

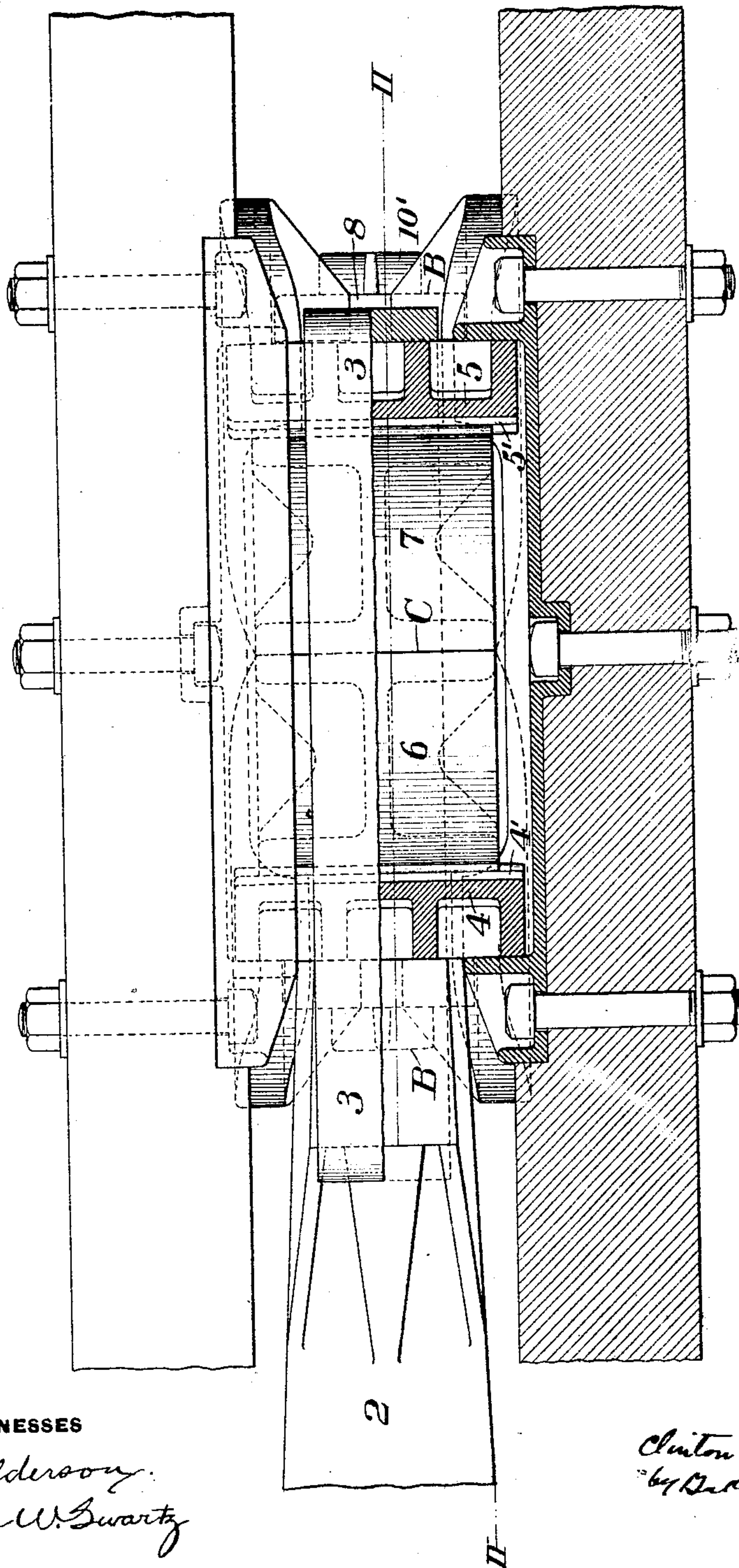
No. 832,220.

PATENTED OCT. 2, 1906.

C. A. TOWER.
DRAFT RIGGING.

APPLICATION FILED JULY 14, 1905. RENEWED FEB. 20, 1906.

