

No. 776,202.

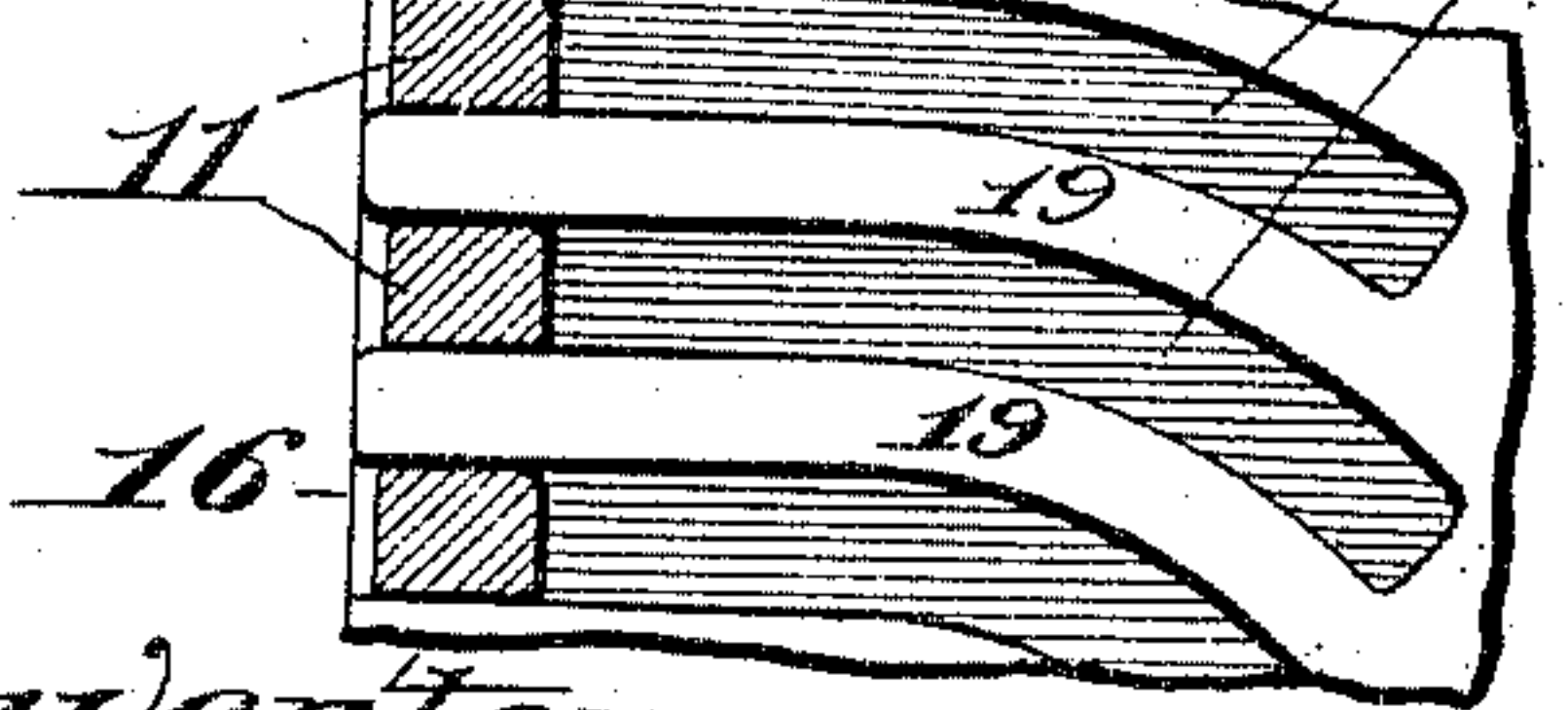
