

No. 710,978.

Patented Oct. 14, 1902.

R. H. HORN BROOK.
CAR TRUCK BOLSTER.
(Application filed June 25, 1902.)

(No Model.)

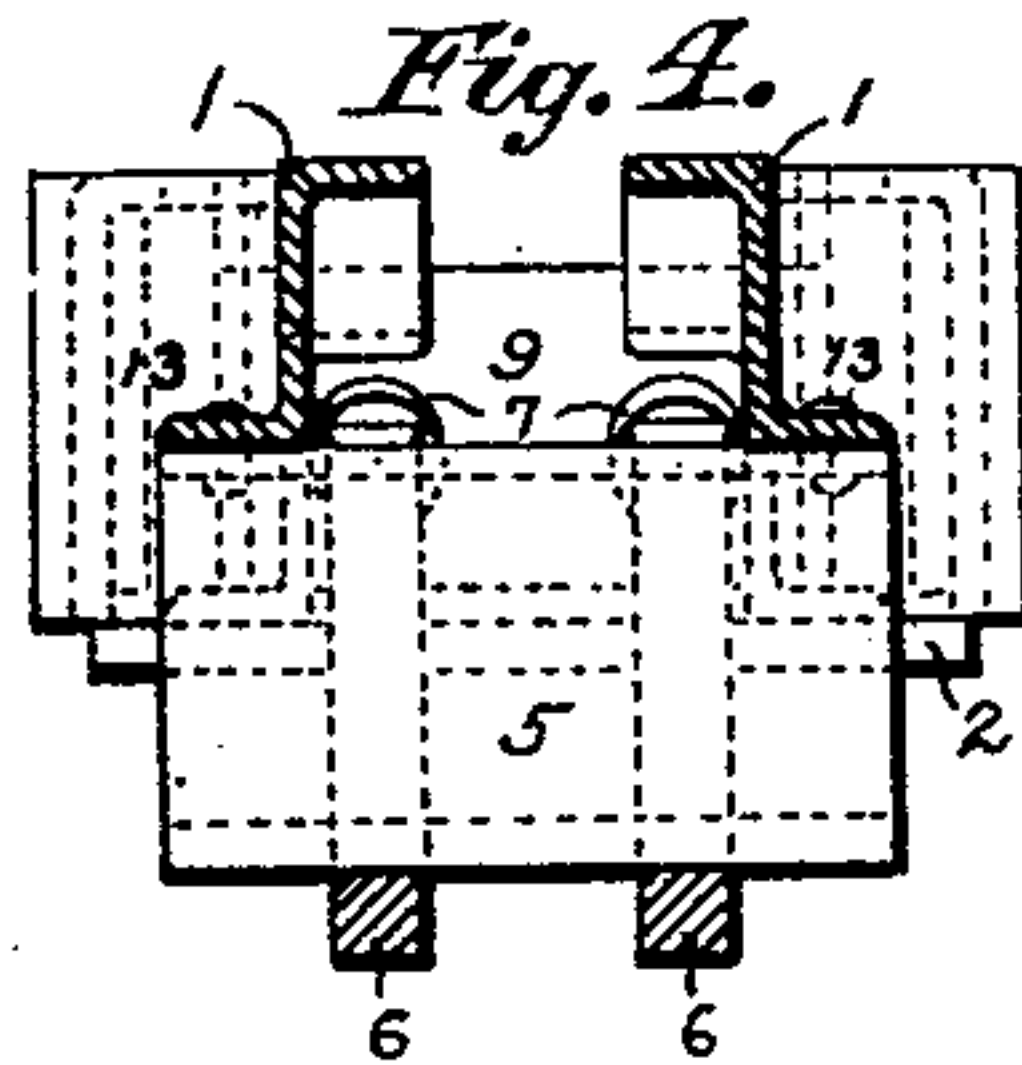


Fig. 1.

