

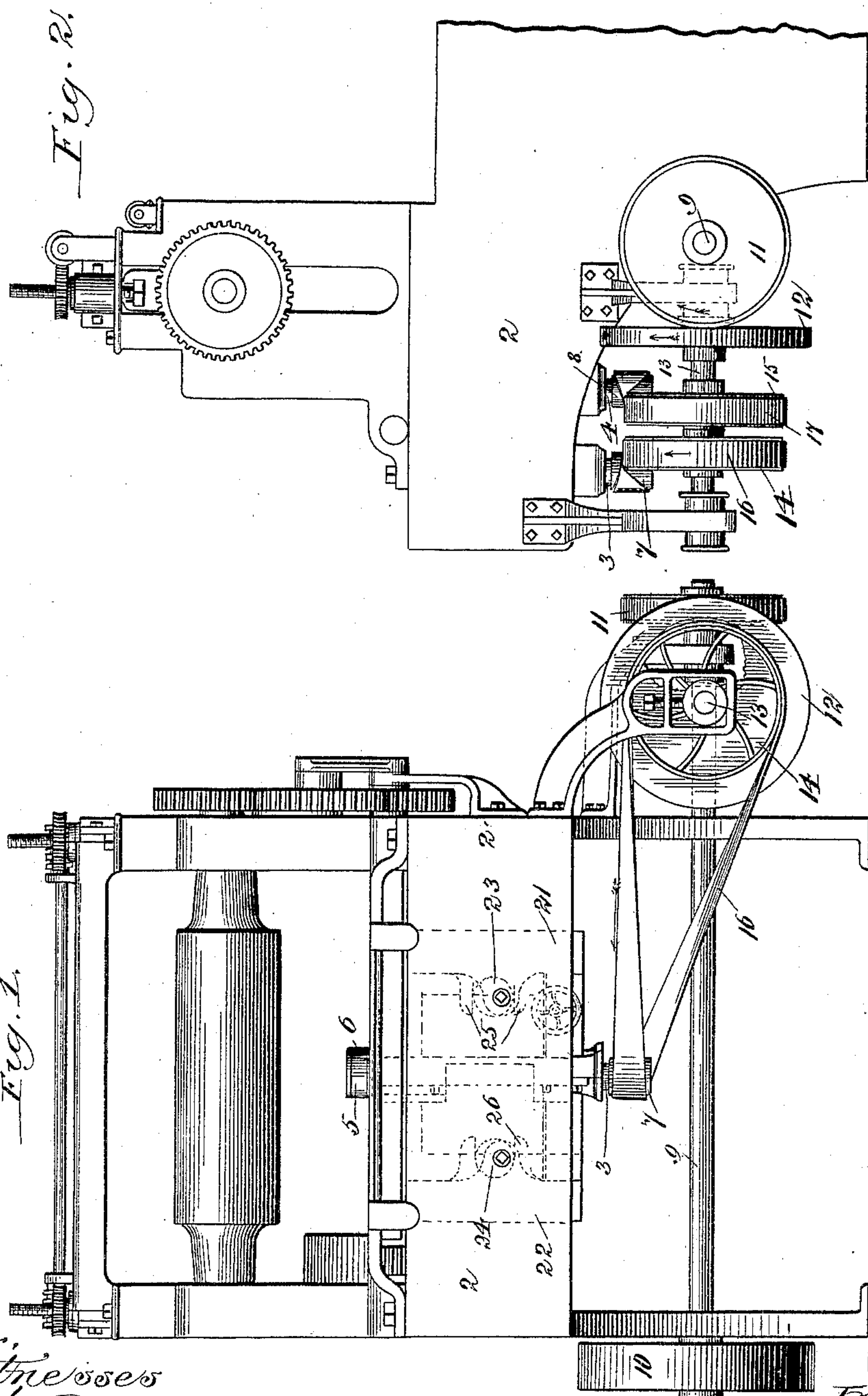
(No Model.)

3 Sheets—Sheet 1.

E. BENJAMIN.
MATCHER.

No. 436,331.

Patented Sept. 16, 1890.



Witnesses
W. Passiter
O. R. Barnett

Inventor
Edwin Benjamin
By Raymond & Seider
Attys.

(No Model.)

E. BENJAMIN.
MATCHER.

3 Sheets—Sheet 2.

No. 436,331.

Patented Sept. 16, 1890.

Fig. 4.

