

No. 878,459.

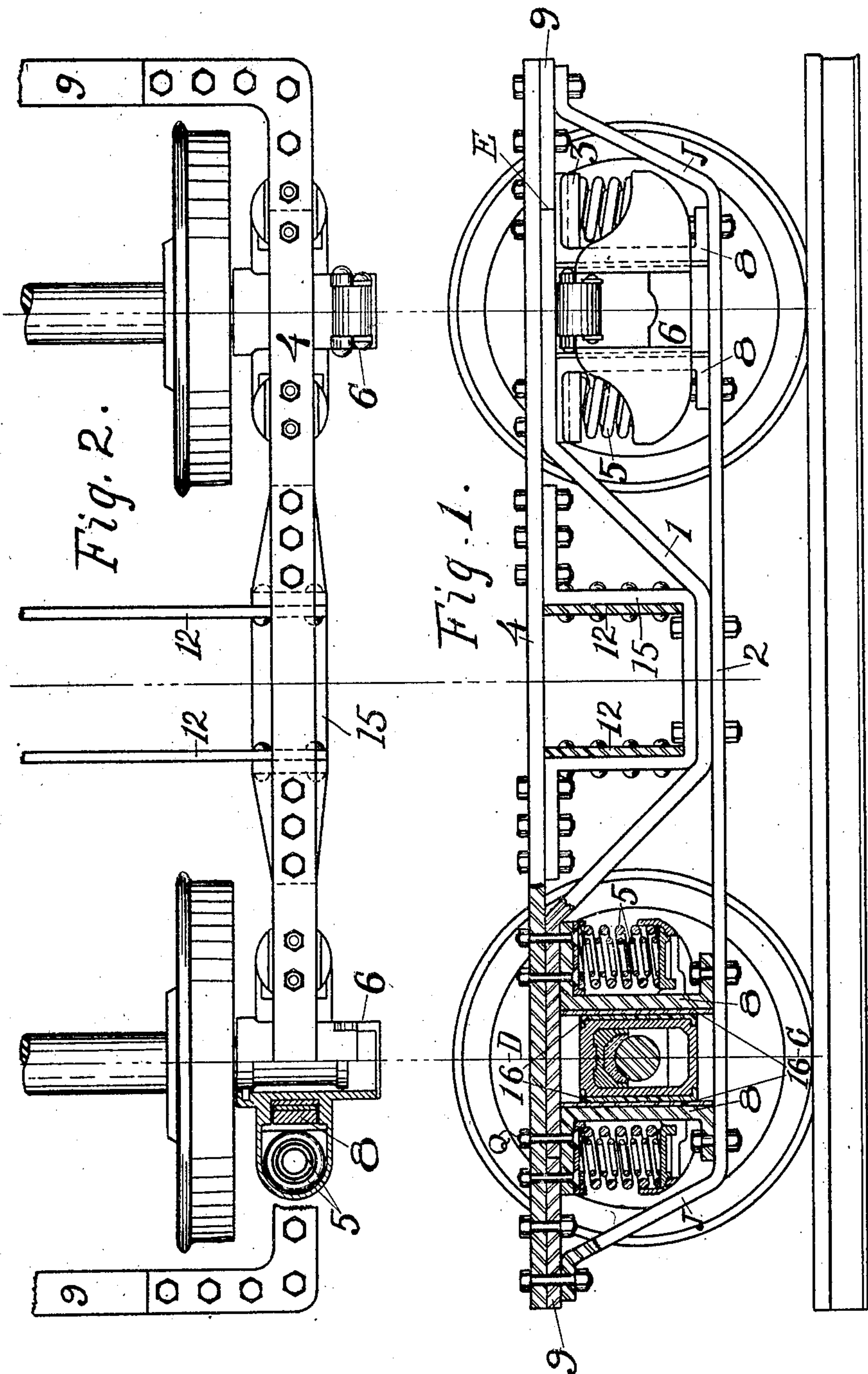
PATENTED FEB. 4, 1908.

