

No. 618,417.

Patented Jan. 31, 1899.

J. J. JONES.
DRAFT RIGGING.

(Application filed May 9, 1898.)

(No Model.)

Fig. 1.

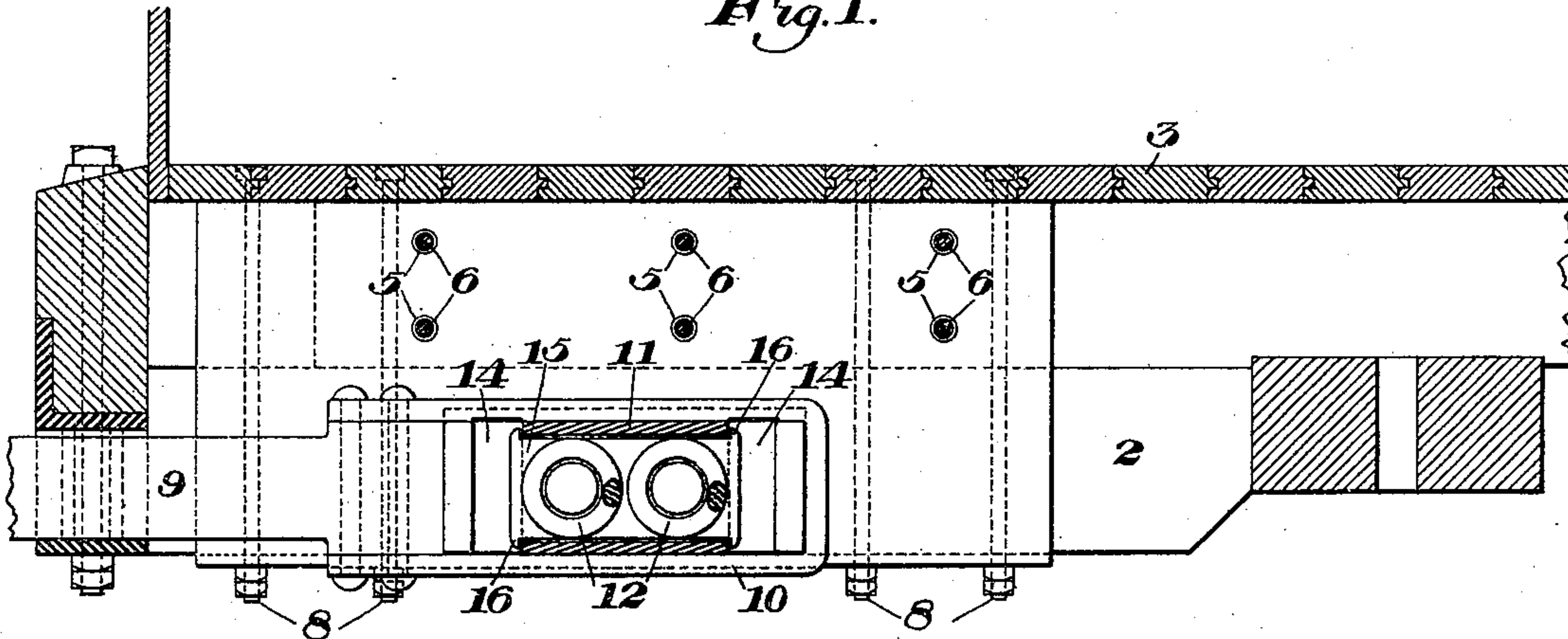


Fig. 2.

