

No. 756,920.

PATENTED APR. 12, 1904.

E. C. WASHBURN.
METALLIC TRUCK BOLSTER.
APPLICATION FILED DEC. 17, 1903.

NO MODEL.

Fig. 1.

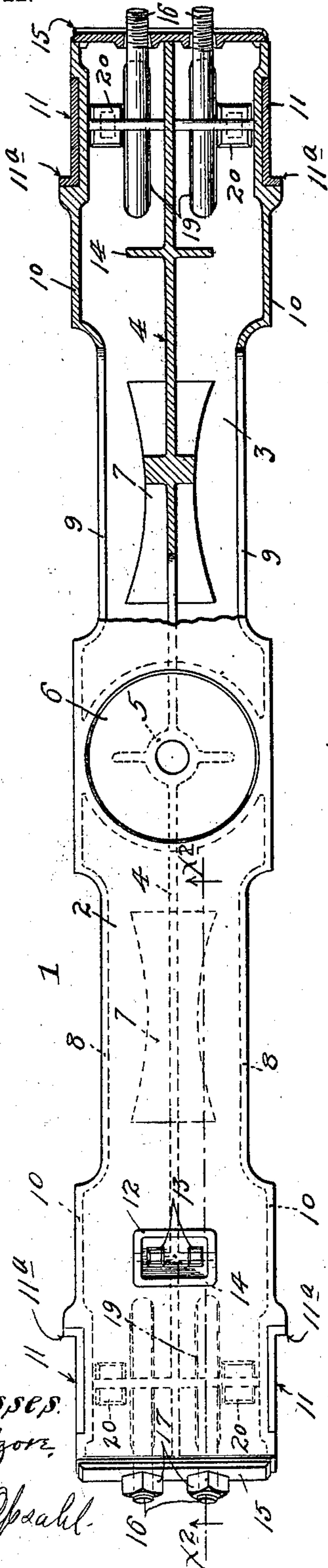


Fig. 2.

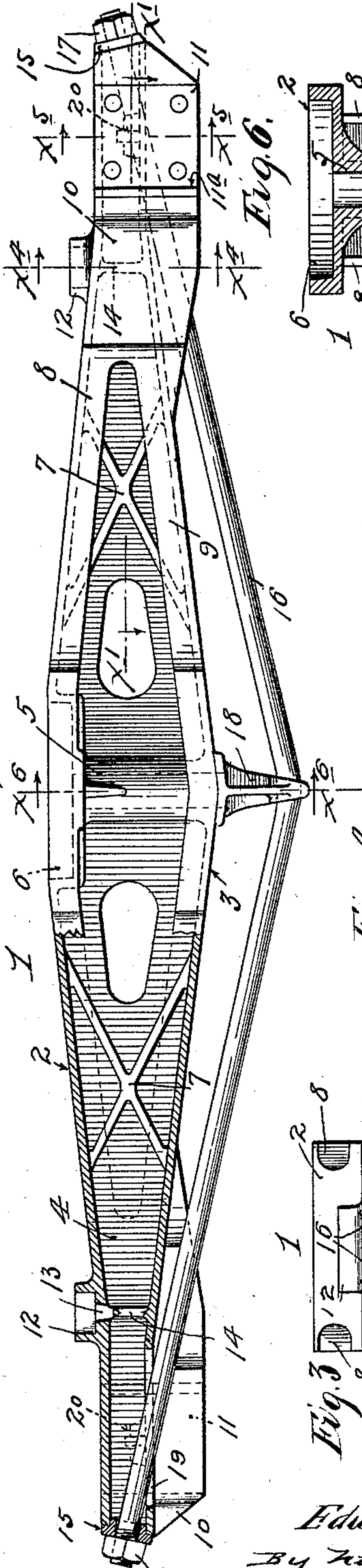


Fig. 6.

