

No. 679,017.

Patented July 23, 1901.

B. EVERAERD.

SAW SET.

(Application filed June 13, 1900.)

(No Model.)

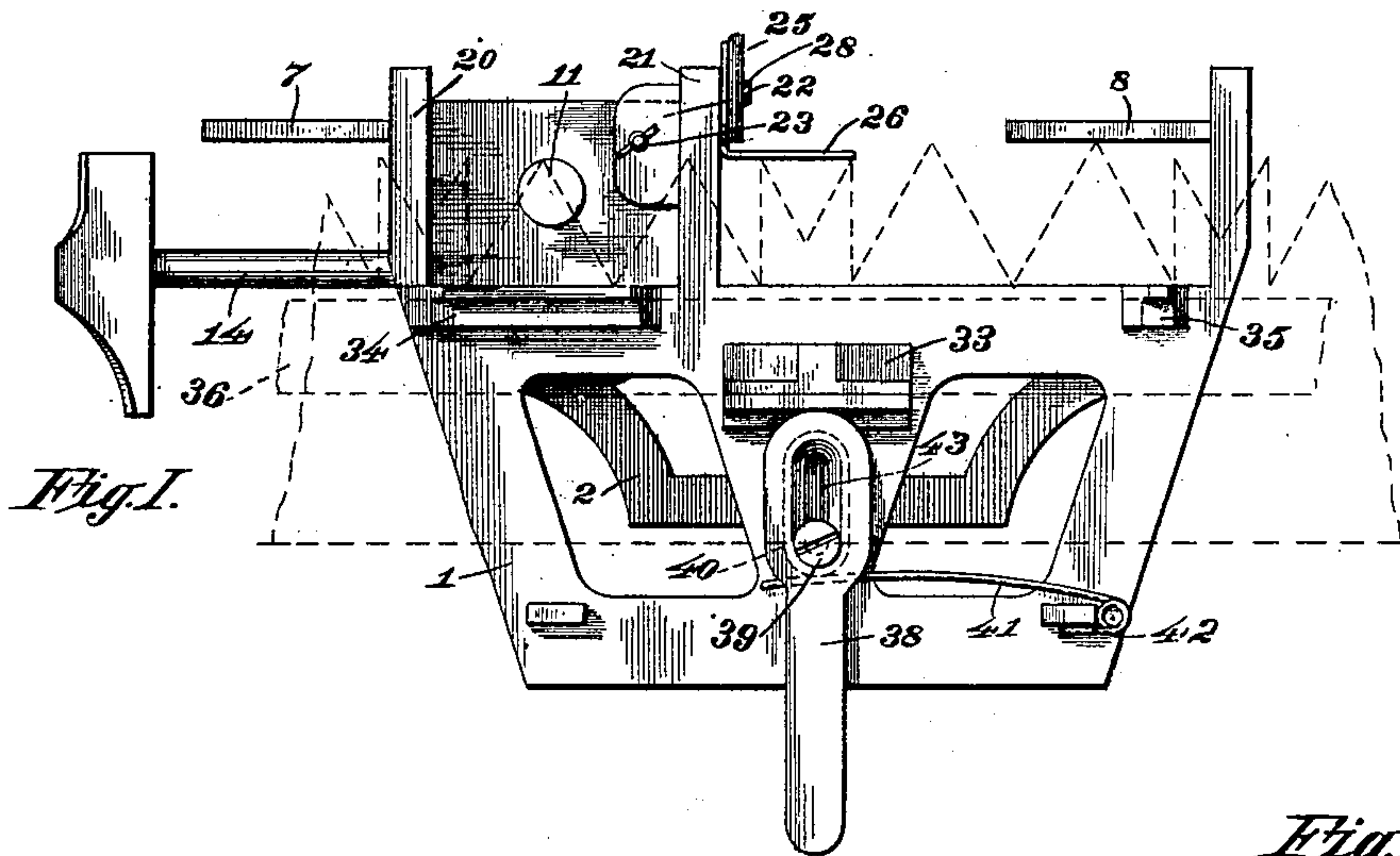


Fig. I.