C. FURMAN.

RAILWAY TRUCK FRAME.

APPLICATION FILED JUNE 20, 1907.

2 SHEETS—SHEET 1.



WITNESSES:

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H. A. Roney

INVENTOR.

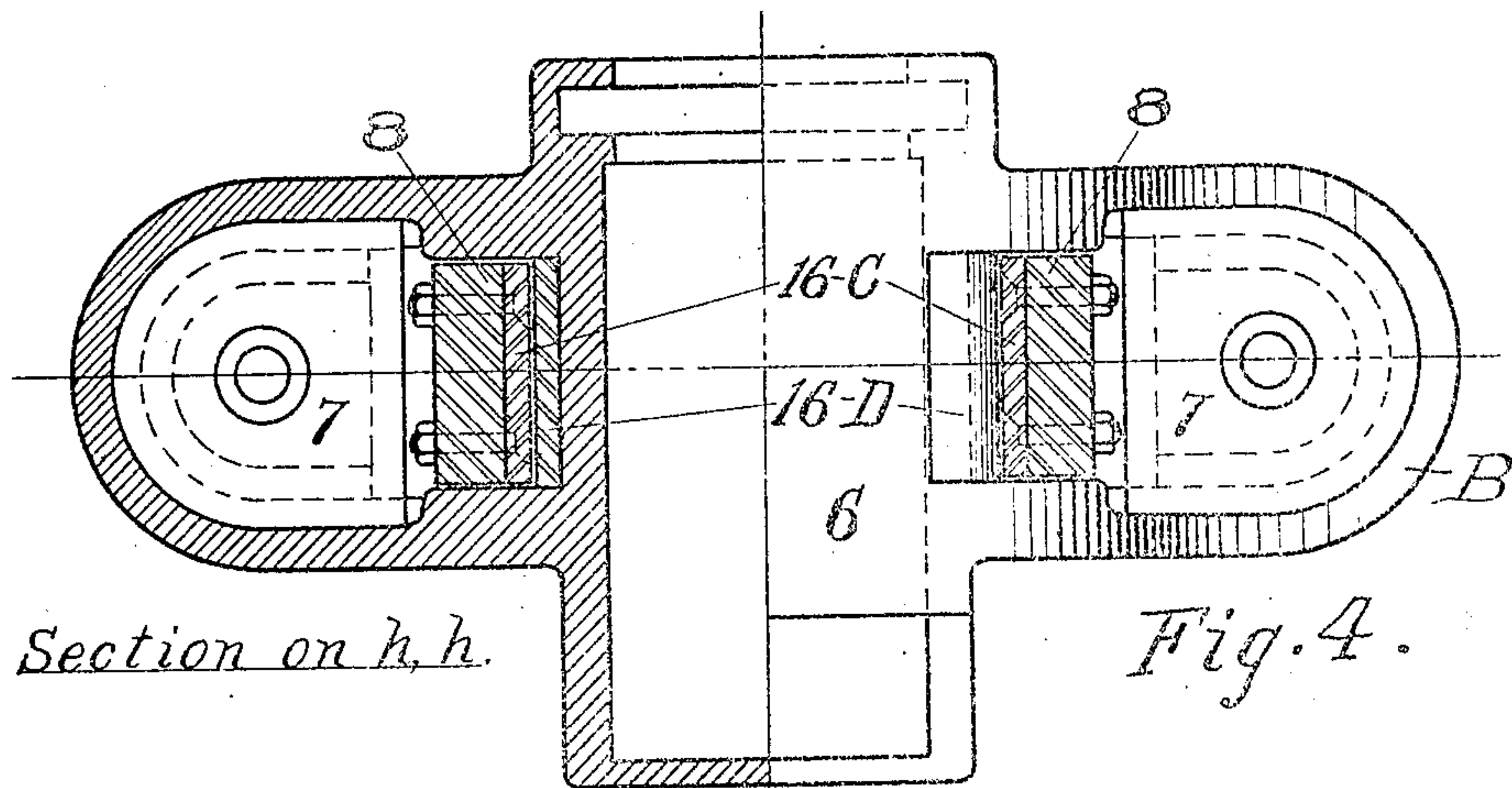
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2 SHEETS--SHEET 2.