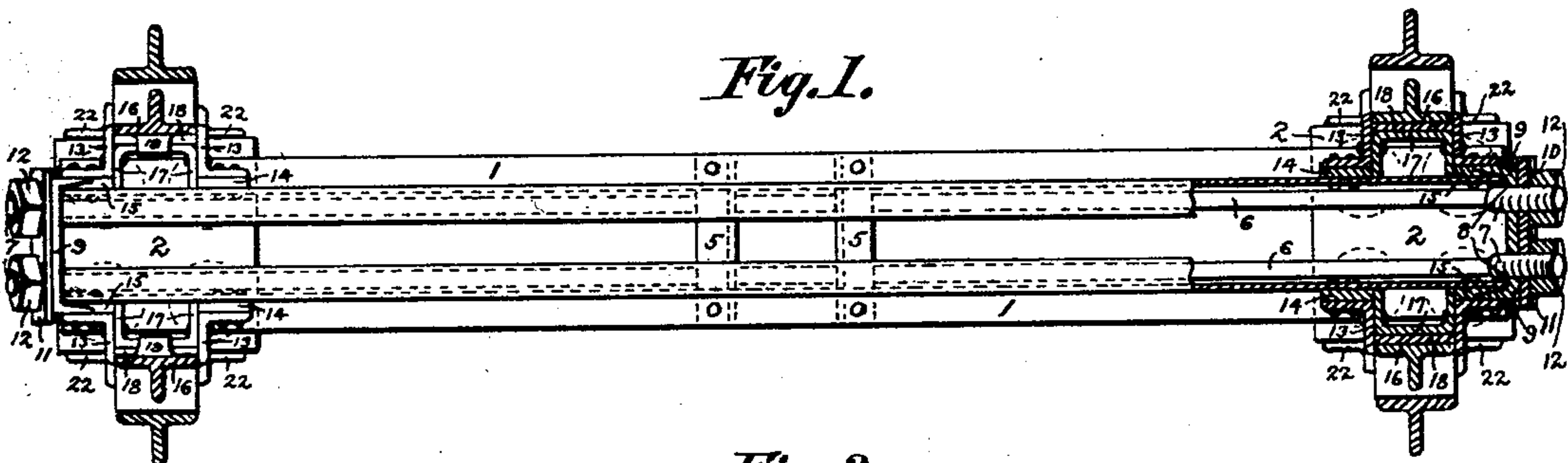


Fig. 2.

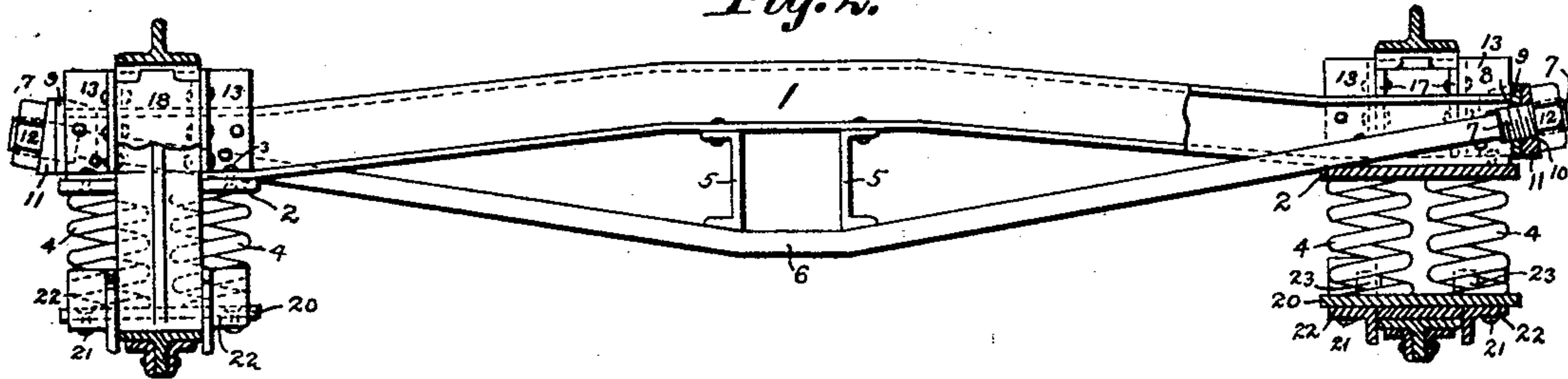


Fig. 3.