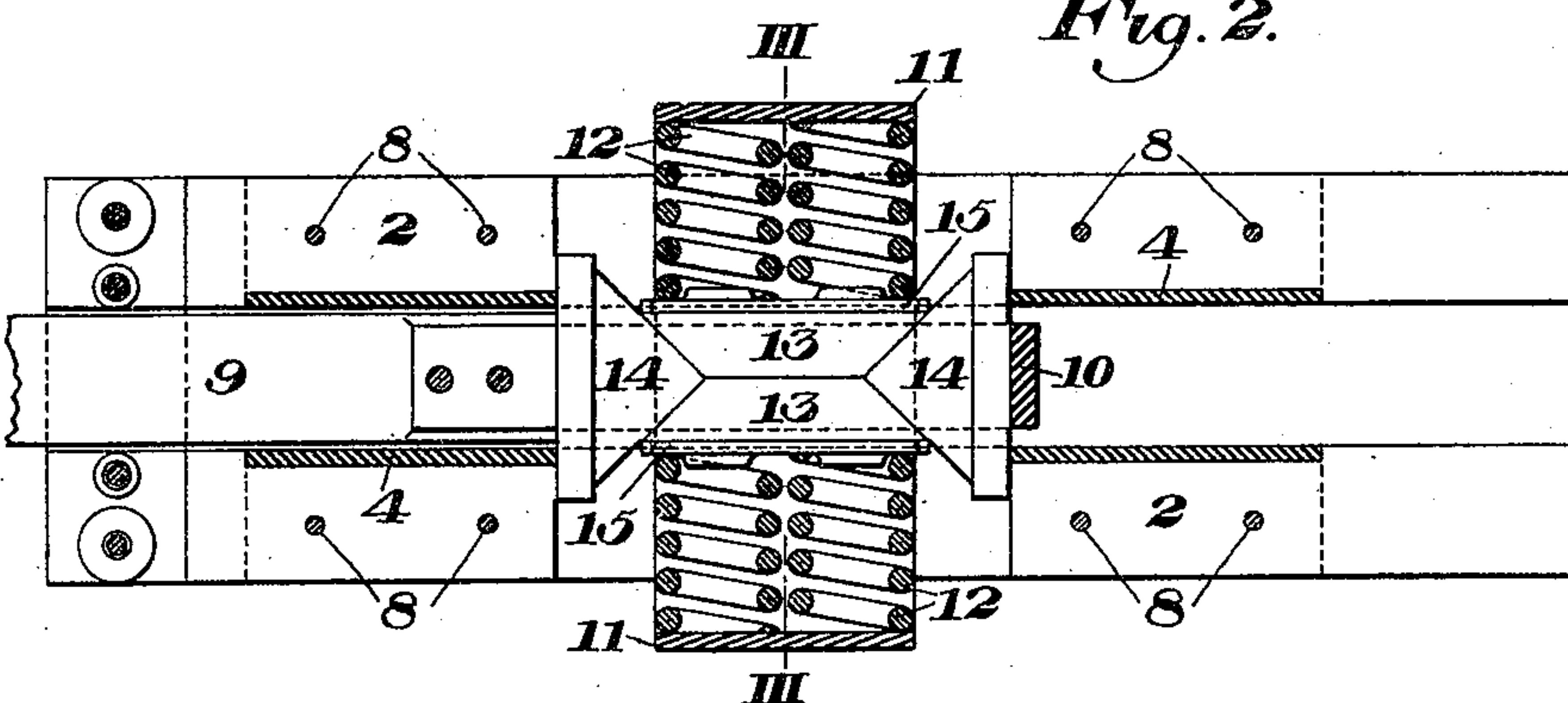
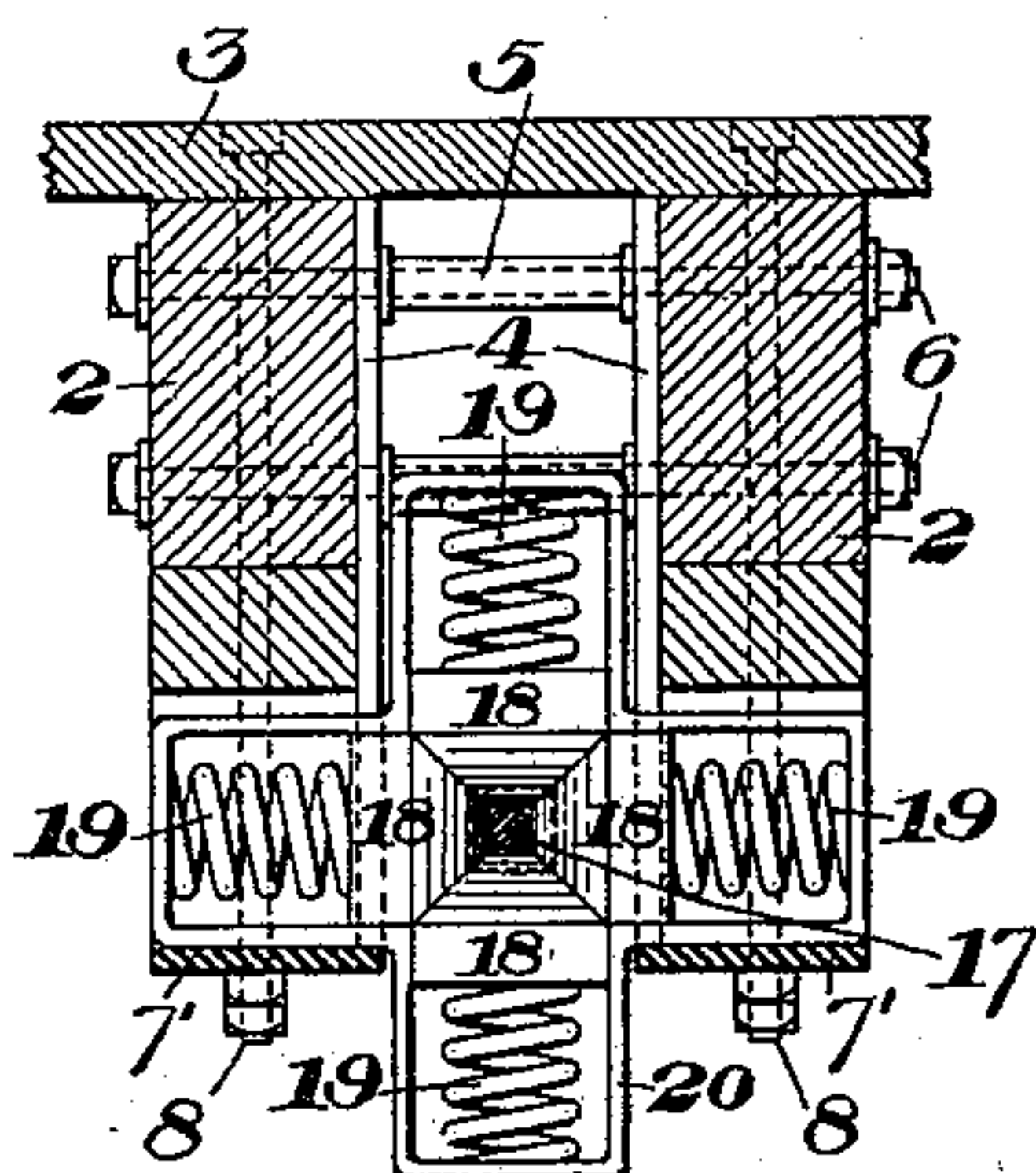