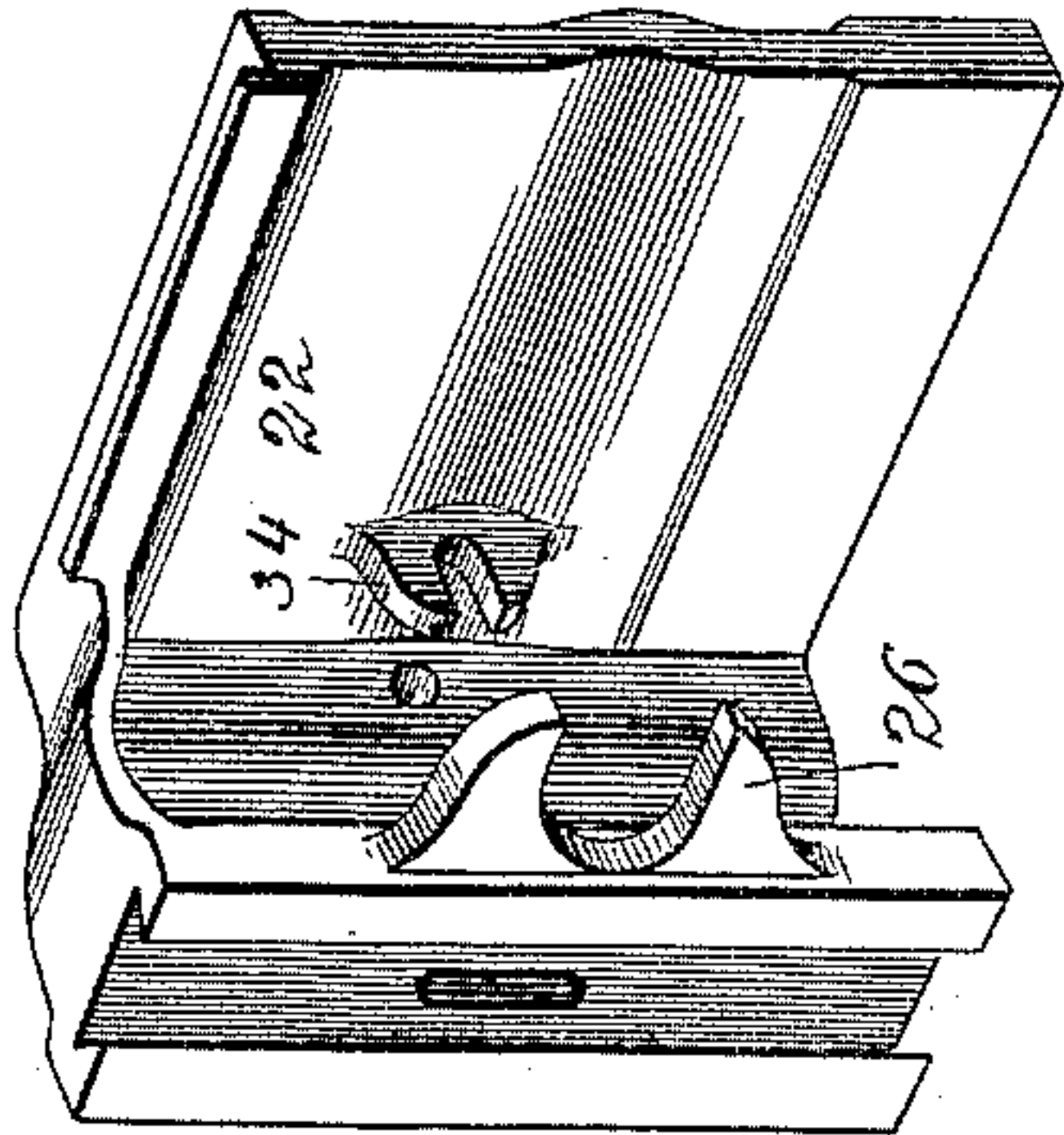


Fig. 5.