Section on h, h.

Fig. 4.

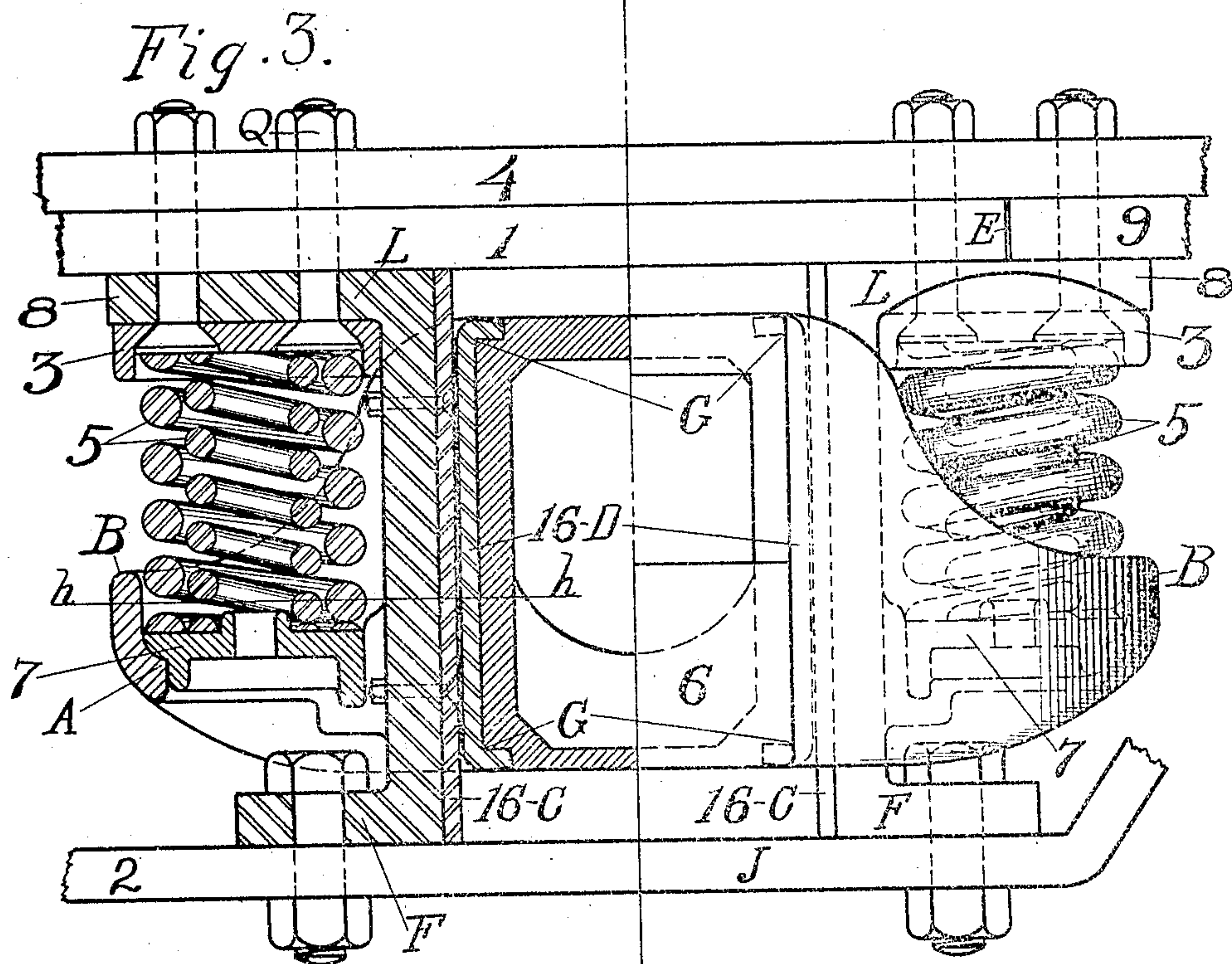


Fig. 3.