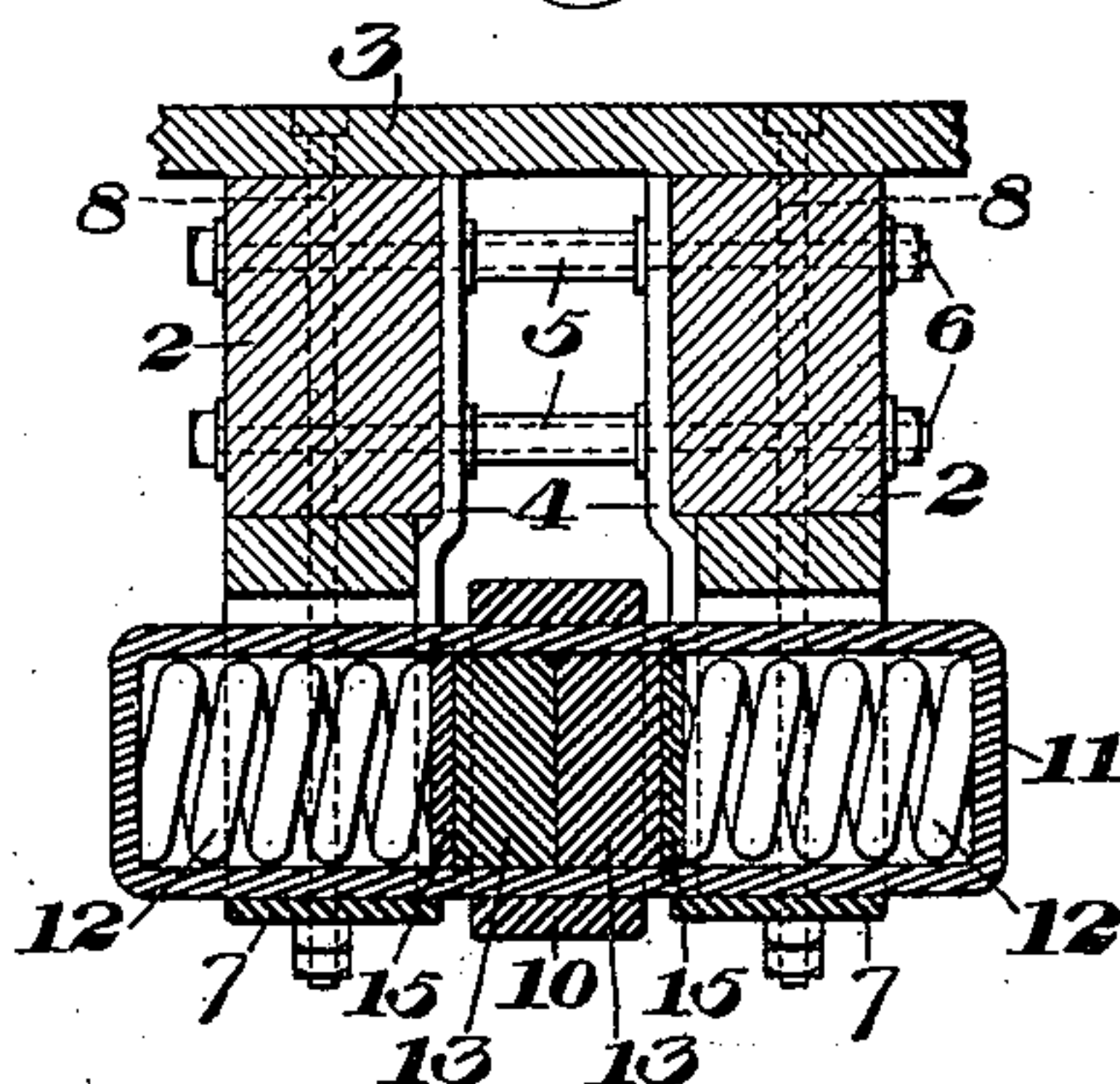
Fig. 4.



