

No. 742,320.

PATENTED OCT. 27, 1903.

J. C. HERRMANN.
FRICTION DRAFT RIGGING.
APPLICATION FILED JULY 9, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

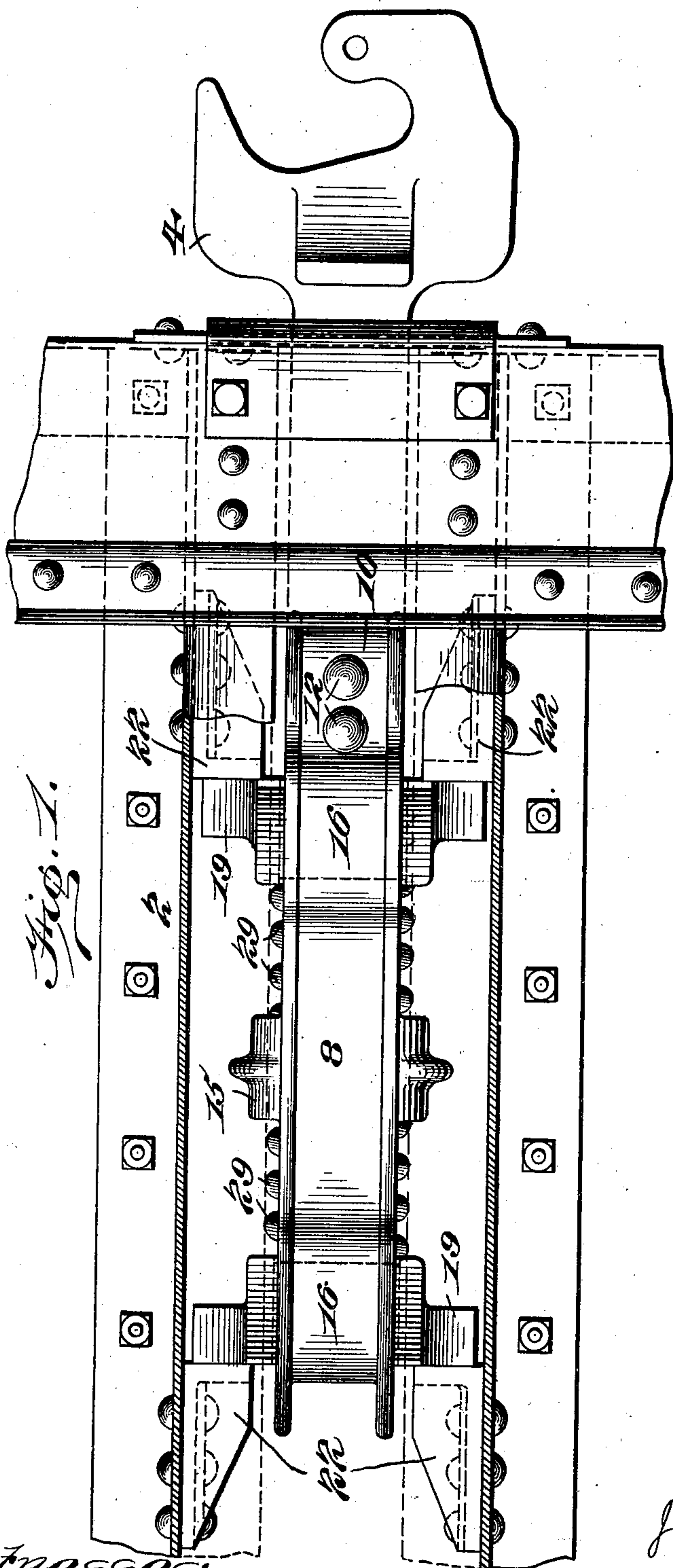


Fig. 1.

Fig. 6.