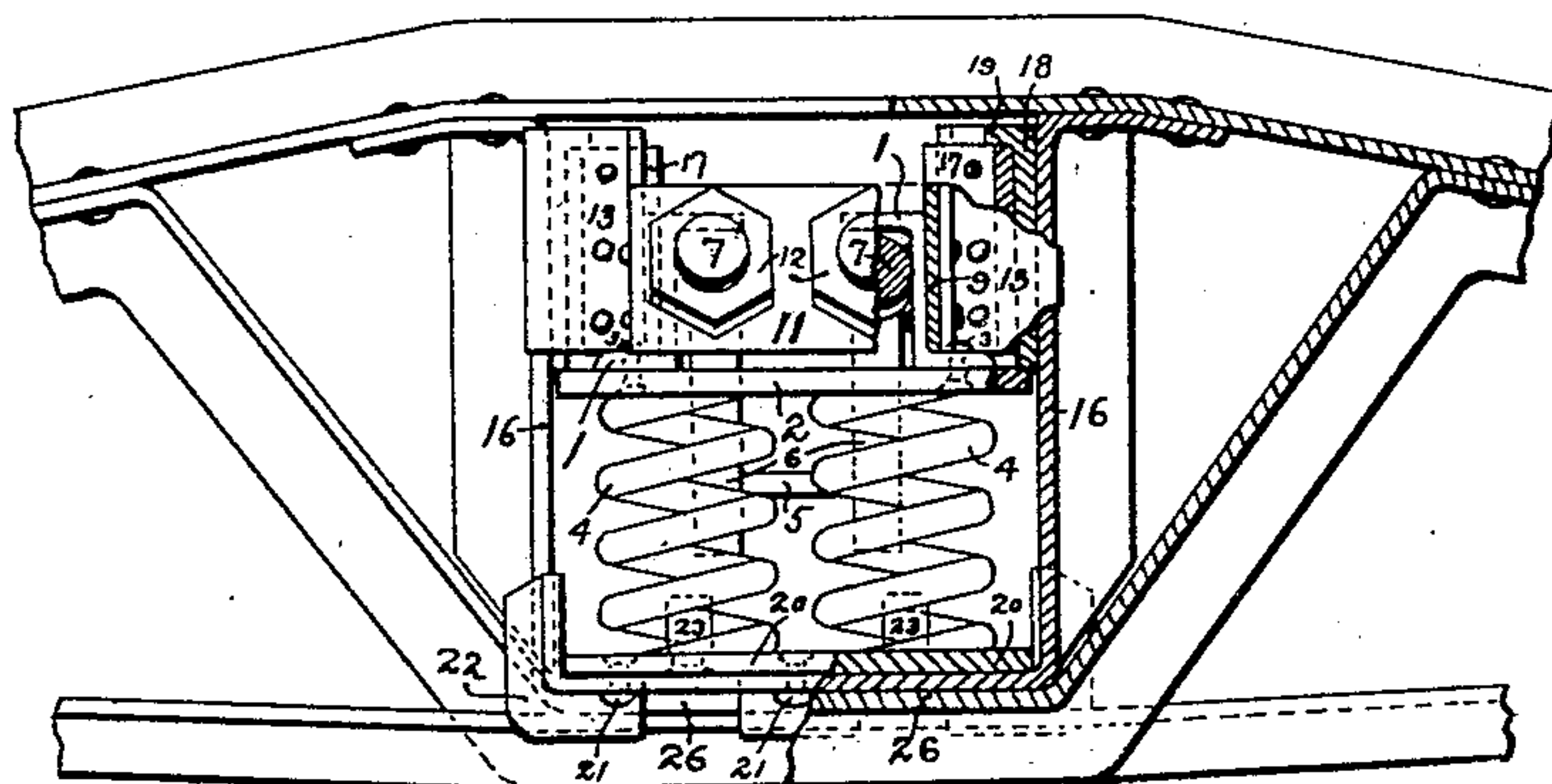
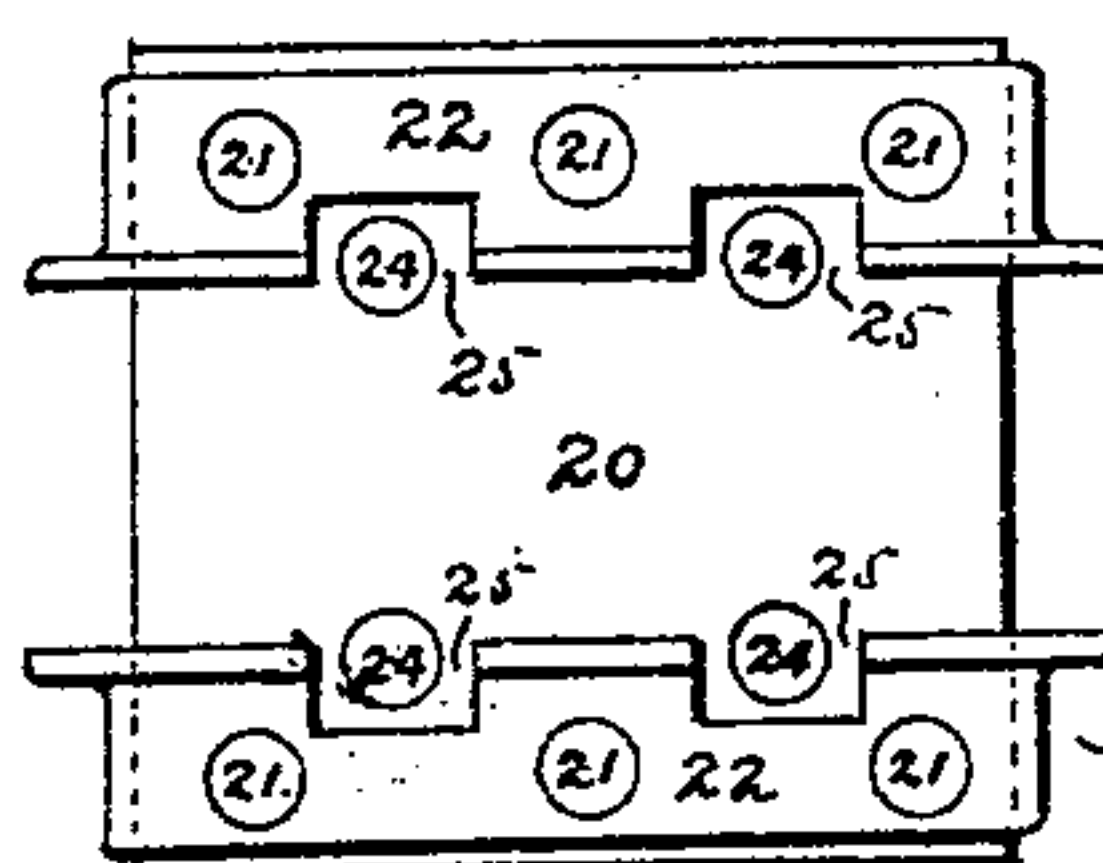