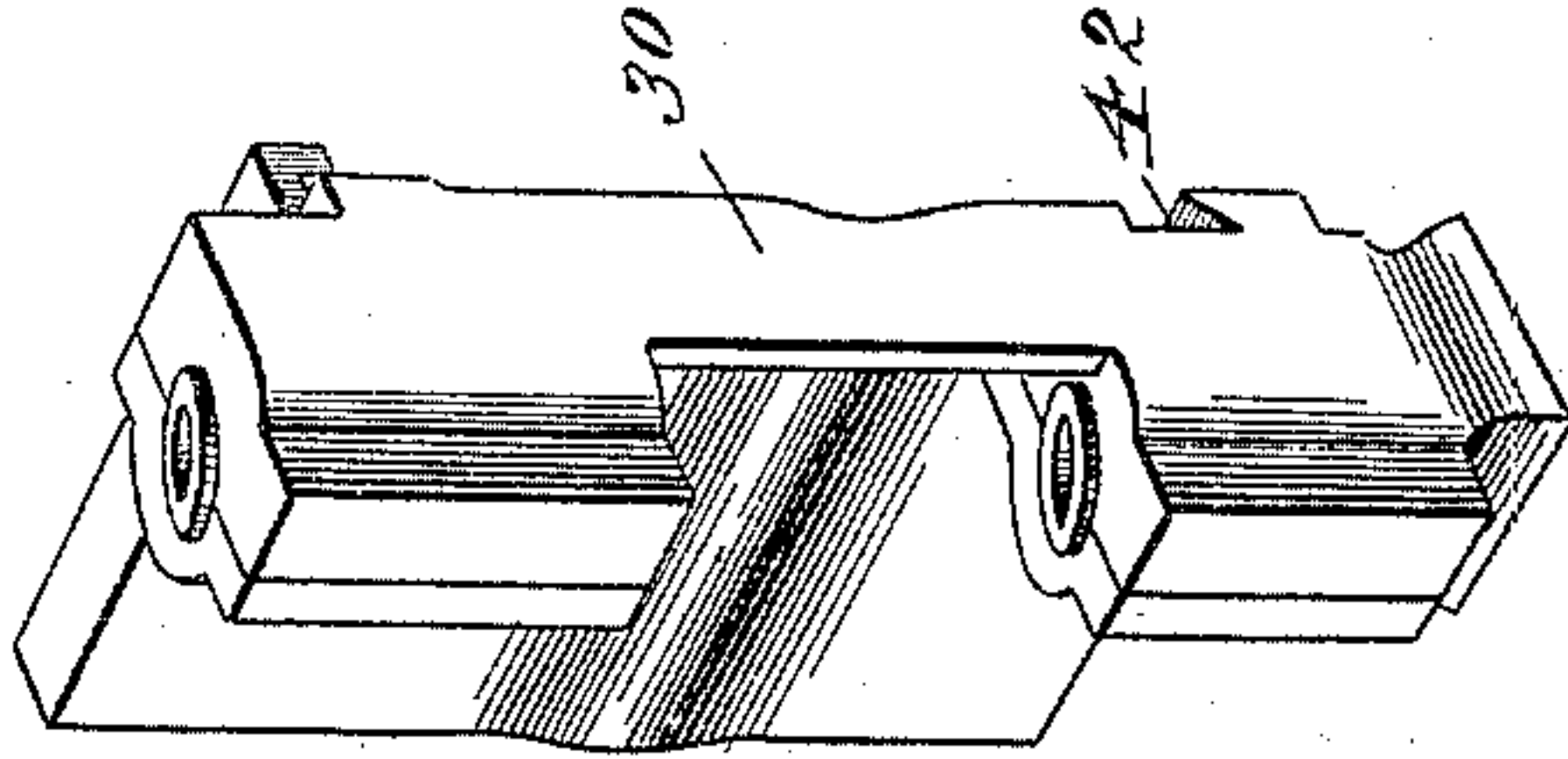