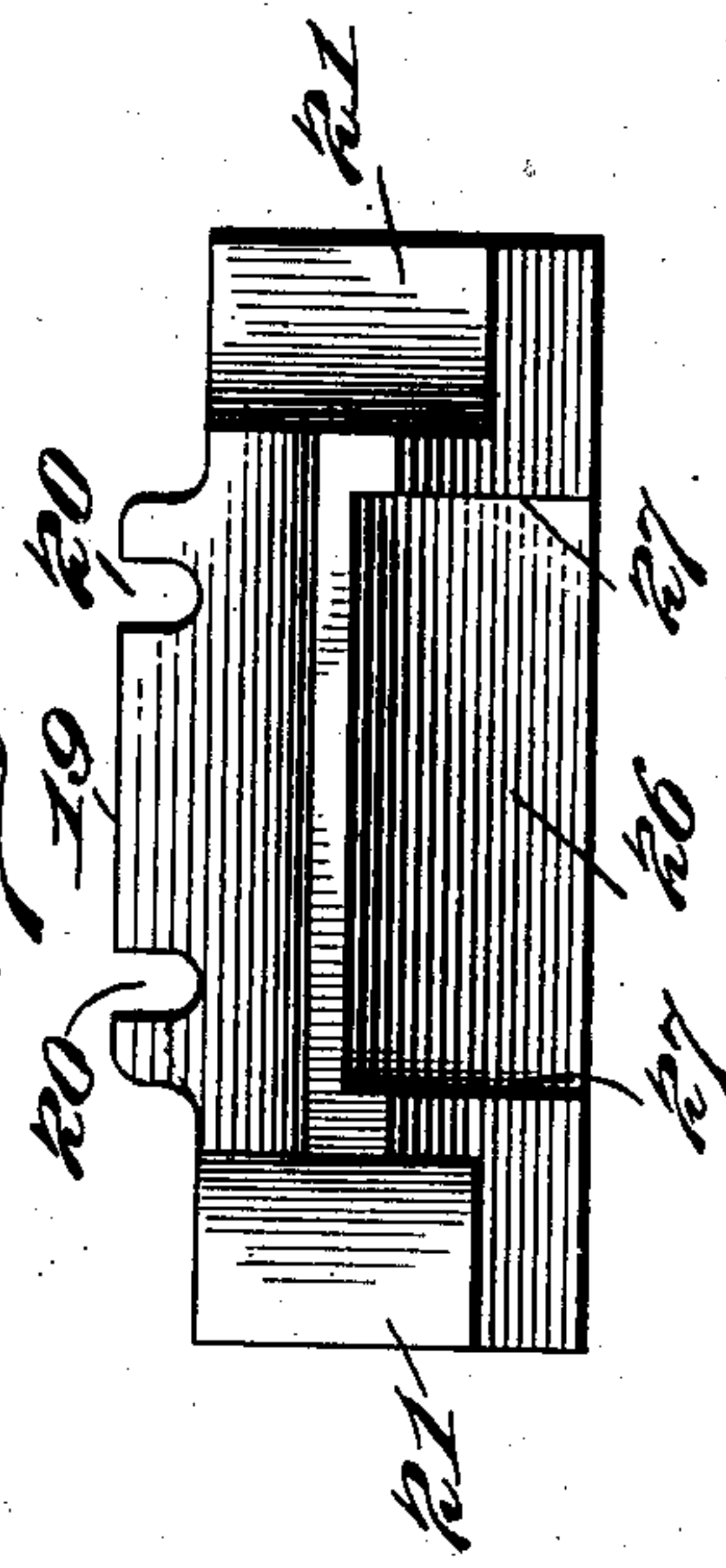