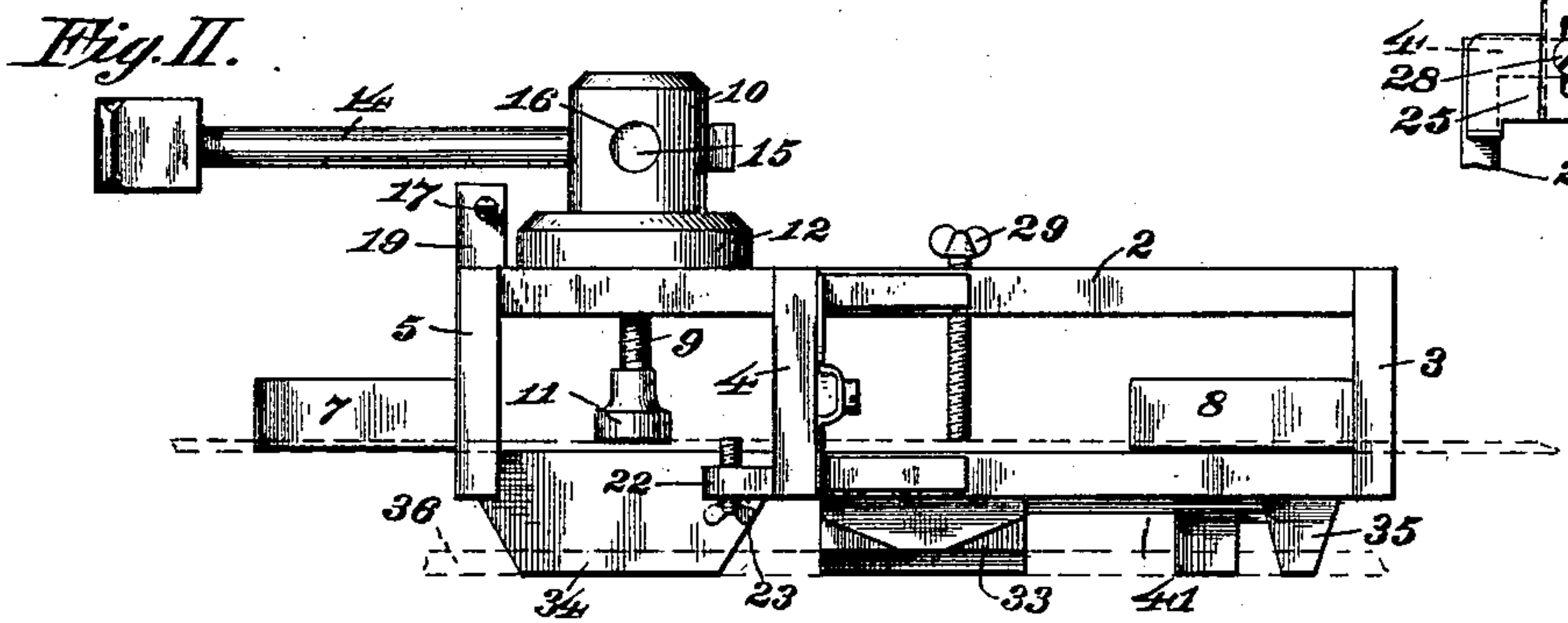


Fig. II.