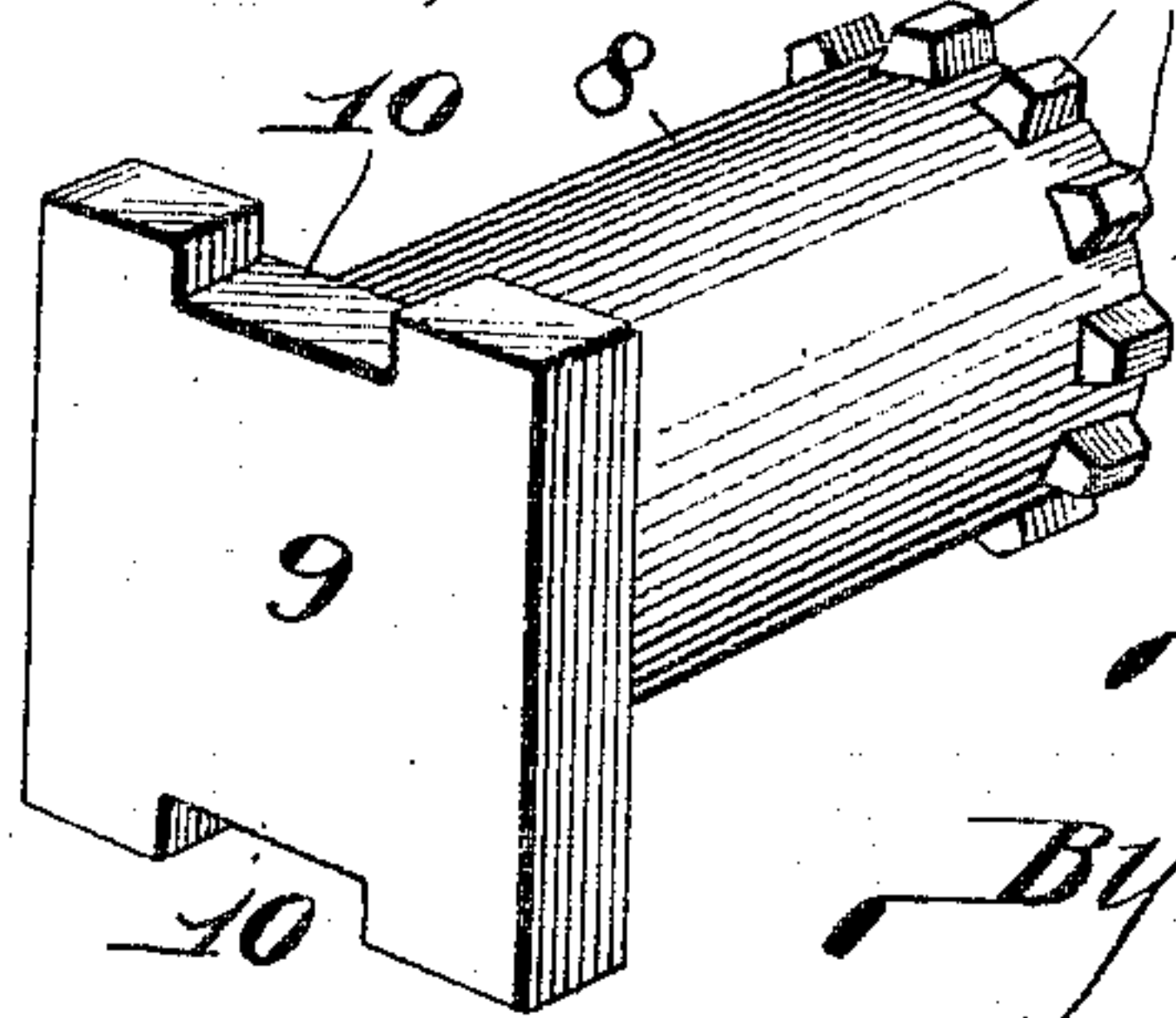