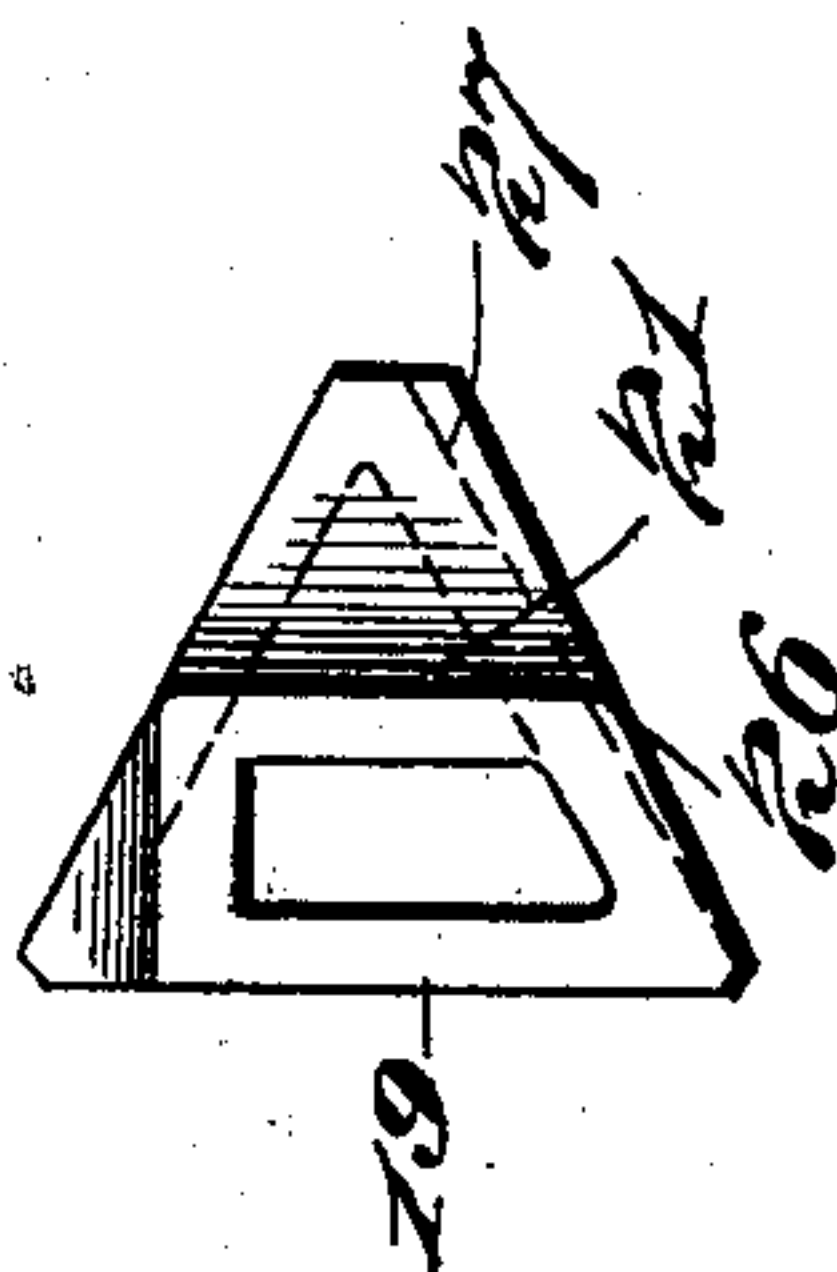