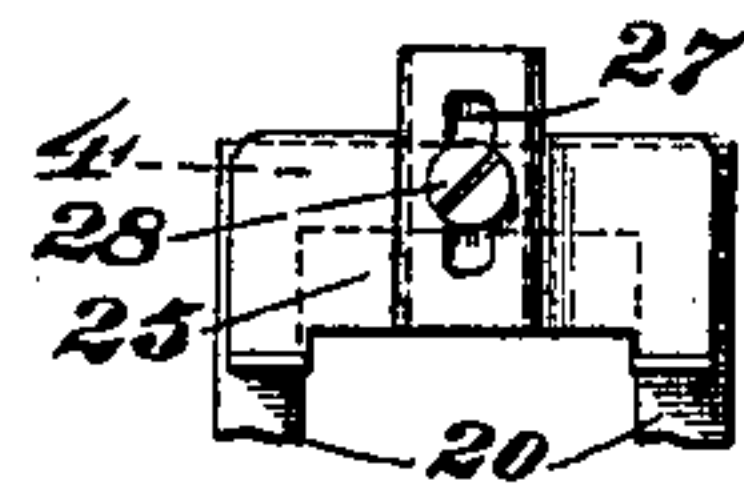


Fig. IV.

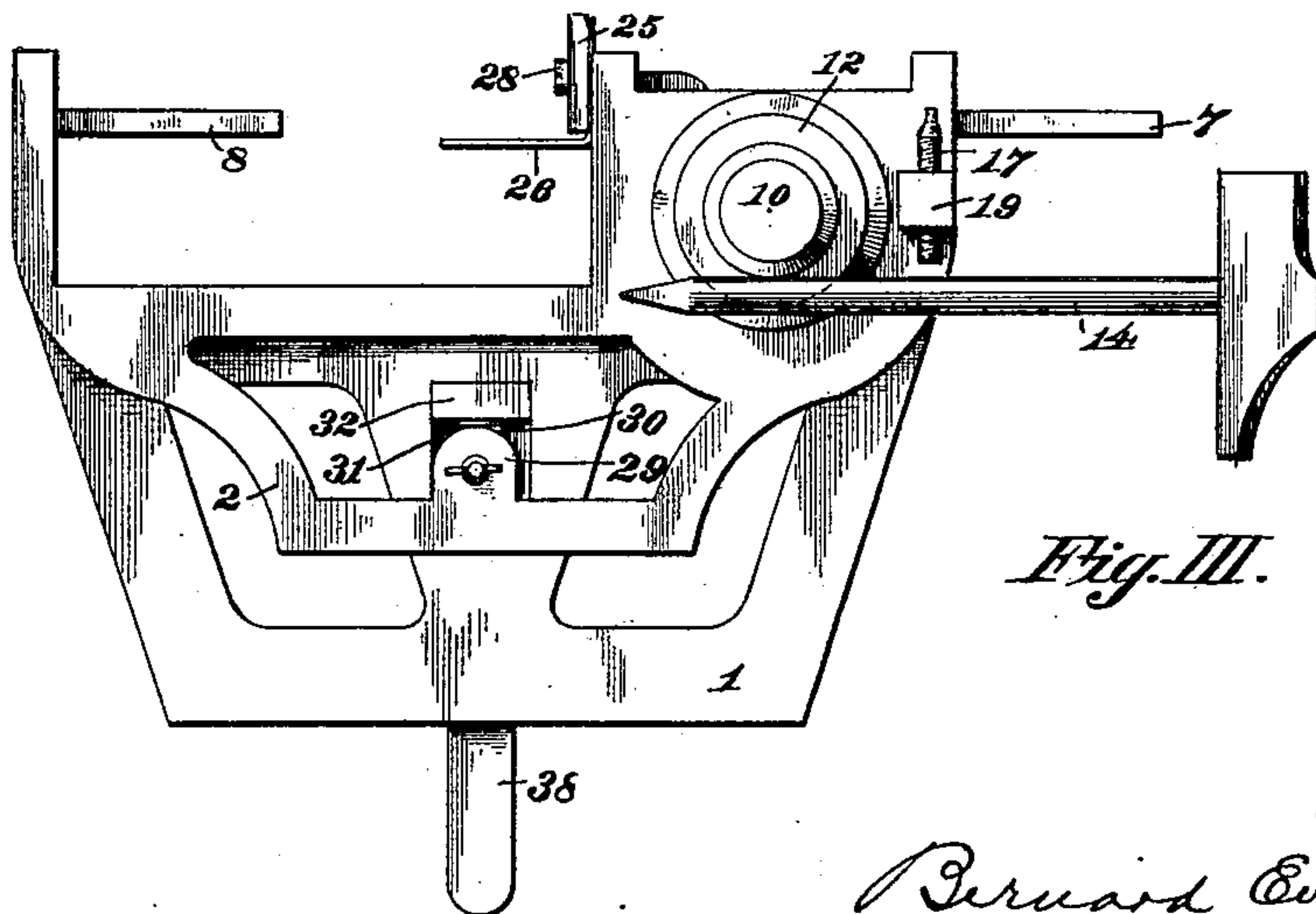


Fig. III.

Witnesses

A. S. Austin.

Paul Daniel.

Inventor;

Bernard Everaerd,

By Joseph H. McKim
Attorney.

Attorney.

UNITED STATES PATENT OFFICE.

BERNARD EVERAERD, OF GLADSTONE, MICHIGAN.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 679,017, dated July 23, 1901.

Application filed June 13, 1900. Serial No. 20,163. (No model.)

To all whom it may concern:

Be it known that I, BERNARD EVERAERD, of Gladstone, in the county of Delta, State of Michigan, have invented certain new and useful Improvements in Saw-Sets, of which the following is a complete specification, reference being had to the accompanying drawings.

The object of my invention is to produce an improved device for accurately determining and effecting the set of crosscut-saws.

In the accompanying drawings, Figure I is a side elevation of my saw-set complete and applied to a fragment of a saw. Fig. II is a top plan view of the subject-matter of Fig. I. Fig. III is a view corresponding to Fig. I, taken from the opposite side of the device; and Fig. IV is a detail view of the raker-gage.

Referring to the numerals on the drawings, 1 indicates a side plate and 2 the other, which are united as to one edge respectively by cross-pieces 3, 4, and 5. The parts above enumerated constitute a frame which is preferably made of a single piece of metal—as, for instance, a casting—and is adapted to straddle a saw-blade, the teeth of which, impinging against gage-plates 7 and 8, projecting from the cross-pieces 3 and 5, respectively, fix the relation of the frame when in place to the teeth. Near one end of the frame and midwise between the cross-pieces 4 and 5 I provide a screw 9, working in a suitably-threaded aperture provided for it in the side plate 2. The screw is provided at one end with a head 10 for operating it, and upon the inner end with a swivel-block 11. I also prefer to provide a boss 12 upon the plate 2 for augmenting its thickness, and thereby affording ample bearing-surface for the threads of the screw 9. 