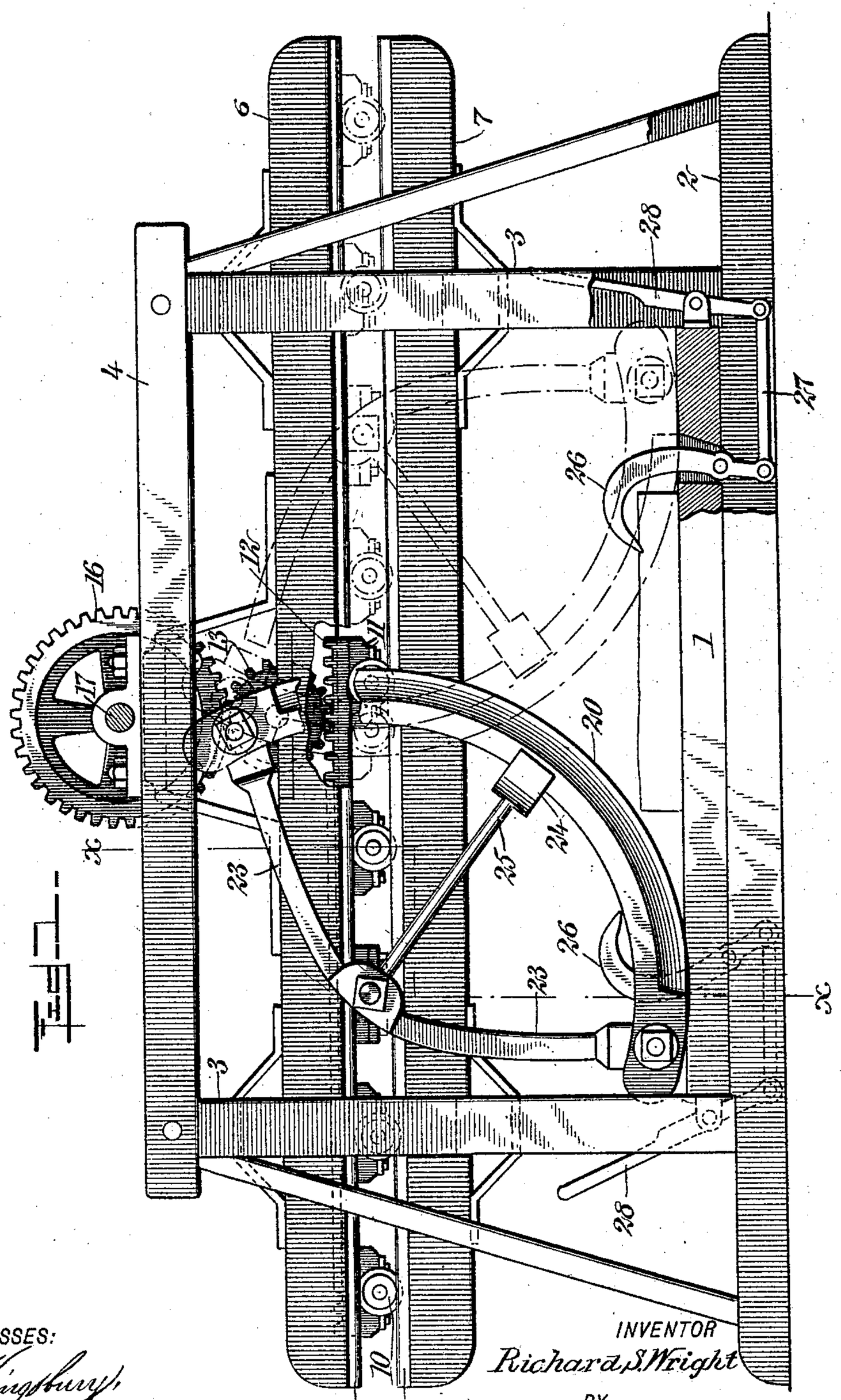
No. 819,491. PATENTED MAY 1, 1906.

R. S. WRIGHT.

CROSS TIE CUTTER.

APPLICATION FILED SEPT. 16, 1905.