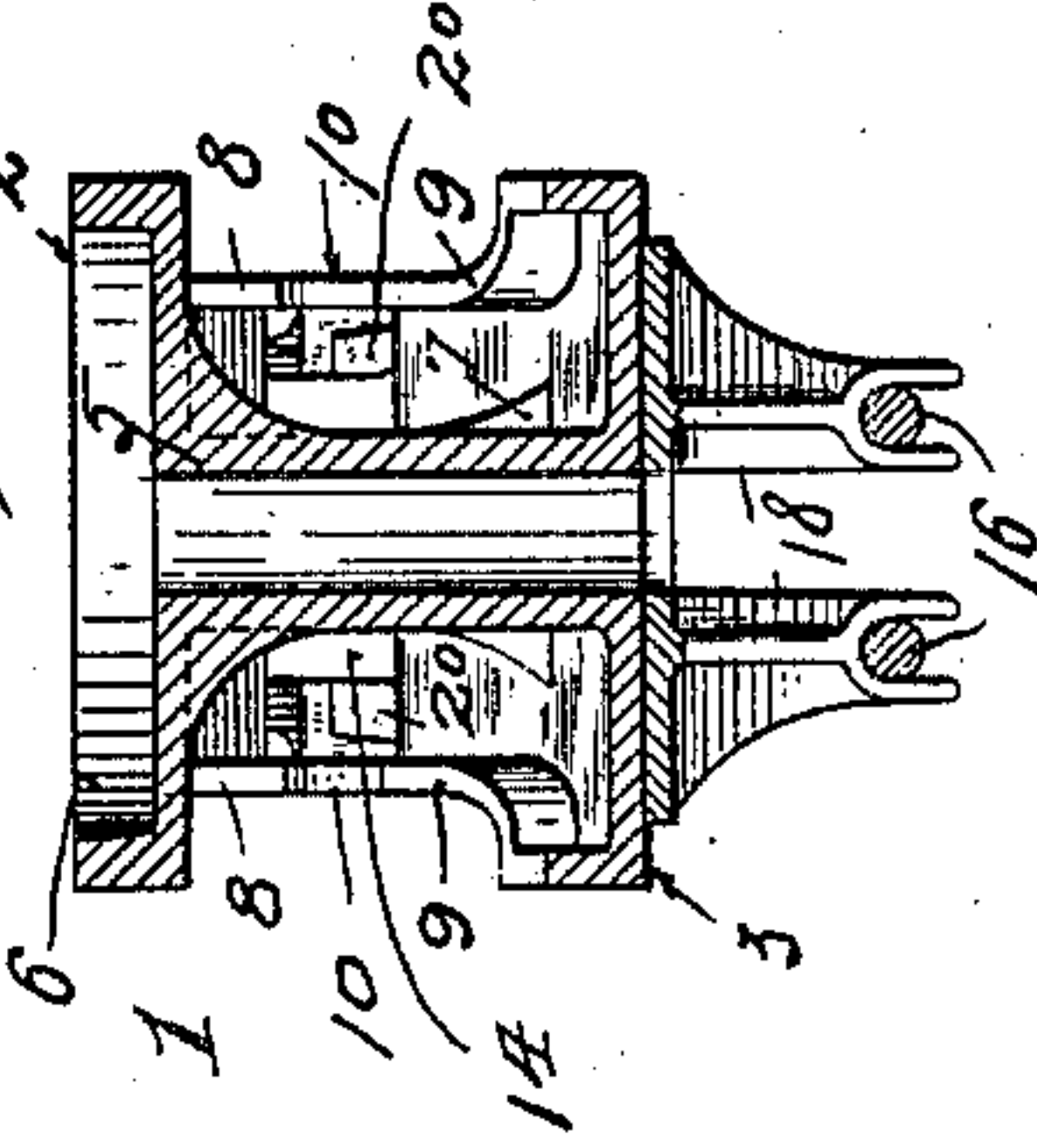


Fig. 5.

