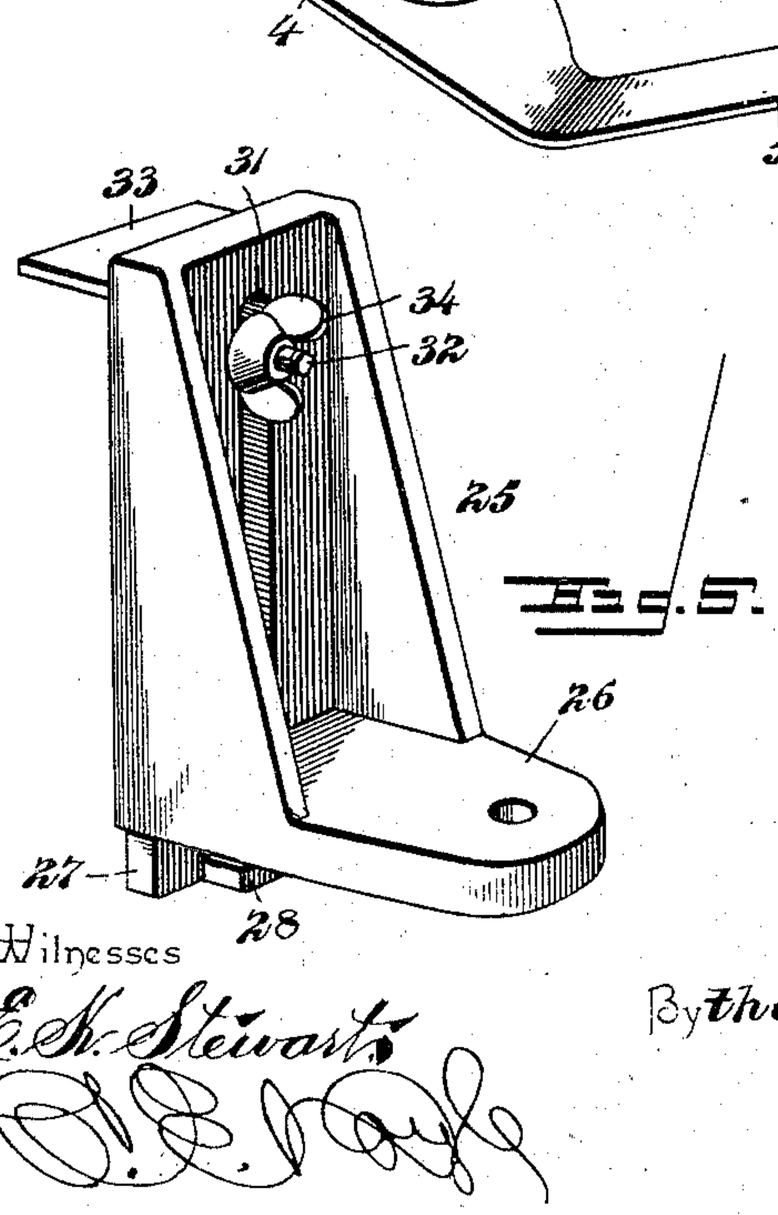

Fig. 5.

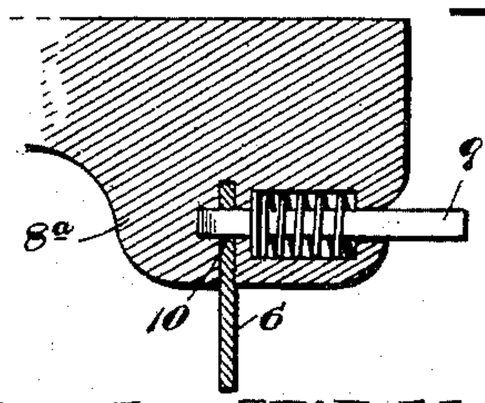

Fig. 7.

Witnesses
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O. E. Hoyle

Inventors
Charles A. Walter
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(No Model.) 2 Sheets—Sheet 2.

C. A. WALTER & S. E. FOWLER.

MITERING MACHINE.

No. 565,652. Patented Aug. 11, 1896.