Fig. 5.



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2 SHEETS—SHEET 2.

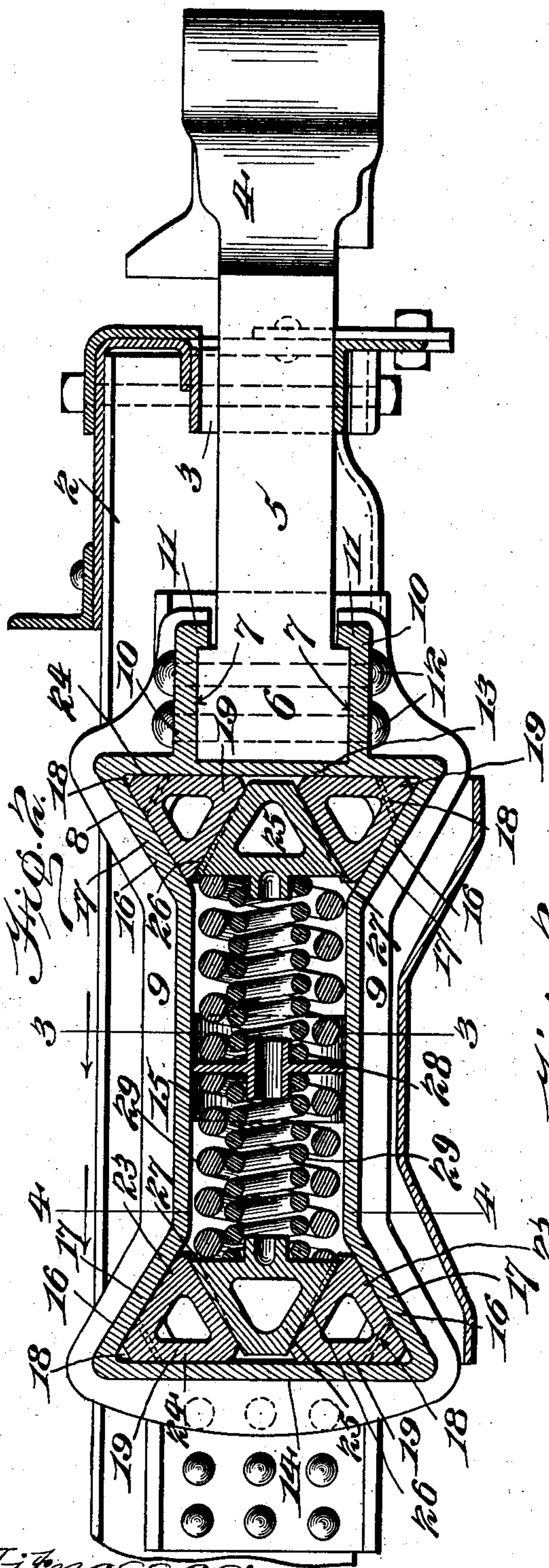