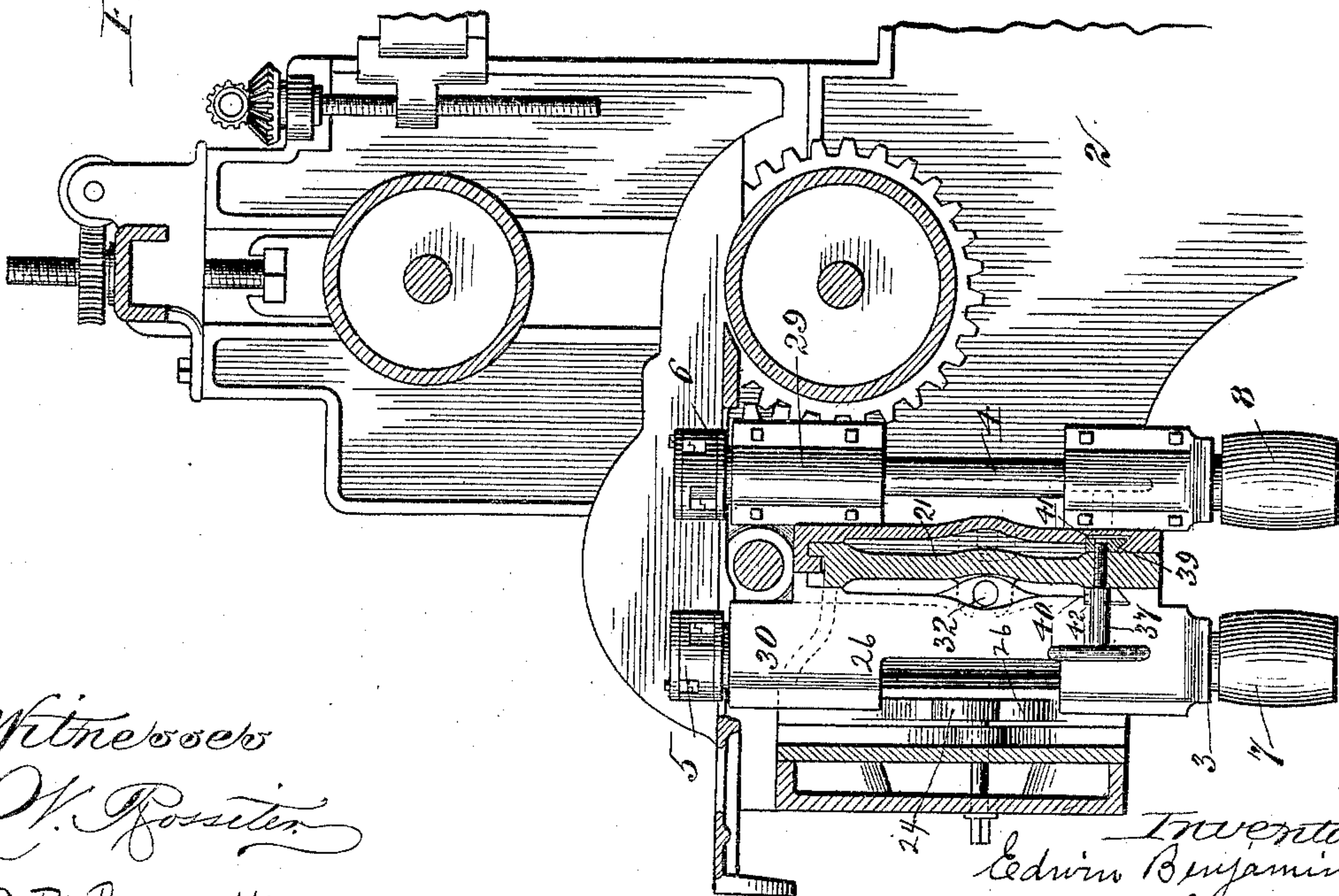