3 SHEETS—SHEET 1.



WITNESSES

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Warren W. Swartz

INVENTOR

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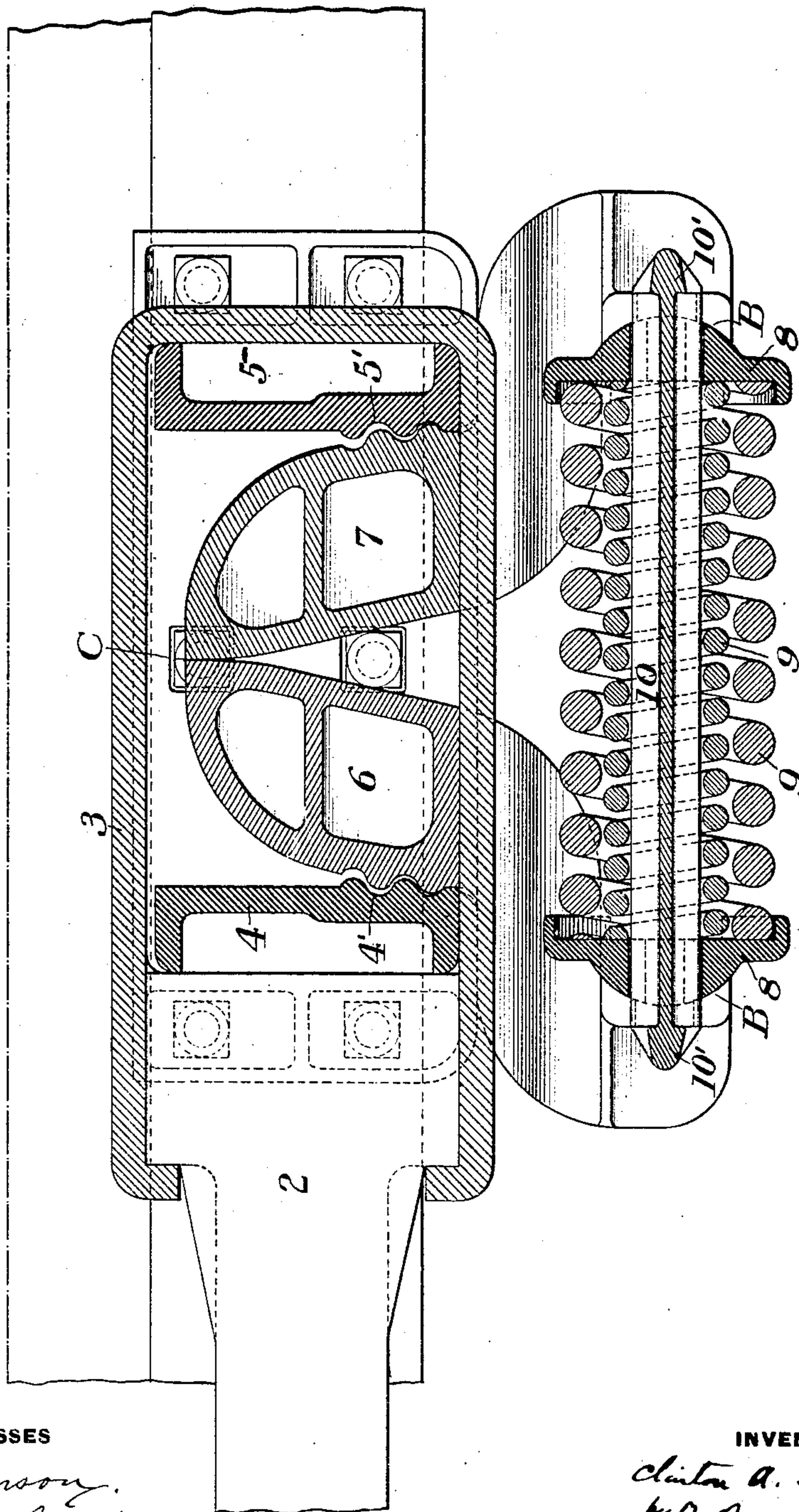
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3 SHEETS—SHEET 2.

Fig. 2.