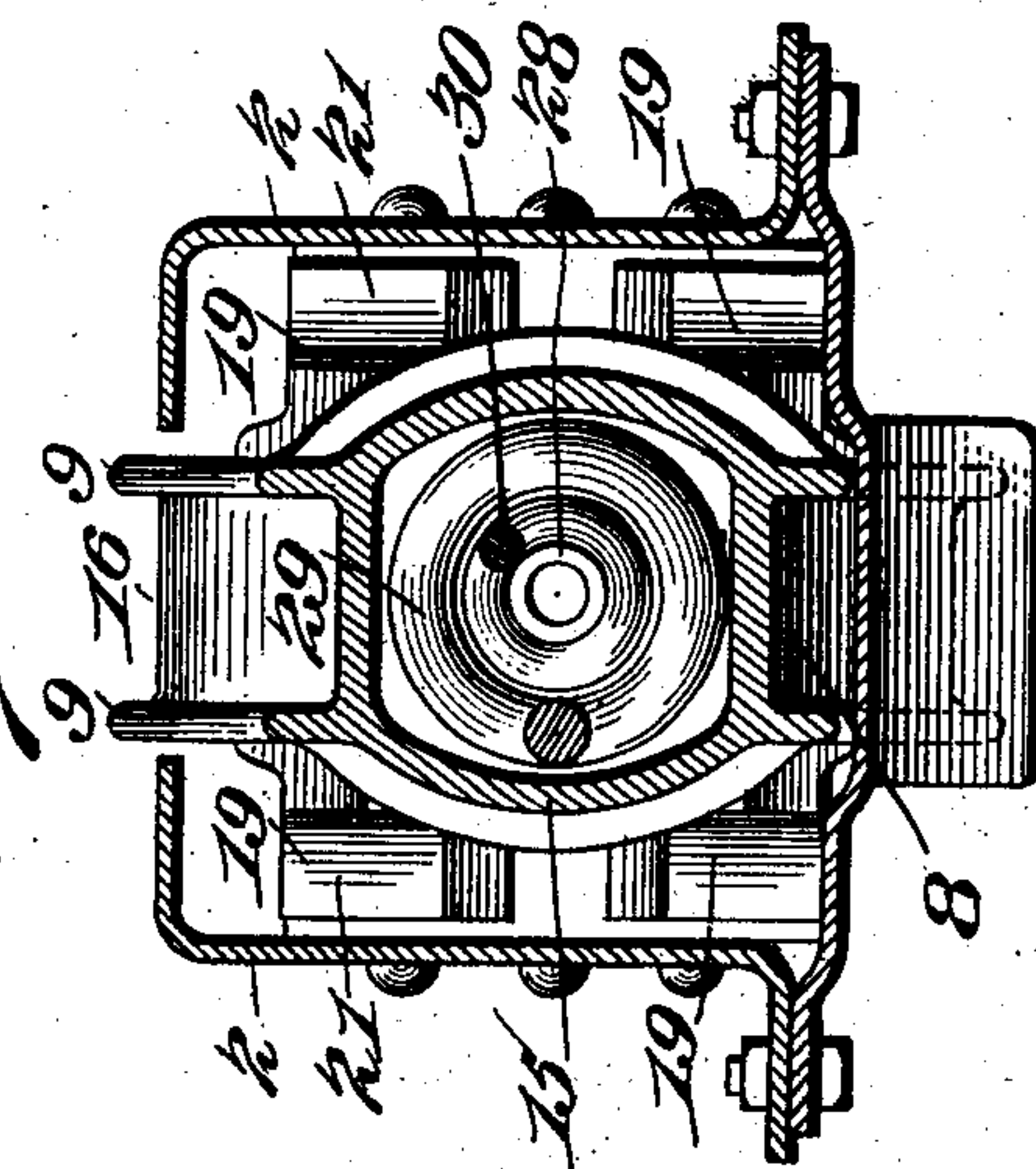
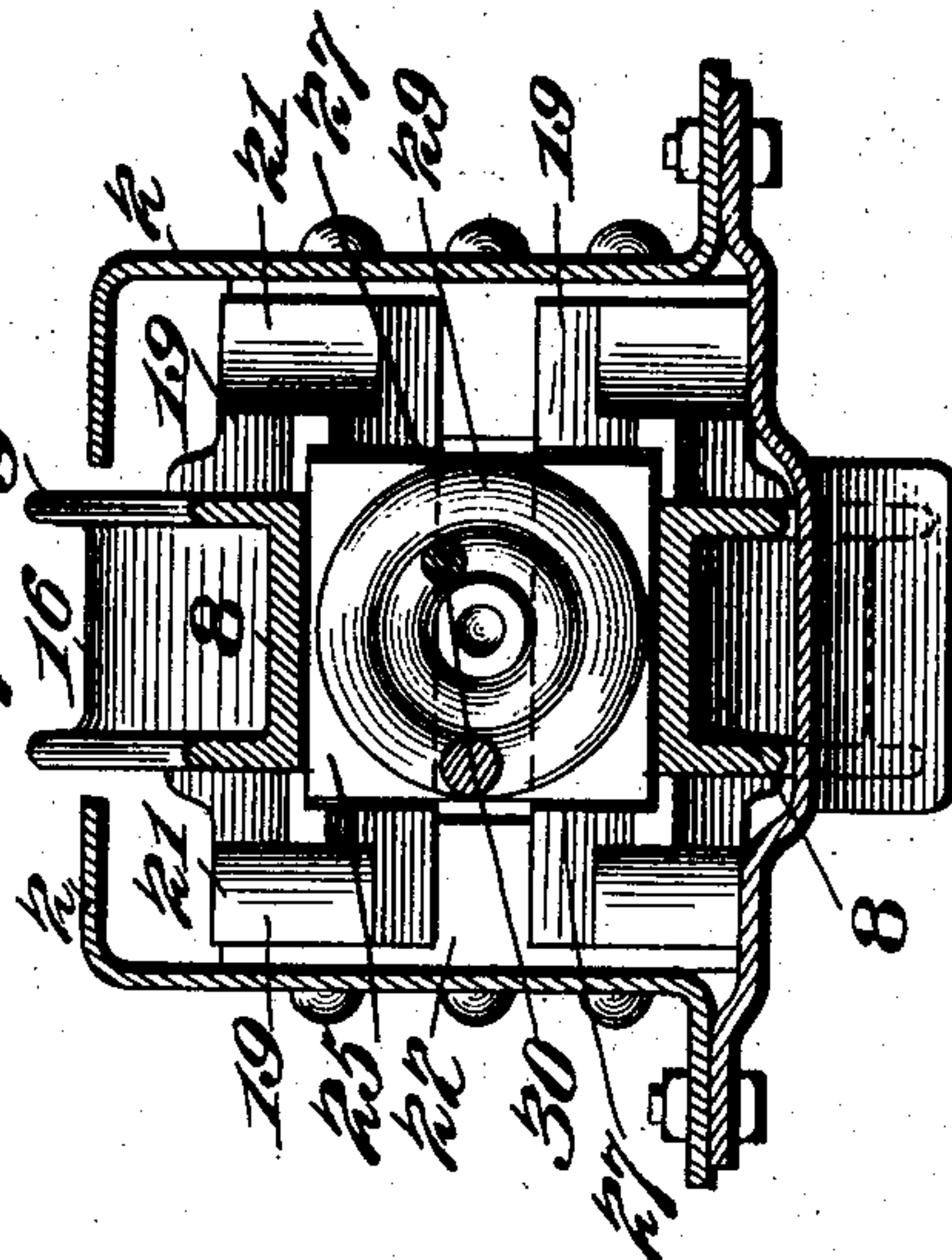