Fig. 3.



Witnesses
O. R. Barnett

Inventor
Edwin Benjamin.
By Raymond & Leeder
Attys

(No Model.)

3 Sheets—Sheet 3.

E. BENJAMIN.
MATCHER.

No. 436,331.

Patented Sept. 16, 1890.

Fig. 9.

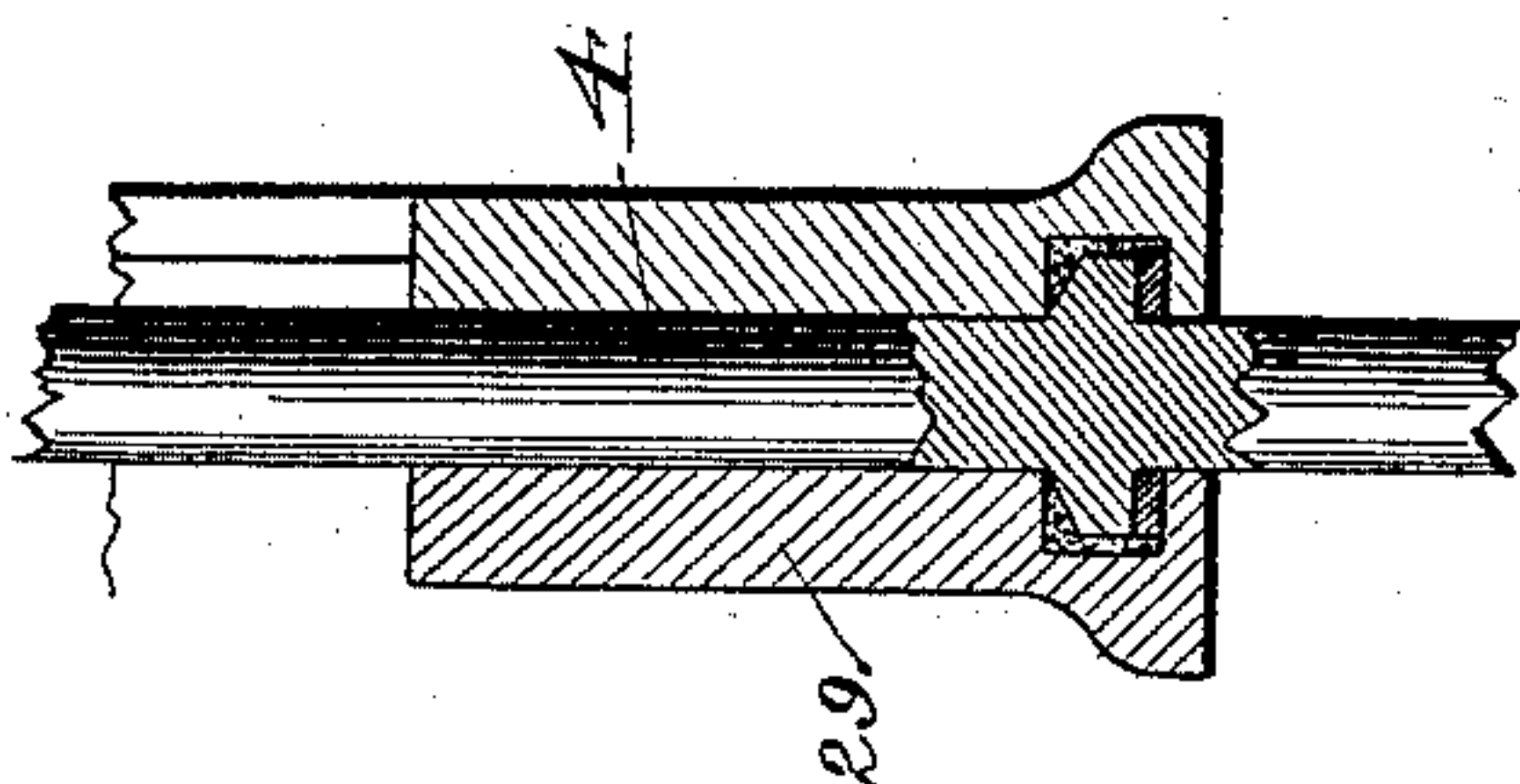
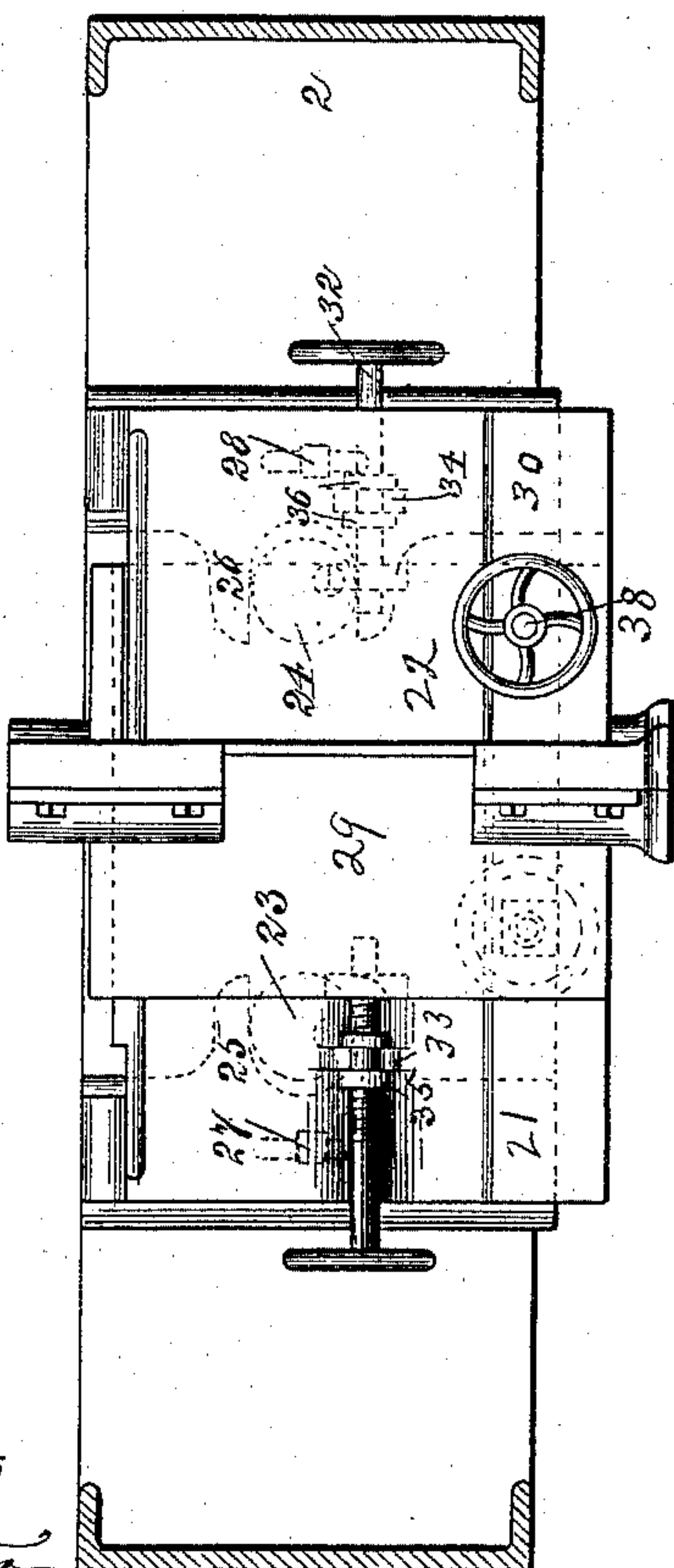
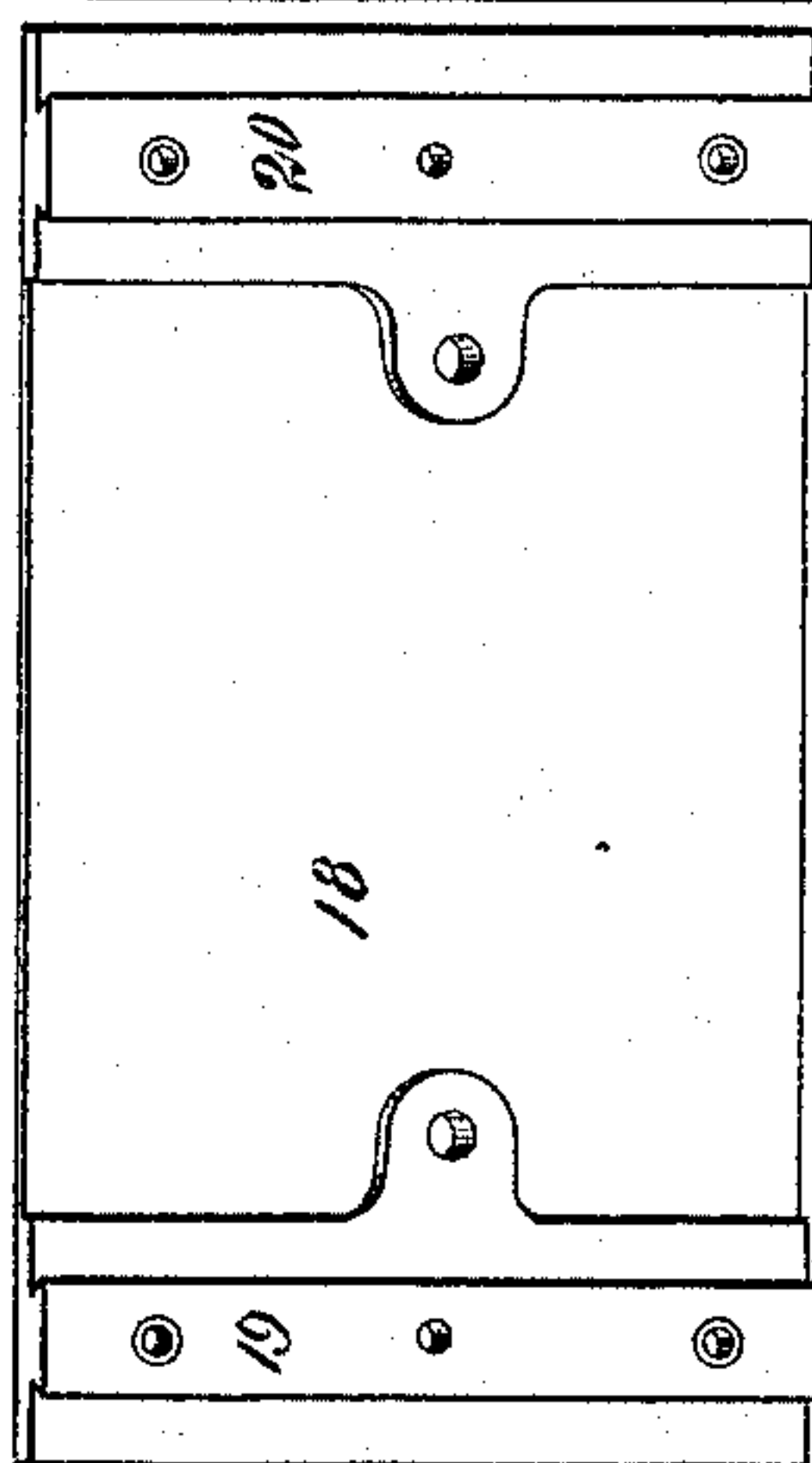