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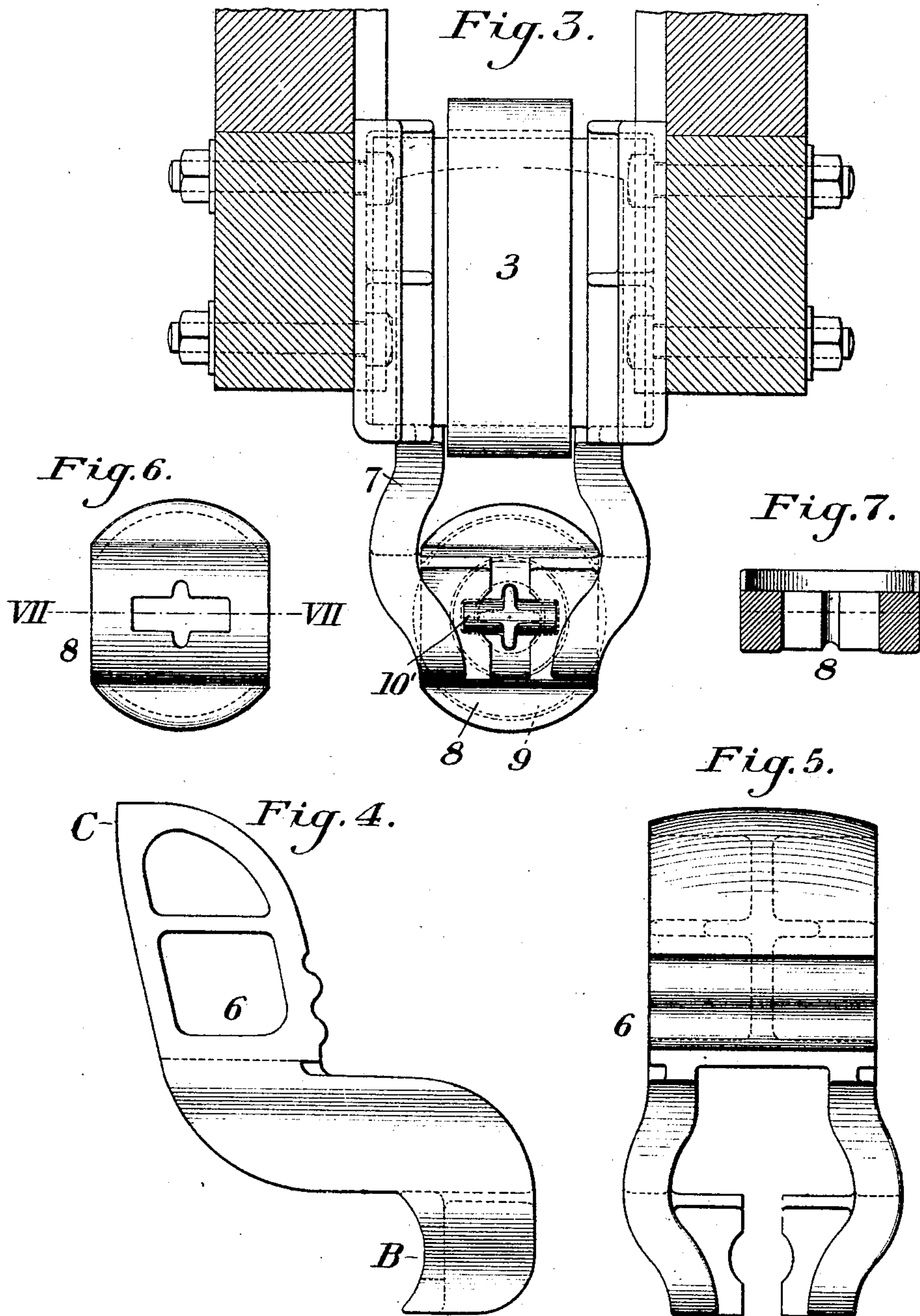
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

CLINTON A. TOWER, OF CLEVELAND, OHIO, ASSIGNOR TO THE NATIONAL MALLEABLE CASTINGS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

DRAFT-RIGGING.

No. 832,220.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed July 14, 1905. Renewed February 20, 1906. Serial No. 302,053.

To all whom it may concern:

Be it known that I, CLINTON A. TOWER, of Cleveland, Cuyahoga county, Ohio, have invented a new and useful Improvement 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, in which—

Figure 1 is a plan view, partly in section, of a draft-rigging constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section on the line II II of Fig. 1. Fig. 3 is an end elevation, partly in section. Fig. 4 is a detail elevation, and Fig. 5 is a front elevation, of the forked levers. Fig. 6 is a detail elevation of the spring-seat, and Fig. 7 is a section on line VII VII of Fig. 6.

In the drawings, 2 represents the draw-bar. 3 is the yoke, which extends rearwardly therefrom, and 4 5 are followers held, respectively, on opposite sides by means of the usual stops on the draft-timbers, which may be applied in the way in which stops are ordinarily applied to the followers of draft-riggings. These followers are preferably strengthened by ribs on their outer surfaces, and their inner surfaces are preferably vertical, having at their lower ends toothed portions 4' 5'.