Fig. 3.



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UNITED STATES PATENT OFFICE.

JULIUS C. HERRMANN, OF ALLEGHENY, PENNSYLVANIA.

FRICTION DRAFT-RIGGING.

SPECIFICATION forming part of Letters Patent No. 742,320, dated October 27, 1903.

Application filed July 9, 1903. Serial No. 164,911. (No model.)

To all whom it may concern:

Be it known that I, JULIUS C. HERRMANN, a resident of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Friction Draft-Rigging; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to friction draft-rigging.

One of the objects of my invention is to provide a friction draft-rigging in which the main friction member may be connected directly to the coupler-bar, so as to dispense with any intermediate connections.

Another object of my invention is to provide for the holding of all the parts of the friction-gear within the main friction member, so that the parts are all held together within the main member by the tension of the springs and ready to be applied to the coupler.

To these ends my invention comprises, generally stated, a main friction member consisting of a suitable casting having angular seats or recesses at each end thereof, triangular-shaped followers adapted to enter said recesses, the outer ends of said blocks bearing against the stationary supports on the draft-rigging frame, and a wedge-shaped friction-block interposed between the triangular followers, together with a spring interposed between said wedge-block and a suitable abutment.

My invention comprises other features, all of which will be hereinafter fully set forth and claimed.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a plan view of a portion of a draft-rigging frame with my improved draft-rigging applied thereto. Fig. 2 is a sectional side elevation. Fig. 3 is a cross-section on the line 3 3, Fig. 2. Fig. 4 is a cross-section on line 4 4, Fig. 2. Fig. 5 is an end view of one of the friction-followers, and Fig. 6 is a top view of the same.

Like numerals indicate like parts in each of the figures.

In the drawings, the numeral 2 designates

any suitable draft-rigging frame, and passing through the opening 3 in said draft-rigging frame is a suitable coupler 4, having the inwardly-projecting bar or tailpiece 5. This tailpiece 5 has the enlargement 6, which enters the seat 7 in the casting 8, which forms the main friction member of my improved draft-rigging. This friction member 8 is formed of suitable metal provided with strengthening-ribs 9, and at its forward end the projecting portion 10 forms the seat 7 for the enlargement 6 of the coupler. The shoulders 11 act to prevent the withdrawal of the coupler-bar, and bolts or rivets 12 pass through the casting and the bar in order to hold said bar securely in position and relieve the outward strain when the friction member is operated.

The friction member 8 is closed at its ends 13 14, but is open at its sides except the mid-portion, where it is strengthened by the ring or enlargement 15. The ends of the friction member 8 are enlarged to form the angular recesses 16, formed by the inclined upper and lower portions 17 of the casting, together with the end walls of same. In order to strengthen the corners of the friction member 8, said friction member is provided with the lugs 18, cast therein, which increase the thickness of the metal at the corner, and thus give additional strength.

Fitting within the angular recesses 16 at the forward end of the friction member 8 are the friction-followers 19. These friction-followers, as indicated in Figs. 5 and 6, are triangular in cross-section, and when they are inserted within the recesses 16 the grooves 20 in said followers are adapted to engage the lugs 18 at the corners of the friction member, while the outer ends 21 of said followers bear against the shoulders or stops 22 on the draft-rigging frame. When these friction-followers are in position, the sides 23 thereof bear against the inclined portions 17 of the friction member 8, while the sides 24 of said follower bear against the end plate 14. A friction-wedge 25 is interposed between the faces 26 of the friction-followers, and in order to provide against the lateral movement of the wedge-block 25 the followers 19 are provided with ribs 27, with which the wedge-block 25 engages.

Interposed between the wedge-block 26 and a sliding plate 28 within the main friction member 8 are the springs 29 30. On the opposite side of the plate 28 are like springs, which bear against a like wedge-block 25, which in turn is in frictional contact with like followers 19, all arranged and constructed as hereinbefore described with reference to the opposite end of the main friction member 8. By the above construction it will be apparent that the action of the springs tends to force the wedge-block 25 in a direction to force apart the followers, said followers being held against forward movement by the stops 22. The friction-blocks are inserted in the main friction member in the following manner: The rear friction-followers are first inserted from the open sides of the main friction member and introduced into the recesses. The wedge-block is then inserted and the springs bearing against same. The movable plate 28 is then inserted and the forward springs. By compressing the springs the forward friction-followers and wedge-block may be inserted, whereupon the springs may be released and the parts all held securely in place, so that in the handling of the friction member the parts will not drop out, and by simply attaching the friction member 8 to the coupler the device is ready for use.