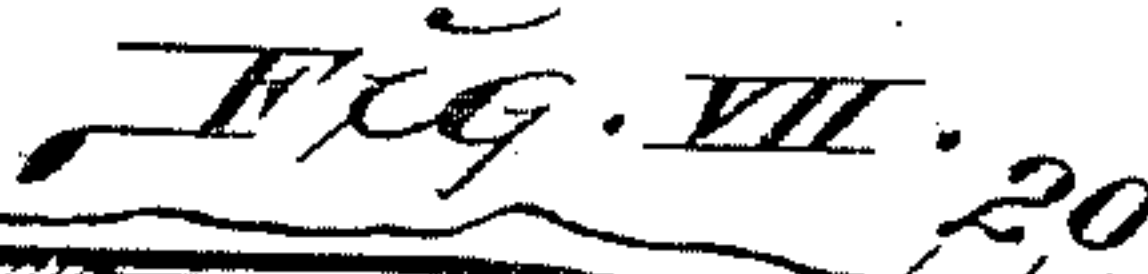
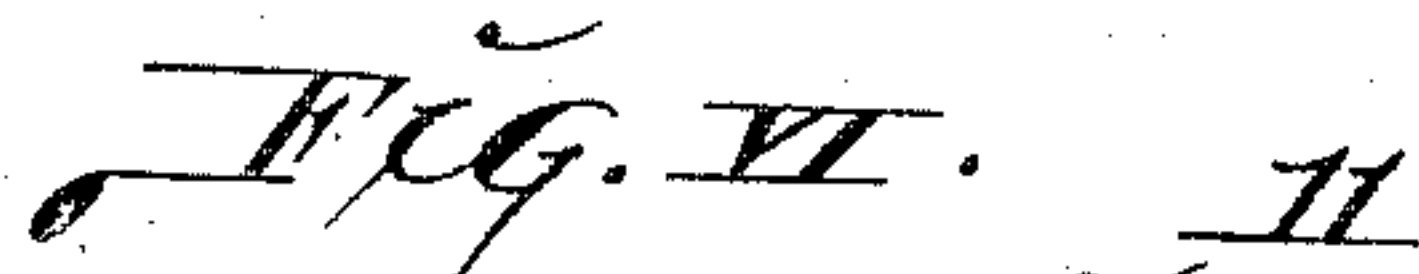