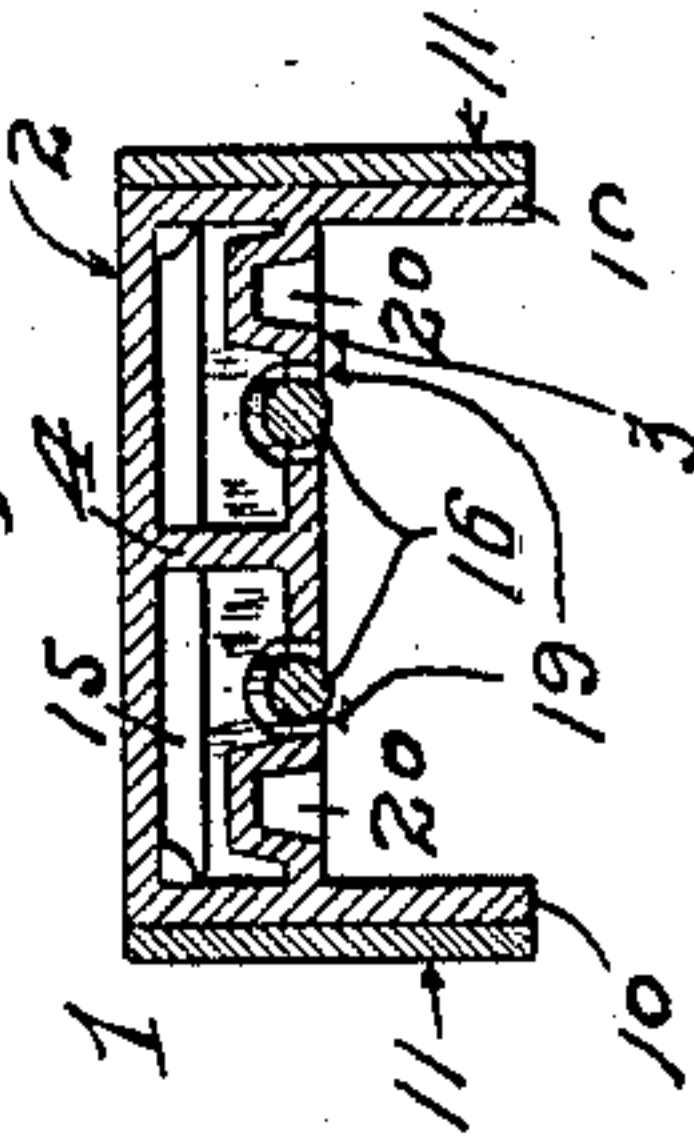


Fig. 4.