When my improved draft-rigging is in operation and the shock comes against the same so as to force back the main friction member 8, said member will recede, and the inclined friction-faces 17 will travel along the corresponding face 23 of the rear followers, and as said followers are held from horizontal movement by the stop 22 the main friction member forces the followers toward each other, thus forcing back the interposed wedge-block 25 and compressing the rear spring 29 and 30. The points of friction secured by the above construction are that of the inclined faces 17 of the friction member 8 against the faces 23 of the followers, that of the ends of the friction-followers on the stop 22, and that of the friction-followers bearing on the inclined faces of the wedge 25. In case the force is applied to move the friction member 8 in the opposite direction or in case of a pull on the draft-bar the friction member 8 will move in the opposite direction; but the same action will take place, as all the parts are combined and arranged in the same manner.

By the above construction I obtain a very efficient draft-rigging in which the frictional contact of the parts is of such a character as to render the device very efficient in taking up of jolts or jars and relieving the strain due to such action.

What I claim is—

1. In friction draft-rigging, the combination of a main friction member connected to the coupler, friction-followers within said friction member, means for preventing the movement of said followers with said fric-

tion member, a friction-block interposed between said followers, and a spring acting on said block.

2. In friction draft-rigging, the combination of a main friction member having angular seats or recesses, friction-followers engaging said recesses, means for preventing the movement of said followers with said main friction member, a friction-block interposed between said followers, and a spring acting on said block.

3. In friction draft-rigging, the combination of a main friction member having an end face and inwardly-sloping faces forming in conjunction with said end face angular recesses, triangular friction-followers in said recesses, a wedge-block interposed between said followers, means for preventing the movement of said followers with said main friction member, and a spring acting on said wedge-block.

4. In friction draft-rigging, the combination of a main friction member having an end face and inwardly-sloping faces forming in conjunction with said end face angular recesses, friction-followers within said recesses, the ends of said followers projecting beyond said friction member and engaging stops on the draft-rigging frame, a friction-block interposed between said followers, and a spring acting on said block.

5. In friction draft-rigging, the combination of a main friction member having angular seats at each end thereof, triangular friction-followers in said seats, means for preventing the movement of said followers with said friction member, friction wedge-blocks interposed between said followers, and springs interposed between said wedge-blocks and a sliding abutment in said main friction member.

6. In friction draft-rigging, the combination of a main friction member having angular seats formed therein, reinforcing-lugs in said seats, triangular friction-followers entering said seats and having recesses formed therein with which said lugs engage, a friction wedge-block interposed between said followers, means for preventing the movement of said followers with said friction member, and a spring acting on said wedge-block.

7. In friction draft-rigging, the combination of a main friction member comprising an open-sided oblong body enlarged at its ends to form angular seats, triangular friction-followers in said seats, means for preventing the movement of said followers with said friction member, friction wedge-blocks interposed between said followers, and springs interposed between said wedge-blocks and a sliding plate in said friction member.

8. In friction draft-rigging, the combination of a main friction member adapted to be connected to the coupler, friction-followers within said friction member, means for preventing the movement of said followers with said friction member, and a spring arranged

to hold said followers against the main friction member.

5 9. In friction draft-rigging, the combination of a main friction member having angular faces, friction-followers engaging said faces, means for preventing the movement of said followers with said main friction member, and yielding means arranged to hold said
10 followers against the angular faces of said main friction member.

10 10. In friction draft-rigging, the combination of a main friction member having angular faces at each end thereof, friction-followers bearing against said faces, means for preventing the movement of said followers with
15 said main friction member, friction wedge-

blocks interposed between said followers at each end, and a spring interposed between said wedge-blocks.

11. In friction draft-rigging, a main friction 20 member having a slot at its forward end adapted to receive the inner end of the coupler-bar, and cooperating friction devices contained in and supported by said main member.
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In testimony whereof I, the said JULIUS C. HERRMANN, have hereunto set my hand.

JULIUS C. HERRMANN.

Witnesses:

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ROBERT C. TOTTEN.