14 indicates a hammer-handle, which is preferably provided with a pin 15, adapted to enter an aperture 16 in the head 10 of the screw 9. This form of handle is adopted not only because it affords suitable means for operating the screw, but also because it is adapted to impinge against a set-screw 17, working in a stud 19, projecting from the side plate 2, and thereby to limit the movement of the screw 9. At the same time, swinging laterally upon its pin 15, the handle 14 may be enabled to pass the

stud 19 whenever required. The hammer is specified as affording means for tapping the saw-teeth, if required; but as a part of my device the member consists, essentially, of a handle provided with the pin 15 projecting therefrom at right angles.

Opposite the swivel-block 11 I provide in the side plate 1 an open space, defined by uprights 20 and 21, which are merely distinctive portions of the side plate 1. The open space is designed to allow movement of the saw-teeth under pressure of the screw 9 when the screw is employed for imparting to them the proper relative spread. Extending from the upright 21 is a lug 22, that carries a thumb-screw 23. This thumb-screw is adapted to be used as a gage for determining the alinement of the saw-teeth after being operated upon by the screw 9 or preparatory thereto.

Upon the side of the cross-piece 4 opposite to that adjacent to which the screw 9 is located I provide a raker-gage, which consists of a frame 25, provided with horizontal raker-gage plates 26. The frame 25 is provided with a vertical slot 27, designed to accommodate a screw 28 for vertically adjusting and fixing the position of the raker-gage plates 26.