3 SHEETS—SHEET 1.



WITNESSES:

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C. C. Ferguson

INVENTOR

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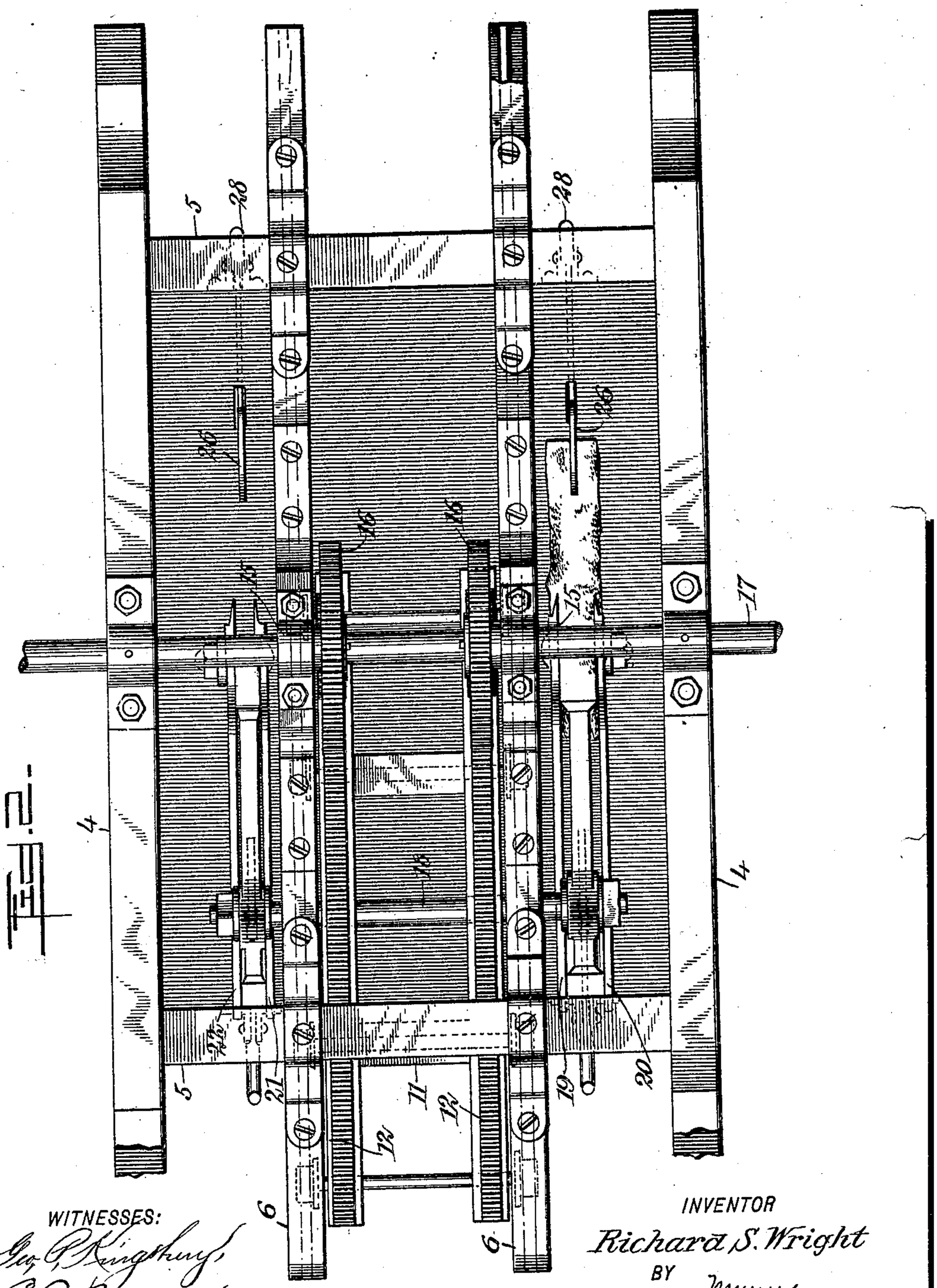

FIG. 2.