WITNESSES

Warren W. Swartz
I. A. Conner

Fig. 3.



INVENTOR

Joshua J. Jones
by Baxendell Baxendell
his Attorneys.

UNITED STATES PATENT OFFICE.

JOSHUA J. JONES, OF PITTSBURG, PENNSYLVANIA.

DRAFT-RIGGING.

SPECIFICATION forming part of Letters Patent No. 618,417, dated January 31, 1899.

Application filed May 9, 1898. Serial No. 680,100. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA J. JONES, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Draft-Riggings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a longitudinal vertical section of my improved draft-rigging in position. Fig. 2 is a horizontal section of the same. Fig. 3 is a vertical cross-section on the line III III of Fig. 2, and Fig. 4 is a sectional end elevation showing another form of my invention.

My invention relates to that class of draft-riggings wherein cushioning devices containing wedge-shaped or inclined faces are combined with springs, so as to absorb the shocks and strains to which the rigging is subjected; and it consists in an improved construction and arrangement of the wedges and springs whereby the device may be applied to existing cars without material alteration and wherein a simple and effective construction is afforded by locating the springs within a movable casing or transverse strap.

In the drawings, 2 2 represent the draft-timbers, and 3 the flooring of the car. The draft-timbers are lined by metal plates 4 4, spaced apart by suitable sleeves 5, through which extend the transverse securing-bolts 6.

In the form of Figs. 1, 2, and 3 the plates 4 are preferably spread apart slightly, and their lower portions are slotted and bent outwardly to form supports 7 7, which are carried by the vertical through-bolts 8 8.