29 indicates a set-screw screwing into a suitably-threaded aperture provided for it in the plate 2 and adapted to work to and from the inner face of the plate 1. Its office is to secure the saw-set to a saw and is alternately loosened and tightened as the saw-set is advanced tooth by tooth along the saw-blade.

In the side plate 1 I provide a vertically-oblong recess 30, which, having beveled side walls 31, is adapted to movably retain a base-block 32 of an external clamping member 33. The clamping member 33 is adapted to cooperate with clamping-plates 34 and 35, preferably made integral with and projecting from the side plate 1. They, in connection with the clamping member 33, are adapted to securely hold a file. (Indicated in dotted lines 36 in Figs. I and II of the drawings.) The clamping member 33 is actuated to and from its clamping position as by a cam-lever 38, pivoted upon a screw 39, that screws into the plate 1. The cam-lever is preferably provided upon its inner face, near its head, with a boss 40, (indicated by dotted lines in

Fig. I,) against which the free end of a spring 41, secured at its opposite end 42 to the plate 1, presses. The aperture 43 in the cam-lever 38, that accommodates the screw 39, is preferably oblong in order that the eccentricity of the cam-head of the lever may be adjusted, and by that means the clamping member 33 may be adapted to accommodate files of different widths.

10 The operation of my device is as follows: After it is set upon a saw-blade, so as to bring the swivel-block 11 opposite to a tooth to be spread, it is secured in place, as by manipulation of the screw 29. The required lateral

15 deflection of the tooth is then imparted by turning the screw 9. In order to apply to each tooth the same degree of pressure, the set-screw 17 is provided to limit the movement of the handle 14. Inasmuch, however, as saws

20 are never uniformly tempered, but some teeth thereof possess more resiliency than others, the gage 17 cannot be depended upon to insure the proper deflection of the tooth. It can only be relied upon to prevent excessive de-

25 flection. For this reason the gage-screw 23 is provided in order that by reference to it all of the cutting-teeth of the saw may be brought to a common alinement. If by reference to the gage-screw 23 any tooth should

30 be found to be out of line, it can be subjected to special manipulation by aid of the screw 9 and brought into required position. On this account, as has been specified, the handle 14 is adapted to be swung clear of the stud 19

35 when required in order that the screw 9 may be turned independently of any limitation imposed by the screw 17.

In practice a crosscut-saw is provided with two kinds of teeth—namely, cutting-teeth and

40 rakers. The rakers should be somewhat shorter than the cutting-teeth, and for that reason in addition to the plates 7 and 8 the raker-gage plates 26 may be fixed at any re-

quired adjustment and made to determine the relative differences in height between the

45 cutting-teeth, which are placed against the plates 7 and 8, and the rakers, which, as specified, are shorter than the cutting-teeth.

The file-holder is adapted to render my device altogether complete in order that it may

50 afford a handle for a file in dressing up the saw before or after it has been otherwise set.

What I claim is—

1. A saw-set comprising a pair of side plates united longitudinally along one of their re-

55 spective edges, a tooth-deflecting screw mounted near one end of one of the side plates, and an open space in the adjacent plate opposite said screw.

2. A saw-set comprising a pair of side plates united longitudinally along one of their re-

60 spective edges, means for imparting a spread to the teeth of a saw, and an adjustable gage in one of the side pieces for determining the degree of spread so imparted.

65

3. In a saw-set the combination with a pair of side plates and separate cross-pieces uniting them on one side, of a tooth-deflecting screw mounted in one of the side plates, uprights supporting the cross-pieces on the opposite

70 side plate, and oppositely-projecting gages occupying the space between the cross-pieces not occupied by the screw.

4. In a saw-set the combination with a pair of side plates united by cross-pieces, of gage-

75 plates upon two or more of the cross-pieces, and an adjustable raker-gage plate on an intermediate cross-piece, substantially as set forth.

In testimony of all which I have hereunto

80 subscribed my name.

BERNARD EVERAERD.

Witnesses:

PETER BECKER,
HARRY BELDING.