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UNITED STATES PATENT OFFICE.

CORNELIUS FURMAN, OF DECATUR, ILLINOIS.

RAILWAY-TRUCK FRAME.

No. 878,459.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed June 20, 1907. Serial No. 379,977.

To all whom it may concern:

Be it known that I, CORNELIUS FURMAN, a citizen of the United States, and resident of Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Railway-Truck Frames, and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to railway rolling stock, and more especially to trucks, and the object of the same is to produce an improved truck frame.

The structure employs no castings, and hence the entire strain will attack mild rolled steel framing only.

In the embodiment of my invention as set forth herein, upright guides of peculiar shape are employed at either side of each journal box to connect the side bar with the lower truss, and between the guides and the box detachable chafing plates are employed which may be replaced when badly worn. In the present invention is also provided an upper truss between the boxes, and a U-shaped bracket to which the transom bars are riveted, thus affording a substantial support on which to mount the bolster.

Details of construction are set forth in the following specification with reference to the accompanying drawings in which—

Figure 1 is a side view of one side of the truck with the journal box, guides, and springs at one end thereof in section. Fig. 2 is a plan view of Fig. 1 with a portion in section. Fig. 3 is an enlarged view of one box and associated parts, half of it in section. Fig. 4 is a plan of one end of Fig. 3 and a section of the other end on the line *h-h*.

In the drawings the numeral 4 designates the longitudinal or side bar of the truck frame, which is of steel and forged at right angles at its ends so as to pass around its corners and overlie the end bars or sills 9. The latter are similarly constructed at the corners, and underlie the side bars 4 to the point E, whereby the corners on the truck are greatly strengthened without undue weight or material.

12 are the transom bars which are riveted preferably by a double row of rivets to a U-shaped bracket 15 hung beneath the mid-length of the side bar 4, than which it is preferably slightly wider as seen in Fig. 2 so

as to accommodate the rivets, although the width of this bracket will be determined by other conditions. Next beneath the side bar 4 is the upper truss 1 whose ends abut at E against the extremities of the end sills 9 and whose center is depressed beneath the bracket 15 which it supports. Next beneath the truss 1 is the lower truss J whose extremities are preferably mounted on the corner bolts between the side and end bars, whose center 2 is bolted beneath the center of the upper truss, and whose end portions sustain the guides and journal boxes which will next be described. Thus it will be seen that my structure contemplates a framework of comparatively light mild rolled steel, allowing for the greatest space at its center for the transom, and confining the weight of the load through two trusses to the side and end bars in the truck and completely around the journal boxes.

The numeral 6 designates broadly the journal box itself whose construction forms no part of the present invention except as will now appear. Shrunk onto opposite sides of each box are chafing plates 16^p whose upper and lower ends are fitted at something less than right angles into notches G in the corner of the box itself. Next outside these plates are other chafing plates 16^c which are detachably connected with the upright portions of guides 8, so that either or both sets of plates may be removed or replaced when worn. Each guide comprises an upright body portion with outwardly projecting head L at the top and outwardly projecting foot F at the bottom. The latter is bolted upon the lower truss J, while the head is connected by two bolts Q passing through the side bar 4 at either side of the point E and thereunder passing also through the extremity of the upper truss 1 and the end of the bar 9. This manner of bolting the guides in place serves the purpose of additionally connecting the parts of the truck frame. The journal box carries wings B having flanged sockets A within which are fitted the removable spring seats 7, 5 are the springs resting thereon, and 3 are the spring caps at the top of the springs and beneath the heads L of the guides 8. By preference the bolts Q which extend through the side bar 4, upper truss 1, and heads L of the guides also hold the spring caps 3 in place as best seen in Fig. 3. The upright portions of the guides 8 fit within channels in the wings