Fig. 6.



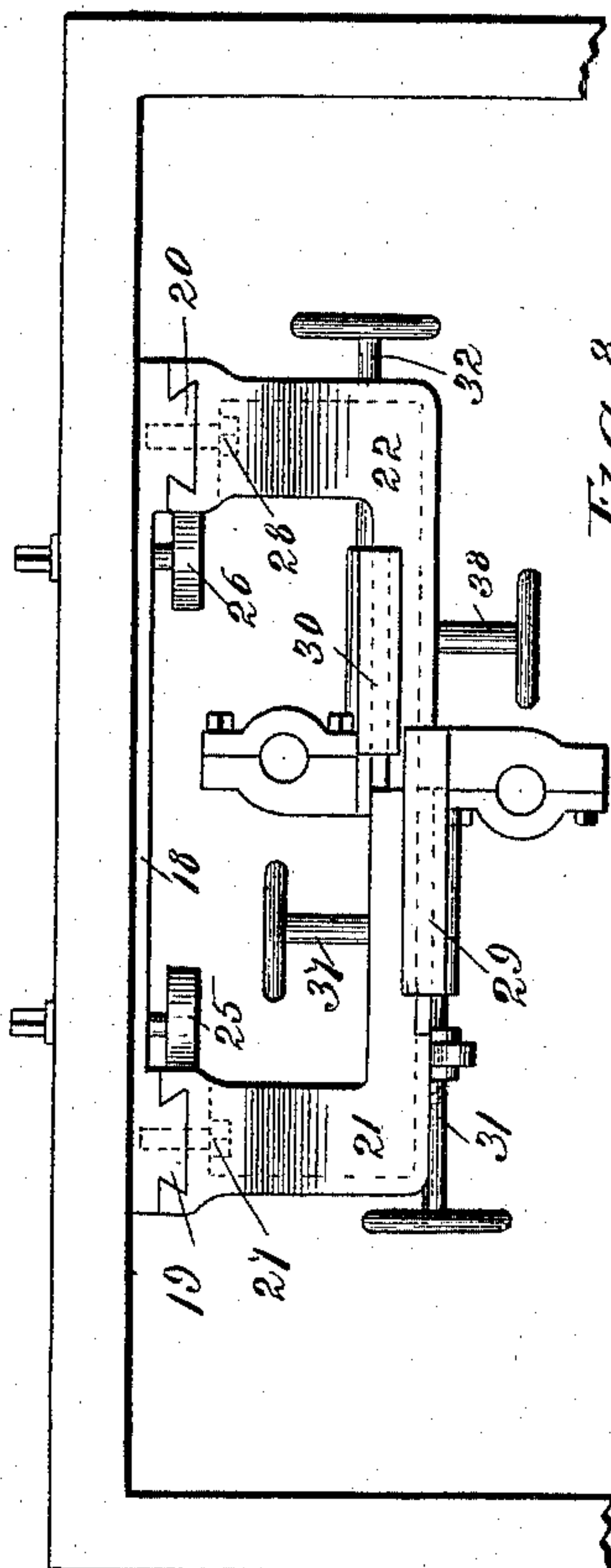
Witnesses
W. Posner
O. R. Barnett.

Fig. 7.



Inventor
Edwin Benjamin
By Raymond & Veeder
Attys.

Fig. 8.



UNITED STATES PATENT OFFICE.

EDWIN BENJAMIN, OF SOUTH EVANSTON, ILLINOIS, ASSIGNOR TO THE
BENJAMIN MACHINE COMPANY, OF ILLINOIS.

MATCHER.

SPECIFICATION forming part of Letters Patent No. 436,331, dated September 16, 1890.

Application filed May 10, 1889. Serial No. 310,220. (No model.)

To all whom it may concern:

Be it known that I, EDWIN BENJAMIN, of South Evanston, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Matchers, of which the following is a specification.