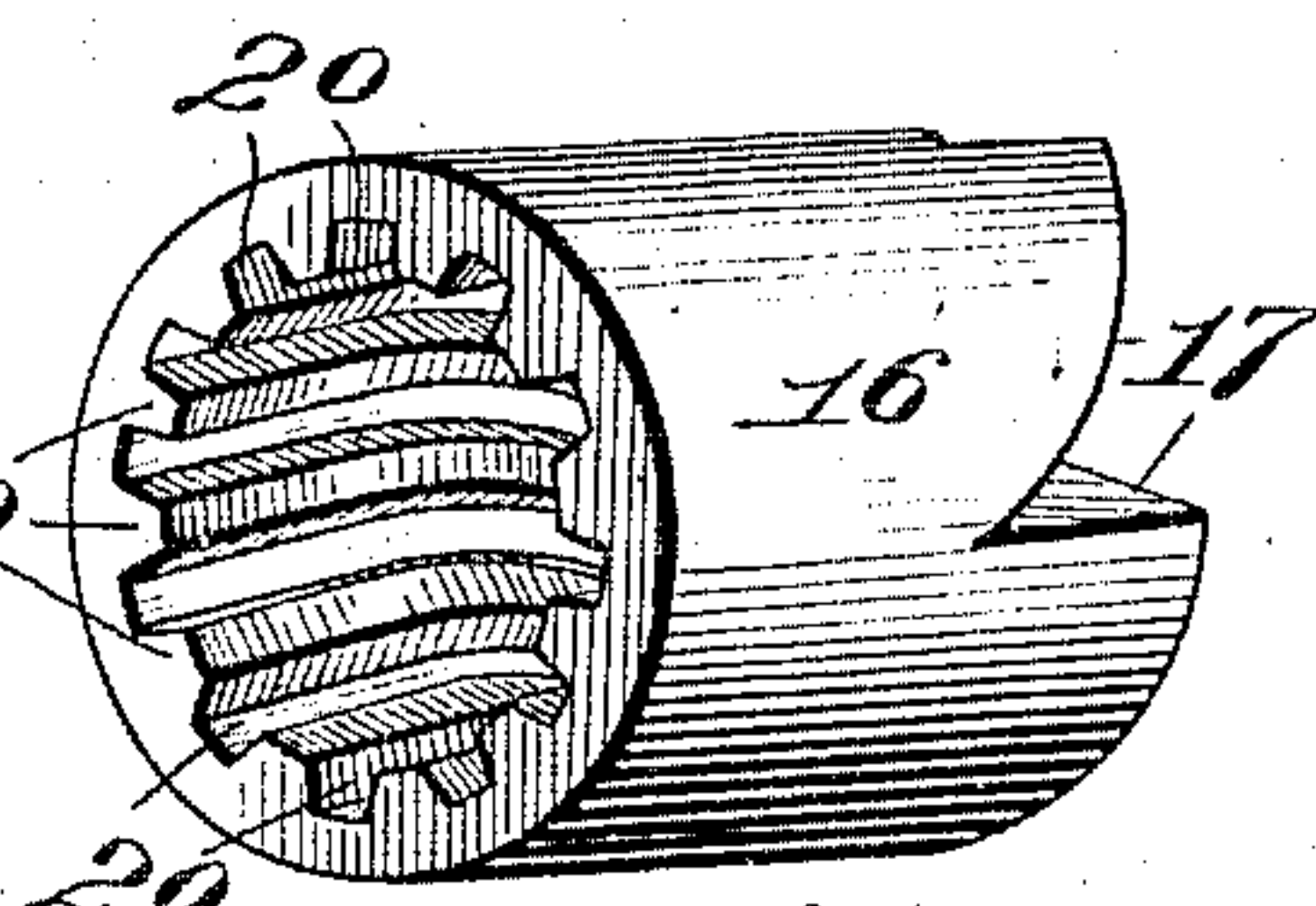