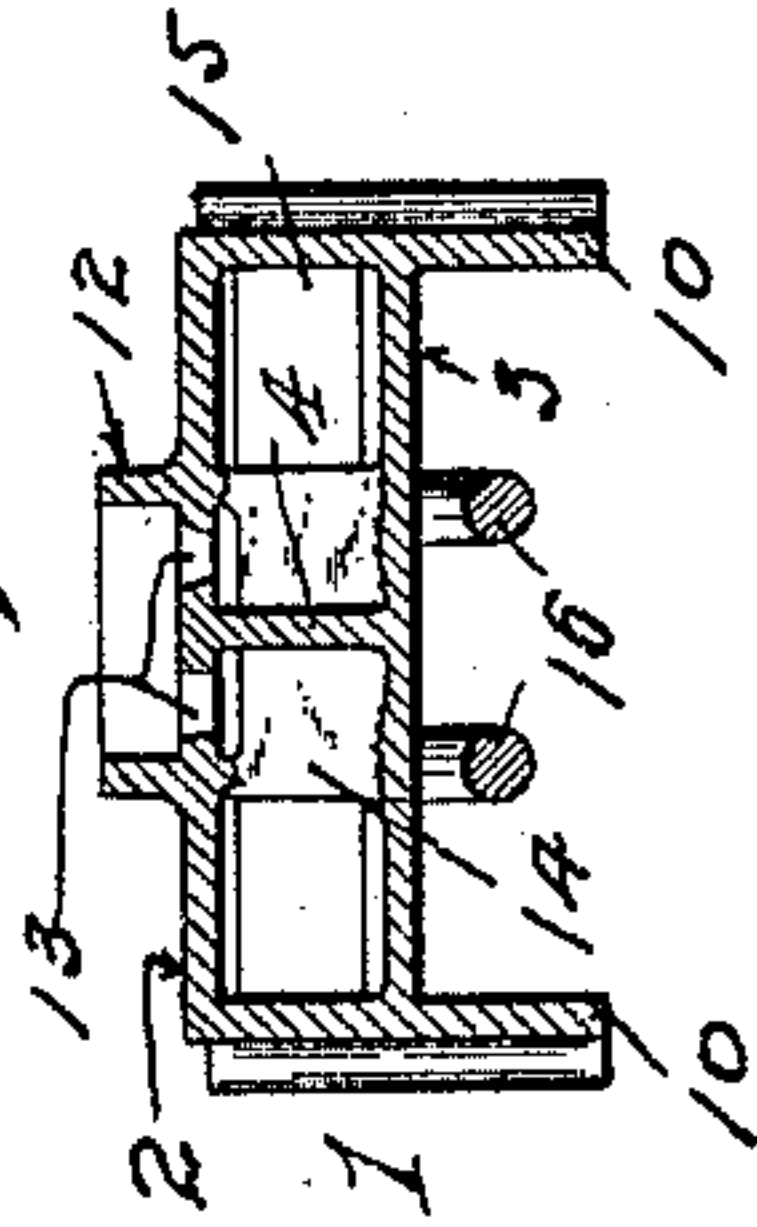
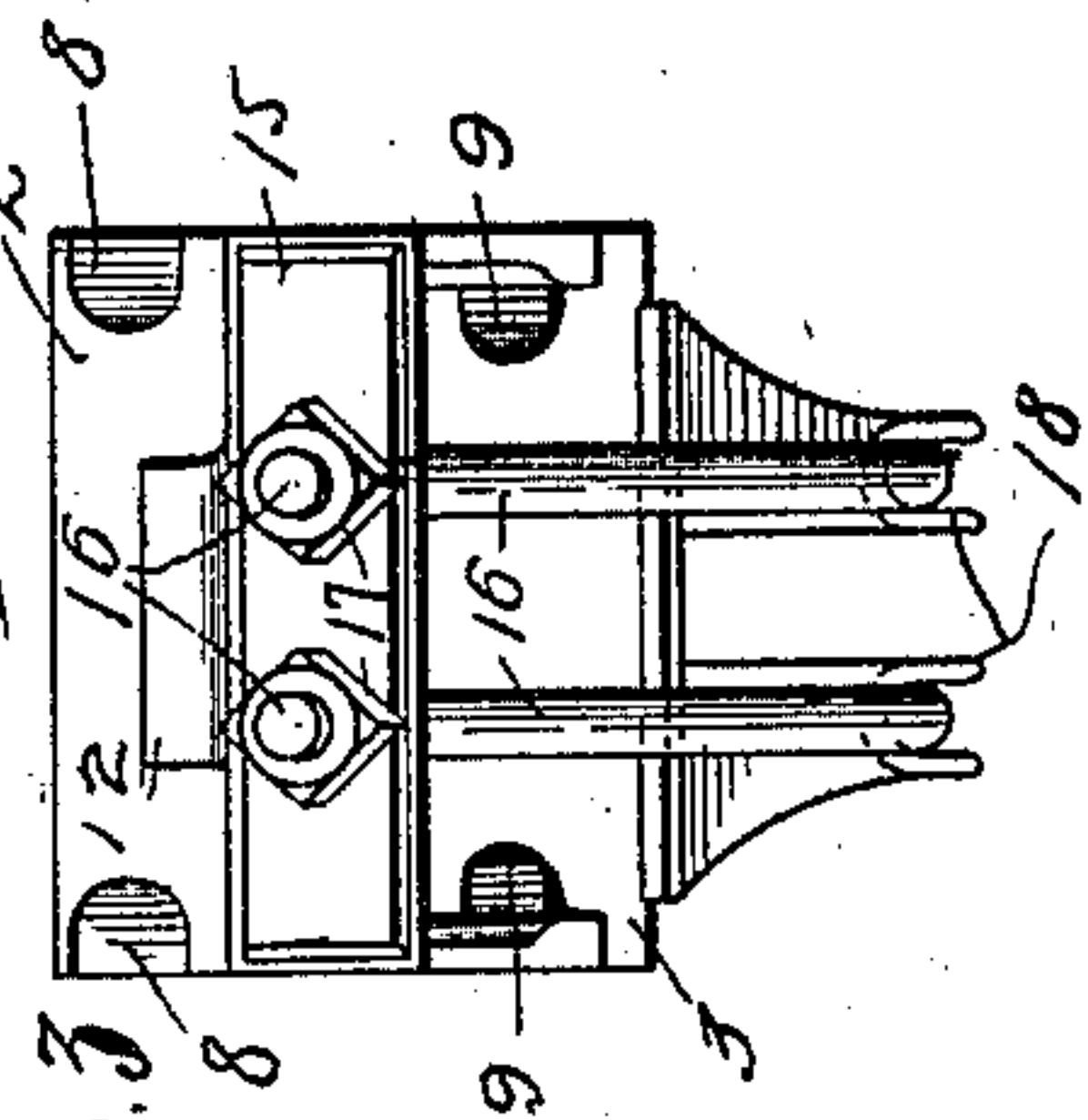