My invention relates to matchers which are capable of adaptation for working either one or two pieces of lumber at a time, and specifically relates to the devices for matching the inner edges of the boards, including the adjusting and driving apparatus for the matcher-heads.

An object kept in view in the invention of the apparatus has been the combination of the advantages in smoothness of finish and ease of working resulting from the employment of matcher-heads revolving on vertical axes with economy of spaces so as to subtract as little as possible from the effective width of the planer.

Another object is to get the mechanism as low down and as much out of the way as possible, so that the jar of the rapidly-rotating parts will affect the planer less and the belts will be less likely to cause or receive injury.

In the accompanying drawings, Figure 1 is an elevation of the end of the planer-bed, showing my improved matching devices attached. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal section corresponding to Fig. 2. Figs. 4 and 5 show details. Fig. 6 shows the saddles carrying the matcher-heads as seen from within the planer-frame. Fig. 8 is a plan view of the end of the planer-bed and the supports for the cutter-heads. Figs. 7 and 9 illustrate details.

2, Figs. 1, 2, and 3, is a portion of the frame of the planer, only enough of it and its attachments being shown to illustrate the connection of my improvements therewith.

Near the center of the width of the bed 2 are mounted vertical spindles 3 4, on the upper ends of which are matcher-heads 5 6 and on the lower ends pulleys 7 8. The driving-gear for said spindles, as shown in Figs. 1 and 2, consists of a shaft 9, driven by pulley 10 from one of the main driving-shafts of the planer, on the end of which is a friction-wheel 11, which revolves in contact with friction-

wheel 12 on the shaft 13, parallel to the side of the planer. On the last-named shaft are pulleys 14 15, from which quarter-twist belts 16 17 pass to the pulleys 7 and 8, respectively.

The devices for mounting and adjusting the matcher-heads and spindles appear in Figs. 3 to 8, inclusive. A foundation-plate 18 (seen detached in Fig. 7) is secured to the end girt of the planer-bed. It is provided with dovetail ways 19 20, to which are fitted the brackets 21 22, (one bracket being shown in perspective in Fig. 4,) said brackets being adjustable vertically by means of the eccentrics 23 and 24, Figs. 1, 3, and 6, which are pivoted in the planer-bed and in foundation-plate 18 and fit between the jaws 25 26 on the brackets. Clamping-bolts 27 and 28 secure the brackets in position when adjusted.

Upon opposite sides of the inwardly-projecting ends of the brackets 21 22 are fitted saddles 29 and 30, Fig. 8, in which are journaled the matcher-head spindles. Said saddles are adjustable horizontally on the brackets 21 22, being movable by means of screws 31 32, tapped into the saddles and fitted to jaws 33 34, Fig. 6, forming part of the brackets 21 22, collars 35 36 on each side of the jaws preventing end motion of the screws.

When adjusted, the saddles are made fast in place by screws 37 38, Figs. 3 and 8, passing through the brackets and tapped into the pieces 39 and 40, which are fitted into dovetailed grooves 41 and 42 in the saddles.

When it is desired to throw one or both matcher-heads 5 and 6 out of operation, it is only necessary to drop them below the planer-bed by loosening the brackets 21 22, turning the eccentrics 23 24, and to disconnect the driving-gear at any convenient point.

I claim—

1. The combination, in a matcher adapted to work two pieces of lumber at once, of two matcher-heads rotatable on vertical spindles which are provided with driving-pulleys at their lower ends and placed relatively to each other in a line nearly parallel to the line of travel of the lumber, and driving-gear for said spindles, consisting of a shaft extending crosswise of said planer and having a friction-wheel at one end, a shaft parallel with the side of said planer provided with a second

friction-wheel in contact with the first, pulleys on the last-named shaft, and belts therefrom to the pulleys on the matcher-head spindles.

2. The combination, in a matcher adapted
5 to work two pieces of lumber at once, of inwardly-projecting brackets mounted on the matcher-frame and capable of vertical adjustment, saddles carrying the matcher-heads, and
10 of said brackets and horizontally adjustable thereon.

3. The combination of a bracket, as 21, ad-

justable on the slide 19, affixed to the frame of the machine by means of eccentric 23, saddle 29, fitted to said bracket, screw 31, 15 journaled in bracket 21, tapped into said saddle, and clamping-bolt or screws 27 and 37 for securing said bracket and saddle, as shown and described.

EDWIN BENJAMIN.

Witnesses:

J. I. VEEDER,

P. H. T. MASON.