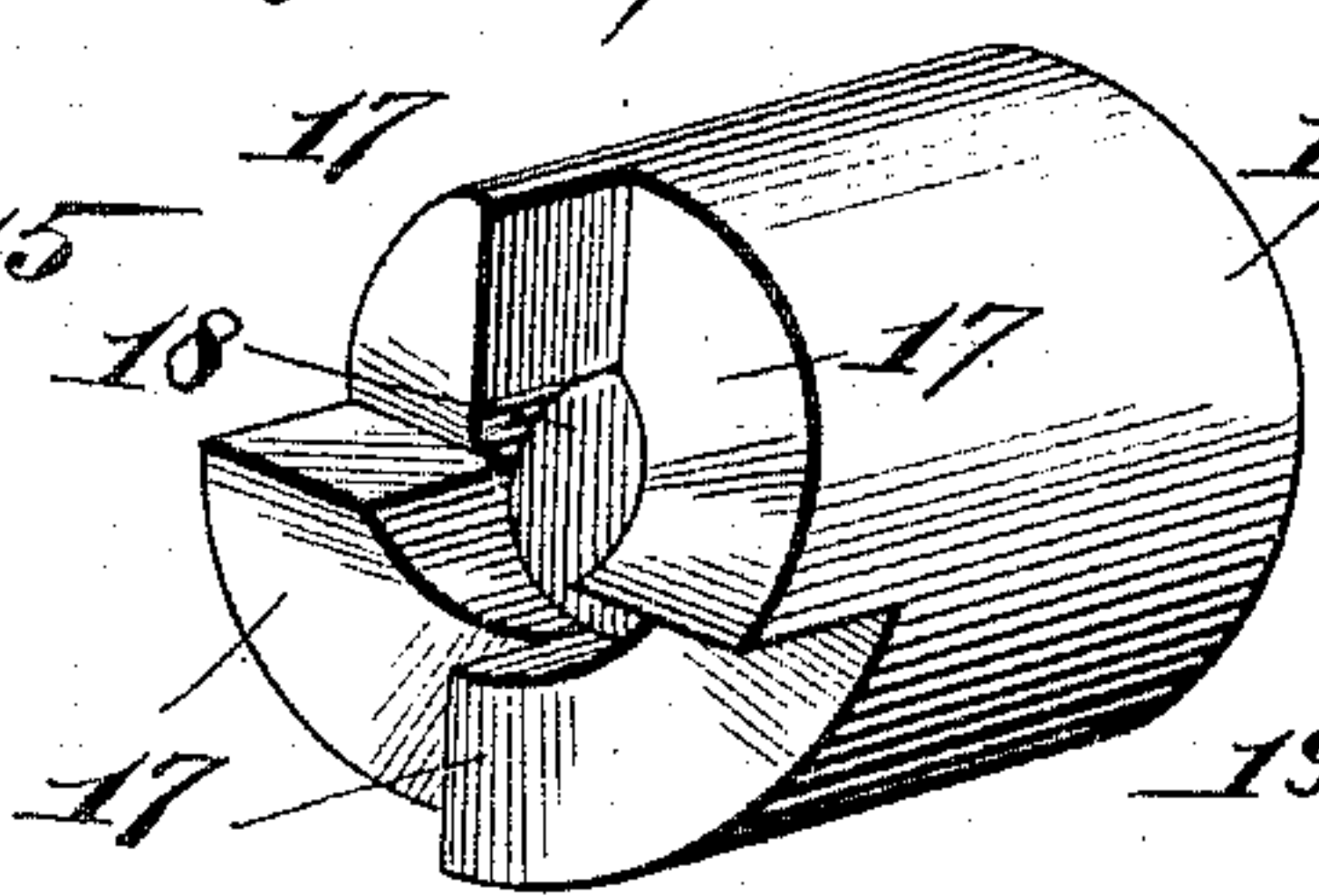
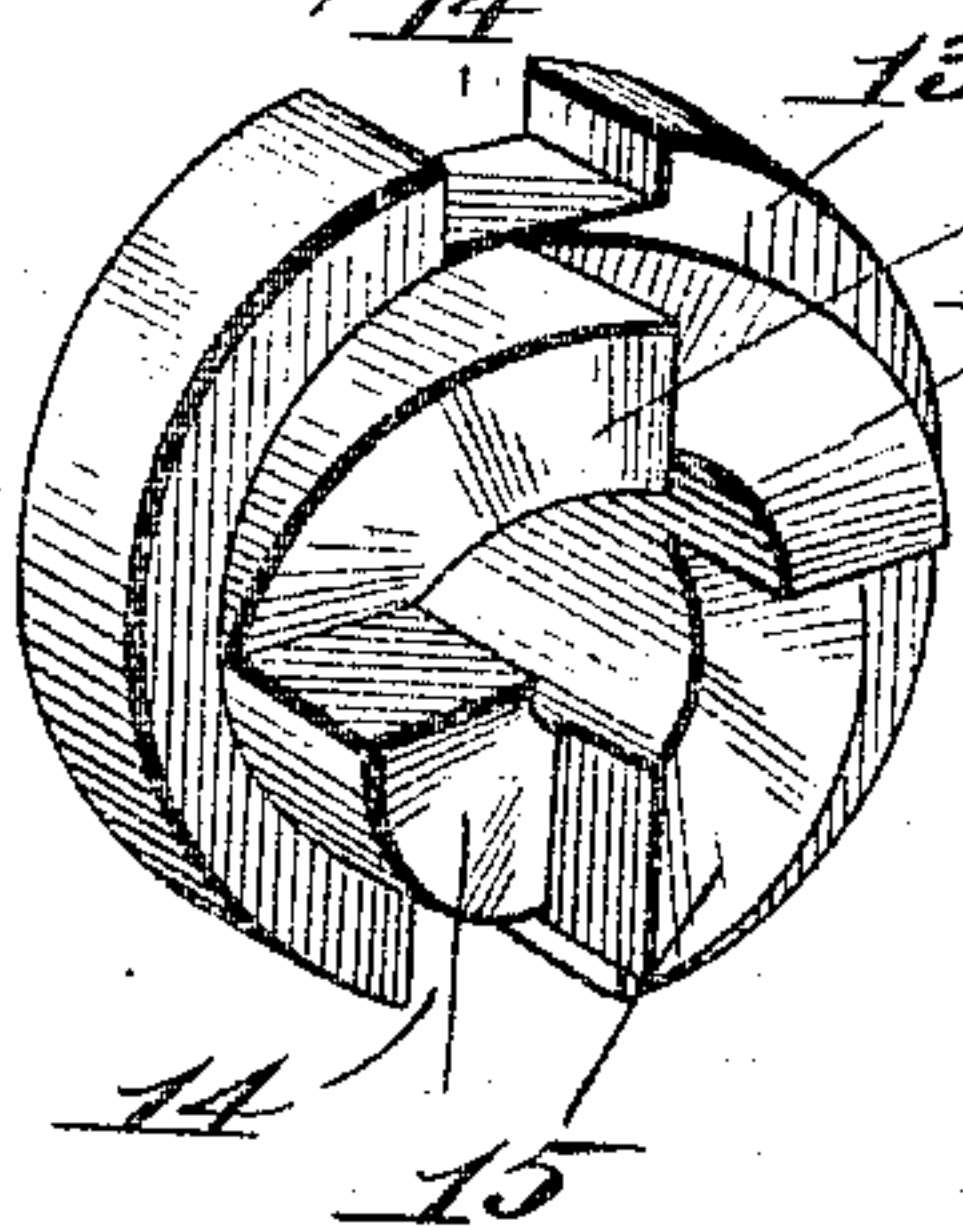