Fig. 5.



Witnesses;
William J. Davies
Joseph Frease.

Inventor;
Raymond H. Hornbrook,
By Harry Frease, Attorney.

UNITED STATES PATENT OFFICE.

RAYMOND H. HORN BROOK, OF CANTON, OHIO.

CAR-TRUCK BOLSTER.

SPECIFICATION forming part of Letters Patent No. 710,978, dated October 14, 1902.

Application filed June 25, 1902. Serial No. 113,065. (No model.)

To all whom it may concern:

Be it known that I, RAYMOND H. HORN BROOK, a subject of the King of Great Britain, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Car-Truck Bolster, of which the following is a specification.

My invention relates to a trussed bolster for car-trucks, and has for its objects a simple and efficient construction from structural steel shapes, rods, and plates of the bolster proper, channels on either side for the bolster-guides of the truck, and a spring-seat for resting on the truck-supporting bars. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the bolster, showing one end and part of the truck-frame in section; Fig. 2, a side elevation showing one end and part of the truck-frame in section; Fig. 3, an end view of the bolster and part of the truck-frame, showing some parts in section; Fig. 4, a middle cross-section of the bolster, and Fig. 5 an inverted plan view of the spring-seat.

Similar numerals refer to similar parts throughout the drawings.

The compression members of the bolster are made of Z-bars 1, located side by side, with their webs vertical and their upper flanges directed inward, respectively. The Z-bars are preferably horizontal in their middle parts, from which they are bent slightly to incline downward and outward to the inner sides of the respective spring-plates 2, where they are bent again and continue horizontal to their respective ends. The spring-plates 2 are formed substantially square and are riveted to the lower flanges of the Z-bars at their respective horizontal end parts by the rivets 3, the lower heads of which rivets are countersunk in the plate to present a flat surface for the respective springs 4. The separating members of the bolster are made of short channel-bars 5, preferably located with the inner flanges outward, to the upper flanges of which channel-bars the lower flanges of the Z-bars, respectively, are riveted.

The tension members of the bolster are made of rods 6, preferably formed rectangular in their middle sections and upset at the respective ends to form the round heads 7, on

which a screw-thread is cut. The tension-rods are located one under each Z-bar just inside of its web, and they are preferably horizontal in their middle parts either way to the separating channel-bars, where they are bent to incline upward and outward, passing above the spring-plates, respectively, with their respective heads passing through the apertures 8 in the short channel-bar end plates 9 and through the apertures 10 in the wedge-shaped washer-plate 11, respectively, and they receive the nuts 12 on the respective ends outside of the washer-plates. The heads of the rods are preferably against the webs of the Z-bars and the end edges of the upper flanges thereof, respectively.