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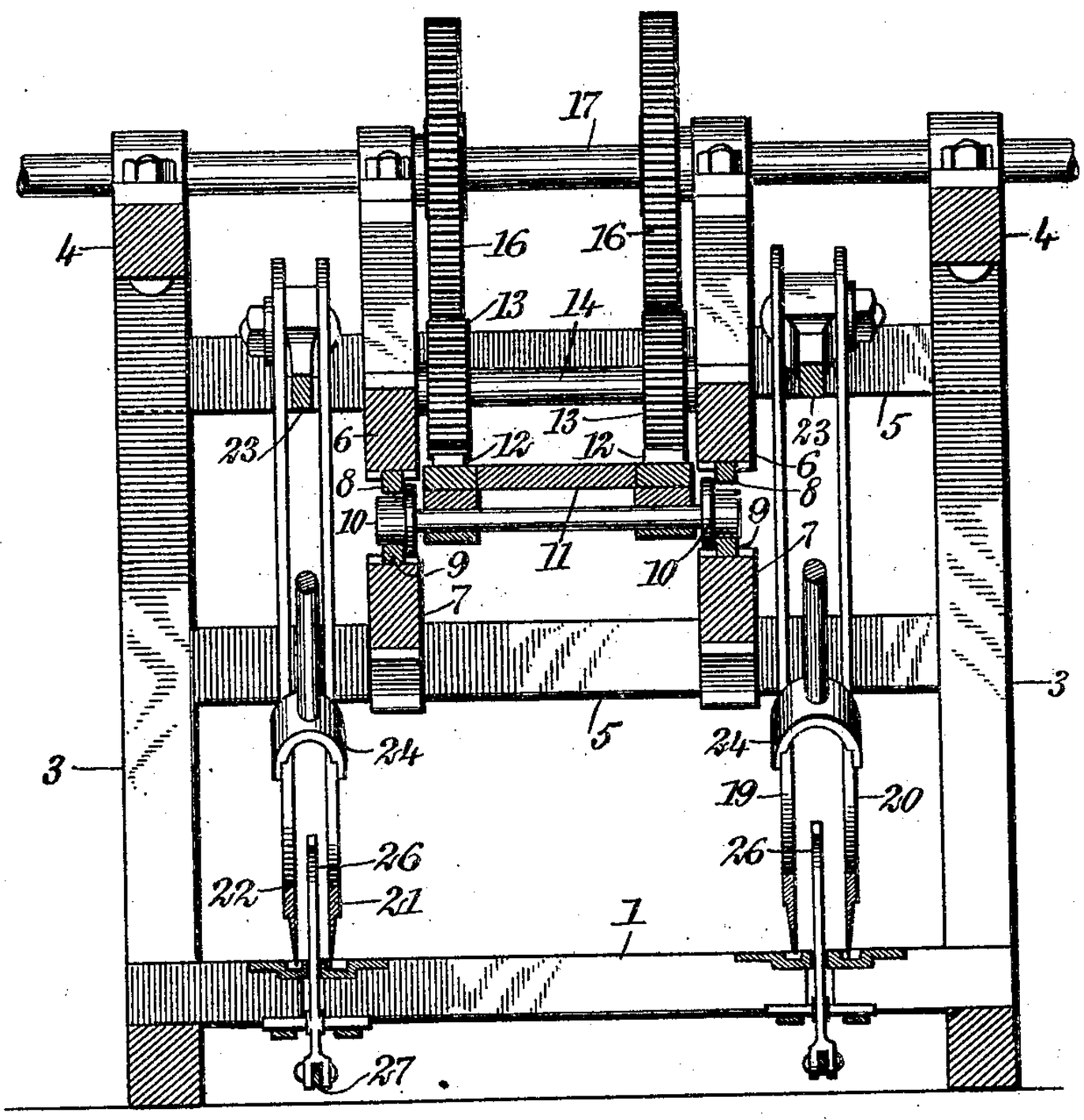
3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

RICHARD SLOAN WRIGHT, OF NELSON, ARKANSAS.

CROSS-TIE CUTTER.

No. 819,491. Specification of Letters Patent. Patented May 1, 1906.

Application filed September 16, 1905. Serial No. 278,730.