6 7 are differential levers, which are set between the followers 4 5 and are forked, as shown in Figs. 3 and 5, so as to pass the yoke and to extend outwardly and preferably vertically downward beyond the line of the draw-bar. These levers meet at their upper end, and their faces, which are opposed to the followers, are preferably broad and are strengthened by webs and flanges, as shown in the drawings, so as to provide a strong broad bearing-surface against the followers. The levers diverge somewhat from their upper end, and where they pass beyond the yoke they extend lengthwise thereof toward the front and back of the yoke. At their lower forked ends they are provided with seat portions B B, affording recesses against which the rear side of spring-seats 8 8 have a rocking bearing. A spring or pair of springs 9 9 is interposed between the spring-seats, and the springs are traversed by a central guiding-rod 10. This rod is preferably of star shape in cross-section and at the ends is preferably formed with enlarged or oblong head portions 10'. In adjusting the rod in place it is inserted lengthwise between the formed portions of the lower ends of the levers, with

the enlarged heads or oblong portions 10' extending parallel with the divisions of the formed portions, and when thus inserted it is turned so as to bring said enlarged ends at right angles to said lines of division, as shown in Fig. 3, thus holding the rod and preventing it from endwise displacement.

When the draw-bar is subjected to a buffing stress, it will move the follower 4 rearwardly and acting on the lever 6 will cause it to rock at the point C, where it meets the other lever 7, this point serving as a fulcrum. The spring is thus depressed, and the lever 7 is caused to rock to an equal extent in the opposite direction. As the levers thus move the points of contact between the followers 4 and 5 and the respective levers will shift gradually toward the upper ends of the levers. This increases the length of the long arm of the levers, which bear upon the springs and shortens the short arms, which are between the contact-points of the followers and the meeting point C. It thus increases the effective resistance of the spring to the motion of the follower as the buffing increases in force. Meanwhile the rear follower 5 is held by its stops and affords the necessary resistance to the buffing action. In pulling the yoke draws the rear follower 5, and the forward follower 4 is held by its stops. When the draft-rigging operates in pulling the cars, the action is similar to that which takes place in buffing, for as the follower 5 advances its point of contact with the lever 7 and the point of contact of the lever 6 with the follower 4 move upwardly, and the effective resistance of the spring is thus increased.

The advantages of my invention reside in its simplicity and great strength and durability. The parts are accessible for repair and inspection, and the device is generally satisfactory and able to withstand the rough service to which such draft-riggings are put on the cars.

Within the scope of my invention as defined in the claims many changes in the parts may be made, since

What I claim is—

1. A draft-rigging having levers which meet at their inner ends, and thence extend divergently and outwardly beyond the line of the draw-bar, spring-seats fitted at the forked ends of the levers, a rod passing through the spring-seats and having head portions adapted to be turned and engage the levers and to

prevent displacement of the rod, and a spring set on the rod between the spring-seats; substantially as described.

2. A draft-rigging having levers which
5 meet at their inner ends, and thence extend divergingly and outwardly beyond the line of the draw-bar, spring-seats fitted at the forked ends of the levers, a rod passing through the spring-seats and having head portions adapted
10 ed to be turned and engage the levers and to prevent displacement of the rod, and a spring set on the rod between the spring-seats, said levers at the point where they pass beyond the line of the draw-bar being extended in
15 opposite direction lengthwise relatively thereto; substantially as described.

3. A draft-rigging having levers which meet at their inner ends, and thence extend divergingly and outwardly beyond the line of
20 the draw-bar, spring-seats fitted at the forked ends of the levers, a rod passing through the spring-seats and having head portions adapted to be turned and engage the levers and to

prevent displacement of the rod, and a spring set on the rod between the spring-seats, said
25 levers having a plain bearing-surface at their upper end and having a toothed bearing-surface against the followers; substantially as described.

4. A draft-rigging having levers which
30 meet at their inner ends, and thence extend divergingly and outwardly beyond the line of the draw-bar, spring-seats fitted at the forked ends of the levers, a rod passing through the spring-seats and having head portions adapted
35 ed to be turned and engage the levers and to prevent displacement of the rod, and a spring set on the rod between the spring-seats, said followers being substantially vertical on their inner surfaces; substantially as described. 40

In testimony whereof I have hereunto set my hand.

CLINTON A. TOWER.

Witnesses:

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HARRY E. ORR.