Fig. 3.



Witnesses:
H. D. Kilgore,

A. H. Opsahl.

Inventor:

Edwin C. Washburn.

By his Attorneys.

William M. Muelken

UNITED STATES PATENT OFFICE.

EDWIN C. WASHBURN, OF MINNEAPOLIS, MINNESOTA.

METALLIC TRUCK-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 756,920, dated April 12, 1904.

Application filed December 17, 1903. Serial No. 185,483. (No model.)

To all whom it may concern:

Be it known that I, EDWIN C. WASHBURN, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Metallic Truck-Bolsters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention has for its object to provide an improved metallic truck-bolster for railroad-cars; and to this end the invention consists of the novel construction, combinations, and arrangement of parts hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a view showing the improved truck-bolster, partly in plan and partly in horizontal section on the line $x'x'$ of Fig. 2. Fig. 2 shows the improved bolster principally in side elevation, but partly in section on the line x^2x^2 of Fig. 1. Fig. 3 shows the bolster in end elevation. Fig. 4 is a transverse section on the line x^4x^4 of Fig. 2. Fig. 5 is a transverse vertical section on the line x^5x^5 of Fig. 2, and Fig. 6 is a transverse vertical section taken on the line x^6x^6 of Fig. 2.

The body portion of the bolster is afforded by a hollow ribbed and flanged casting either of malleable iron or steel, (indicated as an entirety by the numeral 1.) The top walls 2 and bottom walls 3 of the casting 1 converge toward the end of the bolster, and for a short distance at the said end portions run parallel to each other in a horizontal plane. A vertically and longitudinally extended web 4, cast integral with the upper and lower plates 2 and 3, runs centrally from end to end of the bolster-body 1, and at the center of the bolster it unites with a vertical sleeve portion 5, which is also cast integral with the upper and lower plates 2 and 3. The upper plate 2 of the bolster-body surrounding the upper end of the sleeve 5 is depressed at 6 to afford a seat for one member of a center-bearing. (Not shown.) The sleeve 5 affords a seat for the pintle of

the center-bearing, and, furthermore, greatly stiffens the bolster-body at its central portion. Within the bolster-body 1, cast integral with the web 4 and upper and lower plates 2 and 3 thereof, are crossed truss-ribs 7, which greatly strengthen or stiffen the bolster-body between its extreme ends and central portion. These truss-ribs 7 project on both sides of the central vertical web 4. To still further stiffen the bolster-body 1, the upper and lower plates 2 and 3 thereof are formed at their edges with flanges 8 and 9, respectively, which flanges project in vertical plane and extend longitudinally of the bolster to points where they join and are further extended to the ends of the bolster-body in the form of stiffening side plates 10. These stiffening-plates 10 project below the ends of the bolster and are provided with countersunk chafing-plates 11, which are adapted to directly engage the bolster-columns (not shown) of the truck to which the bolster may be applied. Inward of the ends of the bolster-body the top plates 2 are formed with integrally-cast rectangular cups which afford seats 12 for so-called "side" bearings of the car, which side bearings are not shown in the accompanying drawings. In the bottoms of these seats 12 are perforations 13, which are adapted to receive tooth-like projections of the side bearings. As shown, the central web 4 is formed just below the perforations 13 with short vertical webs 14, that connect the upper plate 2 to the lower plate 3 at these two points.