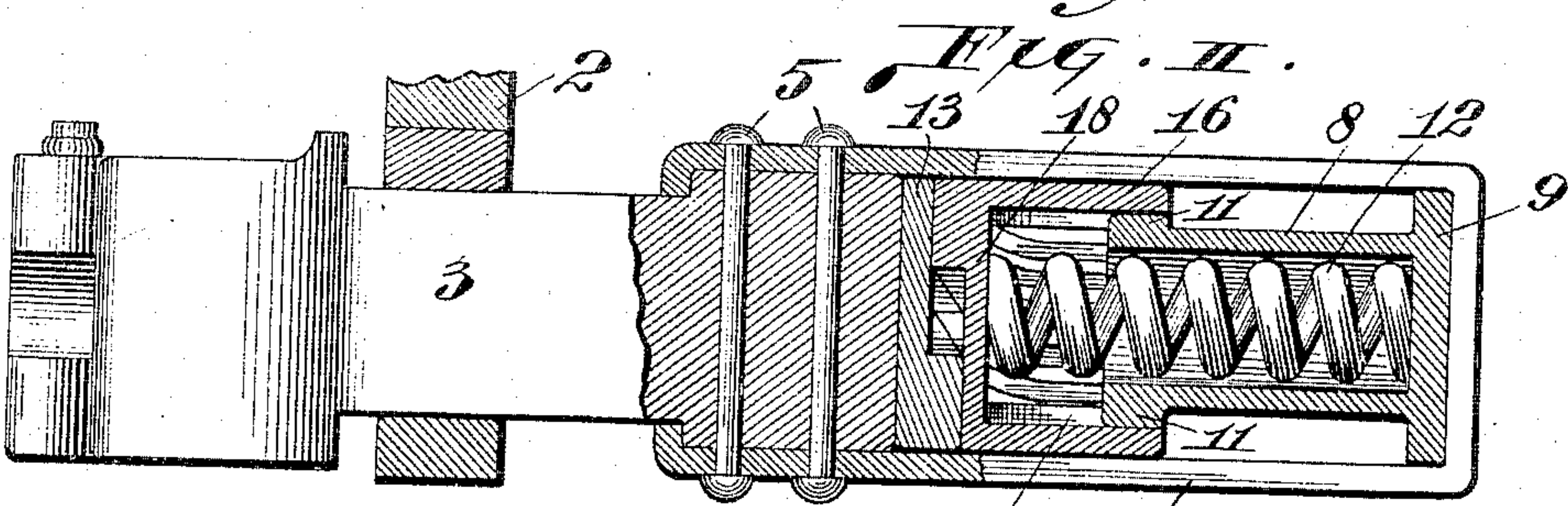