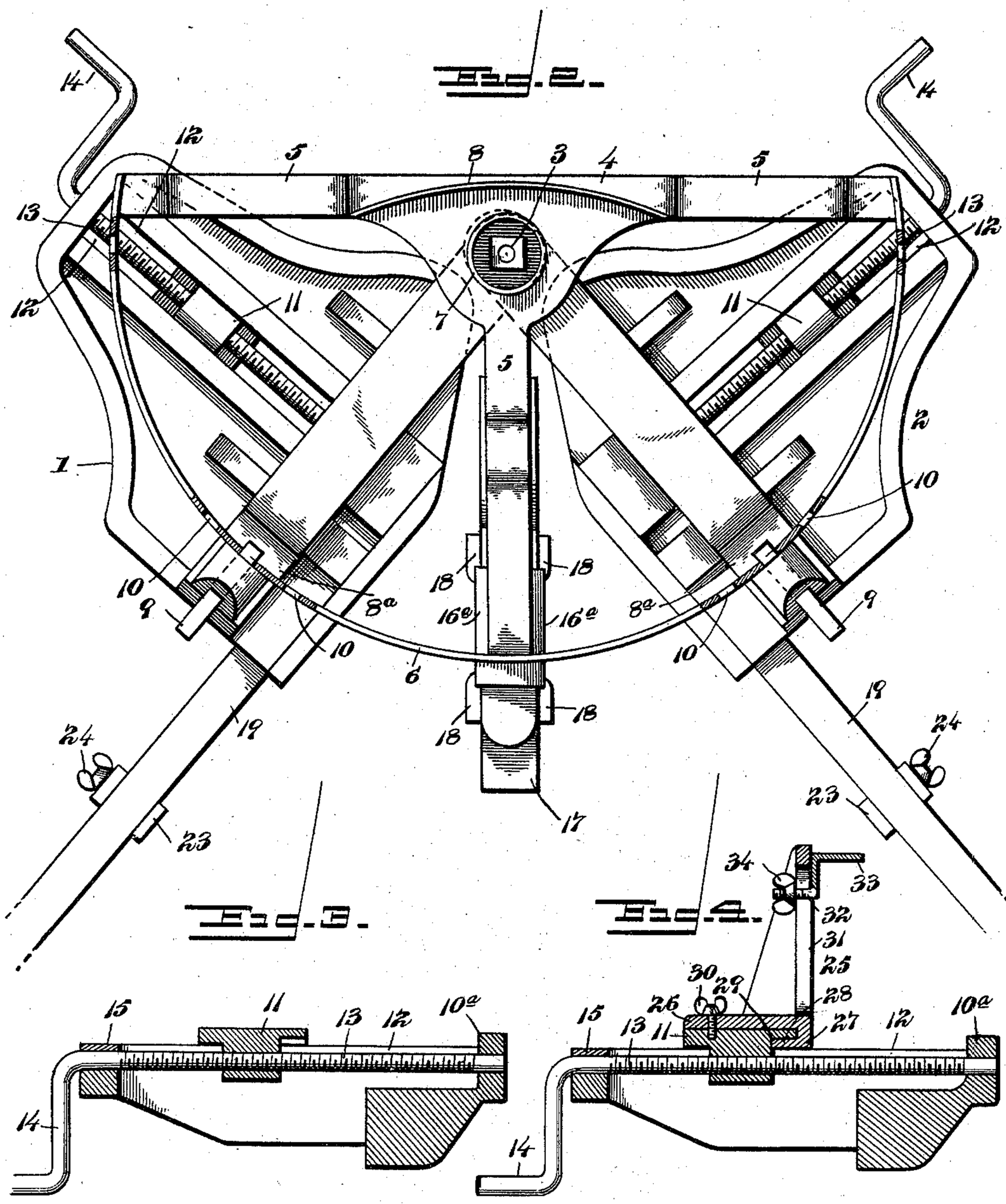

Fig. 3.

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES A. WALTER AND SYLVESTER E. FOWLER, OF ANNA, ILLINOIS.

MITERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 565,652, dated August 11, 1896.

Application filed August 21, 1895. Serial No. 560,025. (No model.)

To all whom it may concern:

Be it known that we, CHARLES A. WALTER and SYLVESTER E. FOWLER, citizens of the United States, residing at Anna, in the county of Union and State of Illinois, have invented a new and useful Mitering-Machine, of which the following is a specification.

Our invention relates to a mitering-machine, and has for its object to provide a simple and efficient device adapted to be adjusted to suit the different angles required between strips to be joined.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a mitering-machine embodying our invention. Fig. 2 is a bottom plan view of the same. Fig. 3 is a section of one of the clamps, taken parallel with the adjusting-screw. Fig. 4 is a similar view showing the auxiliary block carried by the movable jaw of the clamp to engage a hollow molding. Fig. 5 is a detail view in perspective of the auxiliary block. Fig. 6 is a detail section of a portion of the gage and the contiguous portion of a jaw to show the manner of securing the gage thereto. Fig. 7 is a detail sectional view showing one of the bolts for locking the jaws at the desired angular adjustment.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 and 2 designate angularly-adjustable clamps which are pivotally connected by a bolt 3, which also extends through a frame or spider 4, having arms 5, which support a segmental angle-gage 6, consisting of a curved metallic strip arranged cross-sectionally in a vertical plane. The spider is provided with depending webs 7 and 8, adapted to engage the surface of a bench or other support upon which the machine is mounted, and the angle-gage terminates at its lower edge approximately in the plane of the lower edges of said webs to correspondingly engage said surface.