The ends of the bolster-body 1 are rectangular openings in which are seated end caps or plates 15, that bear against the ends of the plates 2 3 10 and the ends of the center web 4. The body of the bolster is reinforced, and its load-carrying capacity is very greatly increased by a pair of tension-acting truss-rods 16, the ends of which truss-rods are passed through perforations in the end caps or plates 15 and are provided with nuts 17, by means of which they are tightened. At their intermediate portions the truss-rods 16 are spaced apart from the central portion of the lower plate 3 of the bolster-body by means of strut-brackets 18, which brackets, as shown, have integrally-cast bases. The end portions of the truss-rods 16 are passed through slots 19,

formed in the plate 3 of the bolster-body outward of the transverse flanges 14.

The horizontal outer end portions of the lower web 3 of the bolster-body between the depending plates or flanges 10 afford bearing-surfaces for lateral-motion devices of the character disclosed and claimed in my pending application, Serial No. 183,860, filed December 5, 1903, entitled "Lateral-motion car-truck." Hence the said flange 3 at the points indicated is formed with depressions or seats 20 for the upper end teeth of the flattened segments disclosed in my said pending application.

A truck-bolster designed as above described will have a maximum of strength with substantially a minimum of weight and at the same time is comparatively cheap and very durable.

It will of course be understood that the laterally-bent portions 11^a of the chafing-plates 11 will act as stops for limiting the endwise movement of the truck-bolster, the said stops engaging with the bolster-columns to limit the movement with the bolster transversely of the truck.

The bolster described is capable of modification within the scope of my invention as herein set forth and claimed.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a truck-bolster, the combination with a cast bolster-body having detachable end caps, of a truss-rod reacting on said end caps, and a strut interposed between the intermediate portion of said bolster-body and truss-rod, substantially as described.

2. A cast truck-bolster, the body portion of which is formed with upper and lower plates, with a central vertical web, and with crossed truss-ribs, substantially as described.

3. A metallic truck-bolster having a cast body portion formed hollow, with open ends, but with internal webs and reinforcing-flanges, of end caps interlocking with the open ends of said bolster-body, truss-rods passed

through the lower plate of said bolster-body and through said end caps, nuts on the outer ends of said truss-rods, and struts interposed between the intermediate portions of said bolster-body and truss-rods, substantially as described.

4. A cast bolster-body made up of the outwardly-converging upper and lower plates 2 3, central web 4 and crossed truss-ribs 7, substantially as described.

5. A cast bolster-body formed with outwardly-converging upper and lower plates, and with a central vertical web uniting the said upper and lower plates, having reinforcing-ribs 8 and 9 extending outward and united to form the side plates 10, substantially as described.

6. A cast bolster-body formed with reinforcing webs and flanges, and having cast integral with the upper end portions thereof, the rectangular pockets 12, having depressions or seats 13, substantially as and for the purposes set forth.

7. A cast bolster-body having outwardly-converging upper and lower plates, the latter at their outer ends being formed with the seats or depressions 20 for coöperation with lateral-motion devices, substantially as described.

8. The combination with a cast bolster-body formed with outwardly-converging upper and lower plates, and with a central vertical web 4, of caps engaging the ends of said bolster-body, truss-rods passed through said caps, one on each side of the central web of said bolster-body, nuts on the outer ends of said rods, and struts interposed between the intermediate portions of said bolster-body and truss-rods, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN C. WASHBURN.

Witnesses:

ELIZABETH H. KELIHER,
F. D. MERCHANT.