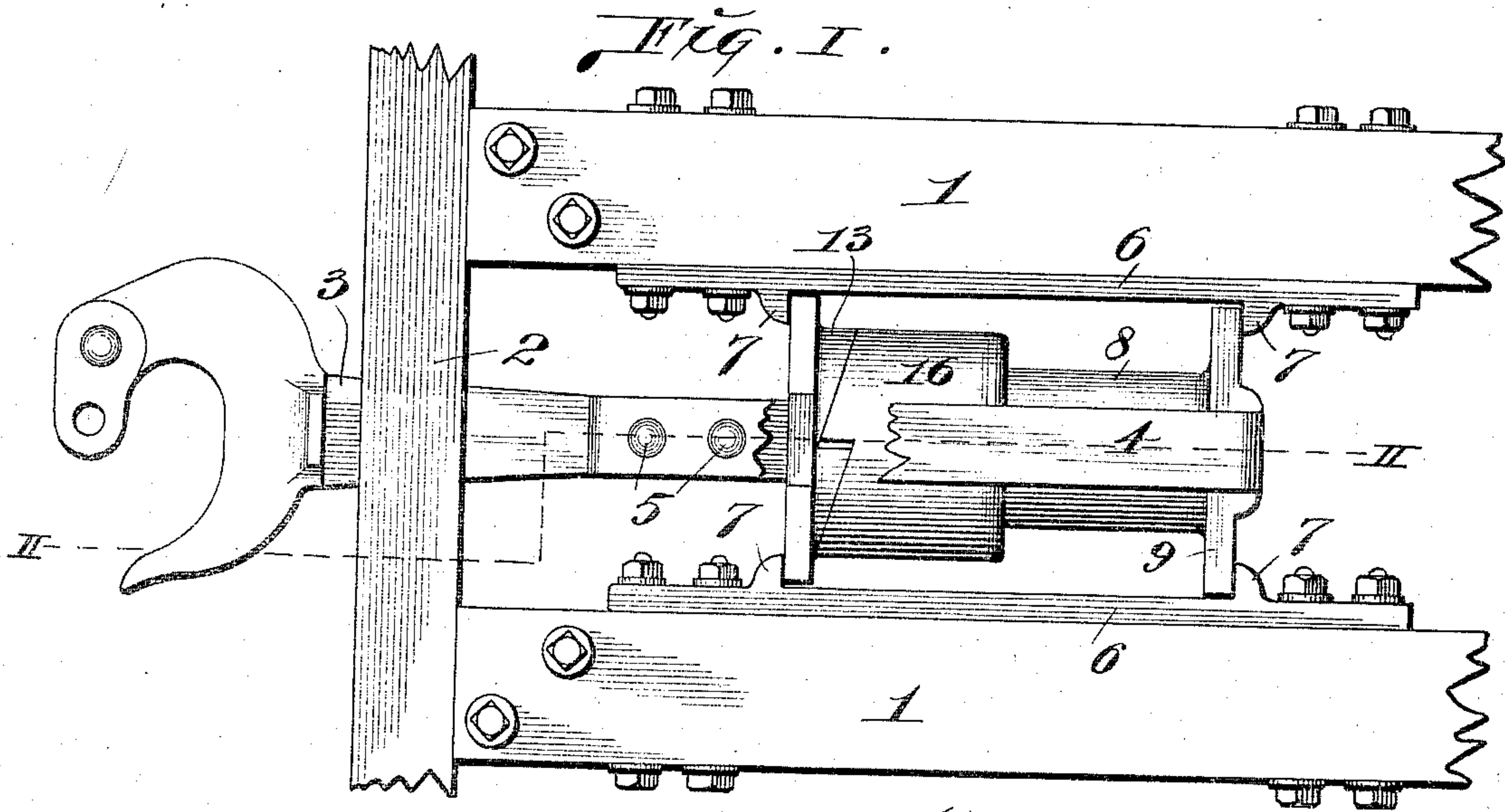
PATENTED NOV. 29, 1904.