To all whom it may concern:

Be it known that I, RICHARD SLOAN WRIGHT, a citizen of the United States, and a resident of Nelson, in the county of Drew and State of Arkansas, have invented a new and Improved Cross-Tie Cutter, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for cutting out or shaping railway cross-ties from the rough timber, the object being to provide a machine of this character by means of which the work may be rapidly done and making up the ties of uniform size.

I will describe a cross-tie cutter embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a cross-tie cutter embodying my invention. Fig. 2 is a plan thereof, and Fig. 3 is a section on the line *x x* of Fig. 1.

The frame of the machine comprises a bed-board 1, mounted on timbers 2, and extended upward from the timbers 2 are posts 3, the upper ends of the posts of a side being connected by a longitudinal beam 4, and the opposite end posts are connected by cross-bars 5. Extended longitudinally through the frame of the machine and supported by the end bars 5 are upper bars 6 and lower bars 7. The upper bars 6 are provided on the under side with metal tracks 8, while the upper sides of the bars 7 are provided with metal tracks 9, and engaging with these tracks are rollers 10 of a carriage 11. On the top of the carriage at the opposite sides are racks 12, engaged by pinions 13, mounted on a shaft 14, having bearings in boxes 15, secured to the upper side of the top bars 6, and these pinions 13 are engaged by gear-wheels 16, keyed to a driving-shaft 17, which may be operated from any suitable source of power to cause a back-and-forth or reciprocating motion to the carriage.

A rod 18 extends through the side portions of the carriage and extends to the outer sides of the bars 6 and 7. Mounted on one end of the rod 18 and spaced apart is a pair of cutting-blades 19 20, and a pair of cutting-blades 21 22 is mounted on the other end of said rod. The pairs of blades are of segmental form and are connected to the rod 18 by means of arms 23, and the blades or cutters of a pair are prevented from spreading apart while operating upon a tie by means of a yoke 24, which engages with the outer sides of the blades and is connected to the arms 23 by means of a rod 25.

Extended through openings in the base-board 1 near the ends and in alinement with the center of the pairs of blades are dogs 26 for engaging with and holding the timber operated upon. These dogs 26 at their lower ends have link connection 27 with operating-levers 28, as clearly indicated in Fig. 1.

The operation of the machine may be described, referring particularly to Fig. 1, in which a piece of timber is to be cut or shaped, as indicated at the right-hand end of the machine. Of course there will be a piece of timber at each side. As the carriage is moved to the right the blades will with a shearing and rocking movement cut off the sides of the timber, as indicated in Fig. 2. As the carriage reaches the limit of its right-hand movement pieces of timber may be placed at the left-hand end of the machine and held by the dogs, so that upon a return movement of the carriage a second set of timbers will be cut. The blades of each pair may be equally spaced apart, so as to cut the timber as above described, or, as shown in Fig. 2, one pair of blades may be placed closer together than the other pair of blades, so that the ties will be cut to a certain thickness in one direction and in a narrower thickness in the other direction.

The machine engages two ties the length desired at the same time, one pair of cutters or blades cutting the thickness of the tie and the other cutter the width of the tie. The ties are transferred from one pair of cutters to the other pair of cutters and thence to any suitable means to carry off the ties and carry the refuse out of the way, so as not to interfere with the operating of the machine. The necessary arrangements for carrying the timber to and from the machine after the machine is put into operation can easily be made.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A cross-tie cutter comprising a frame, a carriage movable horizontally along the frame, racks on said carriage, gear-wheels coacting with said racks, and two pairs of segmental blades mounted on the carriage at opposite sides, the blades of each pair being spaced apart, the blades of one pair being

closer together than the blades of the other pair.

2. A cross-tie cutter comprising a frame, upper and lower bars extended longitudinally through the frame, tracks on the under sides of the upper bars, tracks on the upper sides of the lower bars, a carriage, rollers on said carriage for engaging with the upper and lower tracks, a gear mechanism for causing back and forth movements of the carriage, and two pairs of segmental blades mounted on the carriage at opposite sides, the blades of one pair being closer together than the blades of the opposite pair.

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

RICHARD SLOAN WRIGHT.

Witnesses:
FRANK HAYNES,
Mrs. P. H. MCHENRY.