The channel-bar end plates 9 respectively span the ends of the Z-bars, and the flanges are turned inward along the outer sides of the webs of the respective bars and serve to hold the bars from spreading apart. The washer-plates 11 preferably cover the entire outer sides of the end plates, and the outer faces of the washer-plates are beveled to be perpendicular to the respective axes of the tension-rods, so the nuts 12 will come squarely against these plates, respectively. By this arrangement the nuts come opposite the upper flanges and the webs of the Z-bars, respectively, which squarely receive the binding force of the tension-rods, the same being evenly distributed by the intervening end plates, respectively, and all parts are steadied in proper position by the end-plate flanges on the outside of the webs and the tension-bar heads on the inside of the webs and on the under side of the upper flanges, respectively, of the ends of the Z-bars.

The angle-plates 13 are vertically located in pairs opposite each other on the sides near the respective ends of the bolster proper. Between the plates of each pair and the webs of the adjacent Z-bars are the filler-plates 14 and 15, respectively, which even up with the outer sides of the flanges of the end plates, respectively, through which filler-plates and the flanges of the end plates, respectively, the angle-plates are riveted to the respective webs of the Z-bars, and the angle-plates of each pair are spaced apart to form a channel between their respective projecting flanges for the bolster-guides 16 of the truck-frame.

The space between each pair of angle-plates is partly filled by the U-shaped plate 17, with its closed side outward, its flanges against the respective flanges of the angle-plates, to which they are riveted, and the edges of its flanges against the Z-bar web, and the remaining space between the U-plate and the bolster-guide is filled by the liner-plate 18, which has the bent-over handle 19 on its upper edge for lifting it out when desired. This liner-plate serves to receive the wear caused by the rubbing of the sides of the bolster up and down the bolster-guides of the truck and can be readily renewed when worn out.

The spring-seat is made of the plate 20, which substantially corresponds to the spring-plate 2, and along either side of its lower surface are attached by rivets 21 the angle-bars 22, the respective ends of which angle-bars are extended and bent up past the edges of the plate. The upper heads of the rivets 21 are countersunk in the plate to present a flat surface for the respective springs 4. On the upper side of the spring-seat plate are located the posts 23 for centering the respective springs 4, which posts are riveted by their respective reduced shanks to the plate, the rivet-heads 24 being countersunk in the bottom of said plate to present a smooth surface.

The angle-bars are preferably notched at 25 around these rivet-heads to make them accessible. The spring-seat rests on the supporting-bars 26 of the truck, and the depending flanges of the angle-bars 22, on either side of said supporting-bars, respectively, hold the seat in proper place.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A car-truck bolster composed of Z-bar compression members, separating members riveted to the lower flanges near the middle of said bars, spring-plates riveted to said flanges near the respective ends of the bars, tension-rods passing under said separating members, over said spring-plates, between said Z-bars and beyond the respective ends thereof, end plates spanning the ends of the

Z-bars, there being apertures in said end plates for said rods respectively, and nuts on the ends of said rods against the end plates respectively.

2. A car-truck bolster composed of Z-bar compression members, separating members riveted to the lower flanges near the middle of said bars, tension-rods passing under said separating members and extending beyond the respective ends of the Z-bars near inside the webs and below the upper flanges thereof, end plates with flanges extending along the outer sides of the respective Z-bar webs, there being apertures in said end plates for said rods respectively, and nuts on the ends of the rods against the end plates respectively.

3. A car-truck bolster composed of Z-bar compression members, separating members riveted to the lower flanges near the middle of said bars, tension-rods passing under said separating members and extending beyond the respective ends of the Z-bars, wedge-shaped washer-plates spanning the ends of the Z-bars, there being apertures in said washer-plates for said rods respectively, and nuts on the ends of said rods against said washer-plates respectively.

4. The combination of a car-truck bolster, angle-plates riveted on the side of said bolster, U-shaped plates partly filling the space between said angle-plates, a truck-bolster guide operating between said angle-plates, and a liner-plate between said U-plate and the bolster-guide.

5. A car-truck-bolster spring-seat composed of a plate, angle-bars riveted on either side along the lower surface of said plate, and spring centering-posts riveted on the upper surface of said plate.

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

RAYMOND H. HORNBROOK.

Witnesses:

LESTER DEWEESE,
HARRY FREASE.