O. S. PULLIAM.

DRAFT RIGGING.

APPLICATION FILED APR. 18, 1904.

NO MODEL.



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UNITED STATES PATENT OFFICE.

OSWALD S. PULLIAM, OF ST. LOUIS, MISSOURI, ASSIGNOR TO COMMON-WEALTH STEEL COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

DRAFT-RIGGING.

SPECIFICATION forming part of Letters Patent No. 776,202, dated November 29, 1904.

Application filed April 18, 1904. Serial No. 203,670. (No model.)

To all whom it may concern:

Be it known that I, OSWALD S. PULLIAM, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Draft-Rigging, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement in draft-rigging for railway-cars, the construction embodying one in which the impact of the draw-head of the rigging in its inward movement is contracted by both a spring and frictional engagement of members in the rigging in such manner that the necessary action of the spring operates in conjunction with friction to lessen the degree of spring action in overcoming in a yielding manner the thrust of the draw-head.

Figure I is a top or plan view of my rigging. Fig. II is a longitudinal vertical section taken on line II II, Fig. I. Fig. III is a perspective view of the forward friction member of the rigging. Fig. IV is a front perspective view of the rear friction member. Fig. V is a rear perspective view of the rear friction member. Fig. VI is a perspective view of the spring-box. Fig. VII is an enlarged view showing a fragment of the inner grooved face of the rear friction member.

1 designates the draft-timbers of a railway-car, and 2 the car end sill by which the draw-bar of the rigging is supported.

3 designates the draw-bar, to which is connected a yoke or strap 4, that extends rearwardly from the inner end of the draw-bar, the said yoke being secured to the top and bottom of the draw-bar by suitable means, such as rivets 5.

6 designates guide-plates secured to the inner opposing faces of the draft-timbers 1 and provided with vertical lugs 7.

8 designates a spring-box having at its rear end a head 9, that is provided with notches 10 (see Fig. VI) to receive the arms of the yoke 4, within which the box is seated. This box is provided at its forward end with a plurality of studs 11, projecting from the perim-

eter of the box, and the box being hollow throughout its main portion provides a seat for a bumper-spring 12, that rests at its rear end against the forward side of the box-head, as seen in Fig. II.

13 designates a forward friction member that is provided with notches 14, that receive the arms of the yoke 4, which serve to hold said friction member from rotation. At the rear side of this friction member are a series of inclined projections 15.

16 designates a rear friction member that at its forward end is provided with a series of inclined projections 17, corresponding to the projections 15 of the forward friction member and adapted to bear thereagainst. The friction member 16 is tubular in form and is provided with a forward end wall 18, against which the forward end of the bumper-spring 12 rests. Interior of the friction member 16 are a plurality of ribs 19, between which are located longitudinally-extending grooves 20, in which the studs 11 of the spring-box 8 operate. The ribs and grooves extend in straight lines for portions of their lengths, beginning at the rear end of the friction member, and at their forward ends they are curved laterally.

In the service of my draft-rigging the parts occupy the positions illustrated most clearly in Fig. I, the head of the spring-box 8 resting within the yoke 4 and bearing against the rear-most lugs 7 of the plates 6 and the forward friction member resting within the yoke 4 and against the forward plate-lugs 7. When inward pressure is imparted to the draw-head 3, the bumper-spring 12 first receives the rearward thrust of the draw-head and yieldingly resists its movement due to the travel of the yoke 4 and the friction members 13 and 16 therewithin. During this period of travel of the parts named the studs 11 of the spring-box ride in the straight portions of the grooves 20 in the rear friction member until they finally reach the curved portions of said grooves. When the curved portions of the grooves are reached by said studs and the studs begin to travel therein, a rotative motion is imparted to the rear friction member,

which is thereby caused to turn with respect to the forward non-rotatable friction member.

As the rear friction member is thus turned its inclined projections ride against the inclined
5 projections 15 of the forward friction member, thereby incurring a sufficient degree of friction between the projections of said members to yieldingly resist the inward thrust of the draw-bar to enhance the yielding resistance thereagainst over that provided for by
10 the bumper-spring.

I claim as my invention—

1. In a draft-rigging, the combination of a draw-head, a spring-seat member carried by
15 said draw-head, studs projecting from said member, a rotatable friction member provided with interior grooves partially curved and by which said studs are received, a non-rotatable friction member carried by said draw-head

and opposing said rotatable friction member, 20 and a spring interposed between said spring-seat member and rotatable friction member, substantially as set forth.

2. In a draft-rigging, the combination of a draw-head, a yoke carried by said draw-head, 25 a spring-box non-rotatably held in said yoke, studs projecting from said box, a rotatable friction member having interior grooves partially curved and by which said studs are received, a non-rotatable friction member held
30 within said yoke, and opposing said rotatable friction member, and a spring in said spring-box opposing said rotatable friction member, substantially as set forth.

OSWALD S. PULLIAM.

In presence of—

E. S. KNIGHT,

NELLIE V. ALEXANDER.