The clamps are provided near their outer ends with guides 8^a to traverse the segmental gage, and contiguous to the guides are arranged spring-actuated locking-bolts 9 to engage perforations 10 in the gage, whereby the clamps may be arranged at any desired angular adjustment. The clamps consist, essentially, of flat plates, at the inner edges of which are arranged jaws 10^a to serve as bearings for the inner edges of the strips or moldings to be connected, and operating in lines perpendicular to the inner faces of said fixed jaws are the movable jaws 11, fitted in slots 12 in the plates forming the body portions of the clamps and operated by means of feed-screws 13. These feed-screws extend longitudinally through said slots and are provided at their outer extremities with cranks 14, the bearings for the feed-screws at the outer ends of the slots being provided with removable cap-plates 15, held in place by screws or bolts 16, whereby the removal of the cap-plates allows the removal of the feed-screws and movable jaws.

Arranged upon the frame between the inner edges of the adjustable clamps is a seat 16^a, consisting of parallel upright plates, and in this seat is fitted the saw-guide 17, preferably of wood, and provided upon its sides with metallic rabbeted guides 18 to engage the front and rear edges of the plates forming the seat. This construction provides for the removal of the saw-guide during the securing of the moldings after they have been cut at the proper angle to form the desired joint.

In connection with the above-described construction we employ a length-gage 19, consisting of a bar adapted to fit at its inner end in a socket 20, arranged in each clamp contiguous to the line of the fixed jaw thereof, said bar being provided with a reduced tongue 21 to engage a reduced portion 22 of said socket. Upon the bar is fitted to slide an indicator 23, which is secured at the desired adjustment by means of a thumb-screw 24.

As above described, the machine is adapted for cutting ordinary moldings and strips, such as those used by picture-frame manufacturers, cabinet-makers, and the like, but in connection with the former trade it is necessary to provide means for holding hollow moldings during the mitering and securing thereof, and for this purpose we provide the auxiliary blocks 25 for attachment to the movable jaws of the clamps. This auxiliary block is pro-

vided with a foot 26 and a projection 27, the former being adapted to rest upon the upper surface of the jaw, while the latter depends in front thereof. This projection terminates in a lip 28 to engage a shallow socket 29 in the inner face of the movable jaw, and after engaging said lip with the socket a thumb-screw 30 on the foot is engaged with the body of the jaw. The block is vertically slotted, as shown at 31, to receive the shank 32 of an adjustable keeper 33, said shank being engaged in rear of the block by a thumb-nut 34. The keeper is thus adapted for vertical adjustment to suit the height of the hollow molding, and the body of the block is adjustable by means of the feed-screw to suit the width of the molding.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described our invention, what we claim is—

1. In a mitering-machine, the combination of a frame consisting of a spider having a plurality of radially-disposed arms 5, an angle-gage consisting of a curved strip secured to and held in position by the extremities of said arms, pivotal clamps mounted upon the frame and provided with means for engaging spaced openings in the angle-gage to lock said clamps at the desired adjustment, and a saw-guide arranged between the clamps, substantially as specified.

2. In a mitering-machine, the combination with a frame, relatively-adjustable clamps, and means for securing the clamps at the desired adjustment, of a seat arranged between the clamps and having parallel side plates, a saw-guide fitted between said side plates, and parallel guides secured to the side surfaces of the saw-guide and rabbeted at their inner edges to engage the side edges of said plates, substantially as specified.

3. In a mitering-machine, the combination with a frame, of clamps pivotally connected to the frame by a common pivot and consisting of horizontal plates provided at their inner edges with fixed jaws, movable jaws mounted on the plates and adapted to move toward and from the fixed jaws, means for operating the movable jaws, a continuous segmental angle-gage concentric with the common pivot of the clamps and traversed by the latter, locking-bolts on the clamps for securing them at the desired angular adjustment, and a saw-guide arranged between the clamps, substantially as specified.

4. In a mitering-machine, the combination of pivotal clamps provided at their inner sides with fixed jaws and contiguous thereto with sockets 20, means for locking the clamps at the desired adjustment, a saw-guide, and a gage adapted to be fitted at one end in the socket in one of the clamps and provided with an adjustable indicator, said gage having a reduced tongue 21 to fit in an extension 22 of the socket, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CHARLES A. WALTER.
SYLVESTER E. FOWLER.

Witnesses:
JOHN SPIRO,
GEO. W. HALTERMAN.