9 is the draw-bar, having at its rear end the yoke 10, which lies between the outwardly-spread portions of the plates 4. Through this yoke extends the transverse casing or strap 11, within which are contained the four spiral springs 12. These springs bear against the ends of the casing and against a pair of blocks 13 13, which normally rest in contact with each other and are provided with inclined end faces engaged by the wedges 14. Guide-plates 15 are provided between the springs and the blocks, these plates having suitable bosses to enter the springs and flanges surrounding the outer

edges of the blocks. The plates are notched or offset to form guides, as shown at 16 in Fig. 1. The wedges 14 rest loosely within the yoke and are held in place by their inclined faces and the ends of the yoke and the slot-walls of the draft-irons.

In the operation of the device when a compressive pressure is exerted upon the draw-bar the forward wedge 14 will be driven back and cause the blocks 13 to move outwardly and rearwardly against the action of the springs 12, the spring-casing moving back with the blocks. As the inclines upon both wedges are of the same angle, the blocks will move outwardly in parallel lines and the blow thus be absorbed. When a tensile strain is brought upon the draw-bar, the rear wedge will be drawn forward, moving the blocks forwardly and outwardly, the spring-casing moving forwardly, giving the same action as before.

In Fig. 4 I show a form wherein the pressure is absorbed on all four sides of the draw-bar. In this form the front and rear wedge are in the form of frustums of pyramids and are connected by a central tension-rod 17. The four inclined faces of each wedge are contacted with by the outwardly-movable blocks 18, which are of similar shape, the entire system of blocks forming practically a cube divided on diagonal planes. Each block 18 is normally forced forward by springs 19, contained within a four-lobed casing 20, which rests upon the supports 7' and travels thereon the same as in the form of Figs. 1, 2, and 3. In this form it is evident that when the draw-bar is moved in either direction the blocks 18 will be moved outwardly and forwardly or rearwardly, compressing the springs on the four sides, the spring-casing traveling as before.

The advantages of my invention will be apparent to those skilled in the art. The device may be applied to ordinary forms of cars. It is simple and of few parts and not liable to get out of order. The parts are easily accessible, and the use of the traveling or movable casing for the springs makes the action uniform and causes the blocks to travel outward in parallel lines.

Many variations may be made in the form and arrangement of the wedges and the

springs without departing from my invention, since

I claim—

1. In a draft-rigging, the combination with
5 a draw-bar, of oppositely-located wedges actuated thereby, blocks having inclined faces contacting with the wedges and movable toward and from each other and longitudinally, and a traveling casing having springs bearing
10 upon the blocks; substantially as described.
2. The combination with a longitudinally-movable bar having a yoke containing oppositely-located wedges, of a spring-casing extending transversely through the yoke and
15 containing spring-pressed blocks having inclined faces contacting with the wedges; substantially as described.
3. In a draft-rigging, the combination with a draw-bar, of oppositely-located wedges connected thereto, blocks having inclined faces
20 bearing upon the wedges and movable toward and from each other and longitudinally, and a traveling casing containing spiral springs bearing upon the blocks; substantially as described.
25
4. In a draft-rigging, the combination with vertical draft-irons having horizontal bear-

ings, of a spring-casing movable along the bearings and containing spring-pressed blocks with inclined faces, said blocks being
30 movable toward and from each other and longitudinally, and wedges connected with the draw-bar and contacting with the inclined faces of the blocks; substantially as described.

5. In a draft-rigging, the combination with
35 a draw-bar, of pyramidal-shaped wedges connected thereto, spring-pressed blocks bearing upon the different faces of the wedges, and a movable casing having springs bearing upon
40 the blocks; substantially as described.

6. In a draft-rigging, the combination with a draw-bar, of oppositely-located wedges actuated thereby, and spring-pressed blocks
45 having inclined faces contacting with the wedges, said blocks being movable toward and from each other and longitudinally; substantially as described.

In testimony whereof I have hereunto set my hand.

JOSHUA J. JONES.

Witnesses:

G. I. HOLDSHIP,
G. B. BLEMMING.