B of the journal box as best seen in Fig. 4 and are spaced from each other sufficiently to admit said box and the two sets of chafing plates; and the box is of less height than the distance between the upper and lower trusses, so that the entire frame is permitted to have its necessary vertical movement as the springs expand and contract. Bolts are used at such points as desirable when it becomes necessary to disconnect the parts as for repair or substitution, but otherwise rivets or other forms of connection may be employed. The sizes and proportions of parts, and details thereof other than as herein set forth, are immaterial in this connection.

What is claimed as new is:

1. In a railway truck frame structure, side bars having their ends bent at angles, end bars also having their ends bent at angles each breaking joint with the angles of the side bars at the corners of the truck, a truss connected with the side bars and with its extremities abutting against those of the end bars, a bracket connected with the side bar and with the depressed portion of said truss, and transom bars carried by the bracket.

2. In a railway truck frame structure, side bars having their ends bent at angles, end bars also having their ends bent at angles each breaking joint with the angles of the side bars at the corners of the truck, a truss connected with the side bar and with its extremities abutting against those of the end bars, a bracket connected with the side bar and with the depressed portion of said truss, transom bars carried by the bracket, a second truss whose ends are connected with the frame at its corners and whose body underlies the first truss, and journal boxes at either side of the bracket and between said second truss and the ends of said first truss.

3. In a railway truck frame structure, side bars having their ends bent at angles, end bars also having their ends bent at angles each breaking joint with the angles of the side bars at the corners of the truck, a truss connected with the side bar and with its extremities abutting against those of the end bars, a bracket connected with the side bar and with the depressed portion of said truss, transom bars carried by the bracket, a second truss whose ends are connected with the frame at its corners and whose body underlies the first truss, two pairs of guides connecting the trusses, a head at the upper end of each outermost guide spanning the joint between the ends of the upper truss and end bars, and a journal box removably mounted between the members of each pair.

4. In a railway truck frame structure, the combination with the side bar, a truss, and the transom supported between them; of a pair of upright guides near each end of the truss and whose members have heads and feet connected with the bar and truss respectively, a journal box having channels loosely embracing said guides and also having wings, a spring between each wing and the superimposed head of the guide, and chafing plates removably interposed between each box and the adjacent guides.

5. In a railway truck frame structure, the combination with the side bar, a truss, and the transom supported between them; of a pair of upright guides near each end of the truss and whose members have heads and feet connected with the bar and truss respectively, a journal box having channels loosely embracing said guides and also having wings, a spring between each wing and the superimposed head of the guide, and on either side of each box two chafing plates of which one is removably connected with the guide and the other with the box.

6. In a railway truck frame structure, the combination with the side bar, a truss, and the transom supported between them; of a pair of upright guides near each end of the truss and whose members have heads and feet connected with the bar and truss respectively, a journal box having channels loosely embracing said guides and also having wings, a spring between each wing and the superimposed head of the guide, and on either side of the box two chafing plates of which one is removably connected with the guide and the other has its upper and lower ends bent at angles and shrunk into notches formed in the box.

7. In a railway truck frame structure, the combination with the side bar, a truss, and the transom supported between them; of a pair of upright guides near each end of the truss and whose members have heads and feet connected with the bar and truss respectively, a journal box having channels loosely embracing said guides and also having wings, spring seats removably fitting sockets in the wings, caps superimposed above the sockets and connected with the heads of said guides, and a spring between each socket and cap.

In testimony whereof I sign my name in the presence of two subscribing witnesses, this the 15th day of June, 1907.

CORNELIUS FURMAN.

Witnesses:

EDWARD C. BASSEY,
W. SCOTT SEEGER.