

No. 752,946.

PATENTED FEB. 23, 1904.

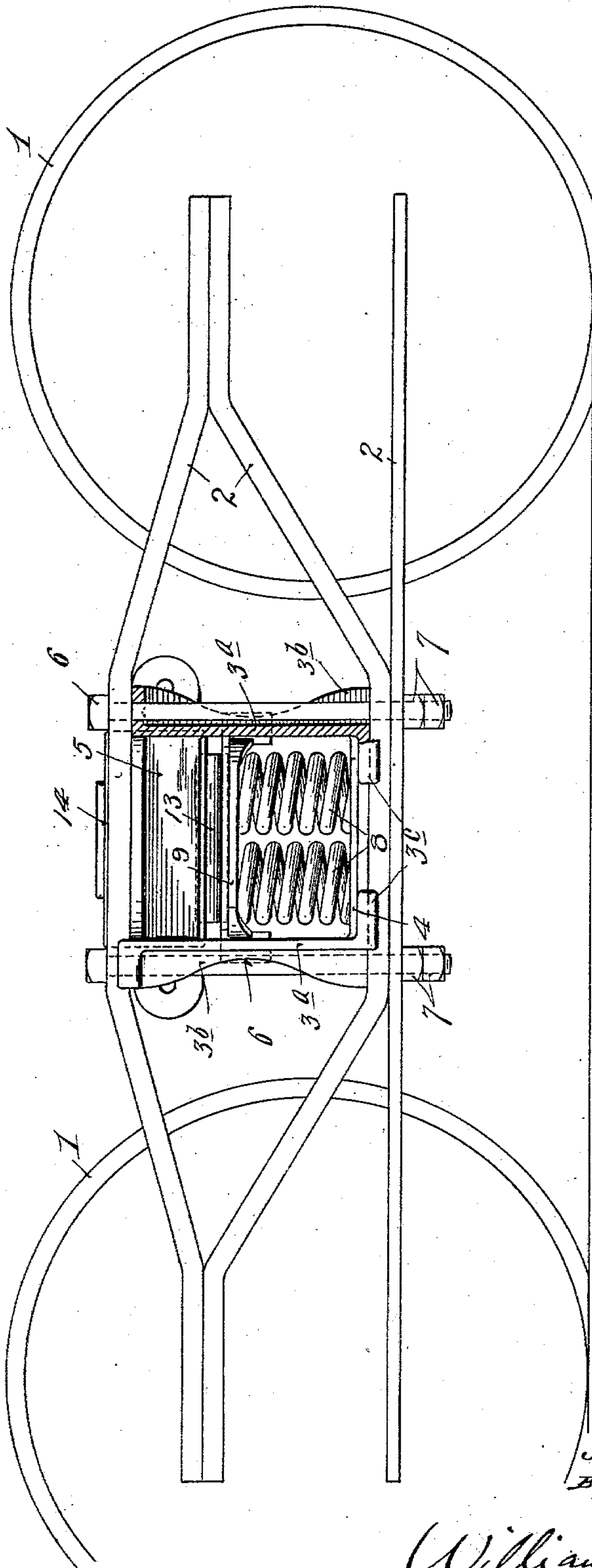
J. C. BARBER.
CAR TRUCK.

APPLICATION FILED APR. 27, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses,
H. D. Kilgore,
A. H. Opsahl

Inventor,
John C. Barber,
By his Attorneys,

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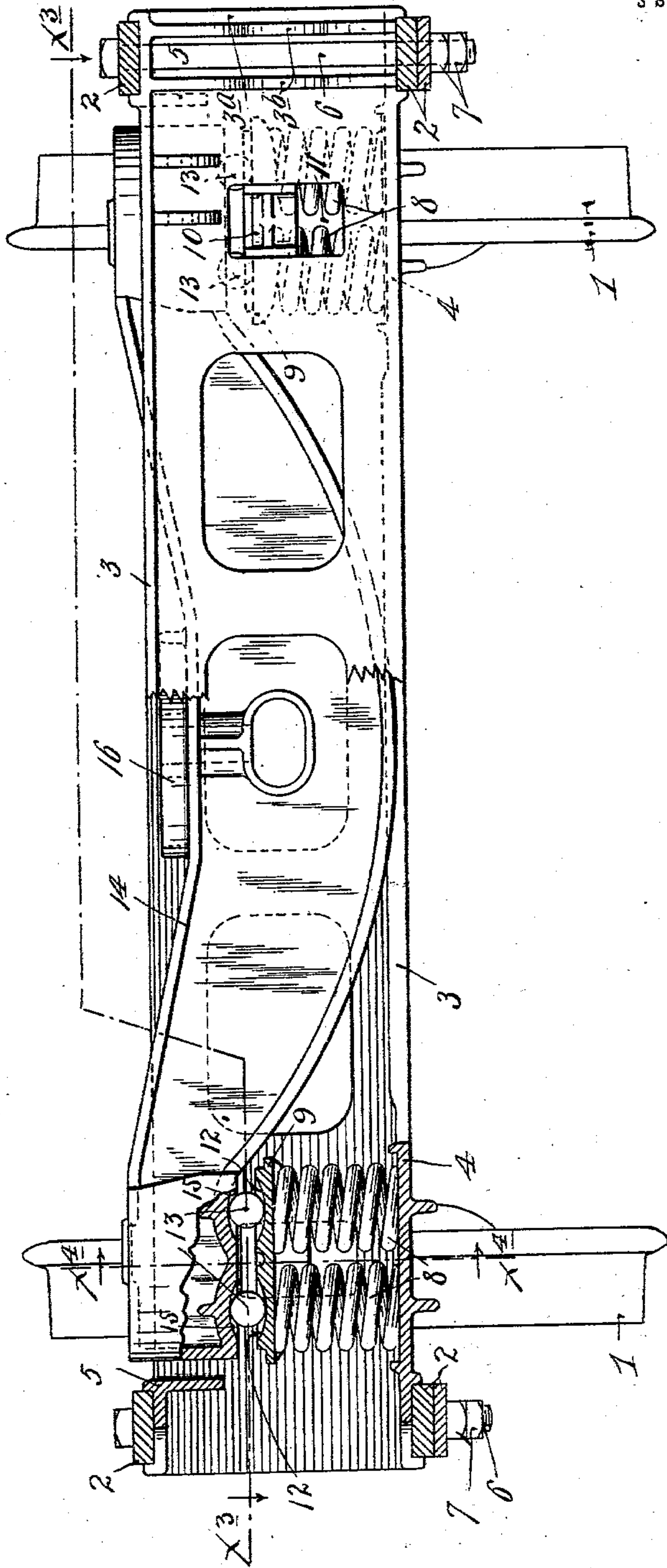
J. C. BARBER.
CAR TRUCK.

APPLICATION FILED APR. 27, 1903.

NO MODEL.

3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

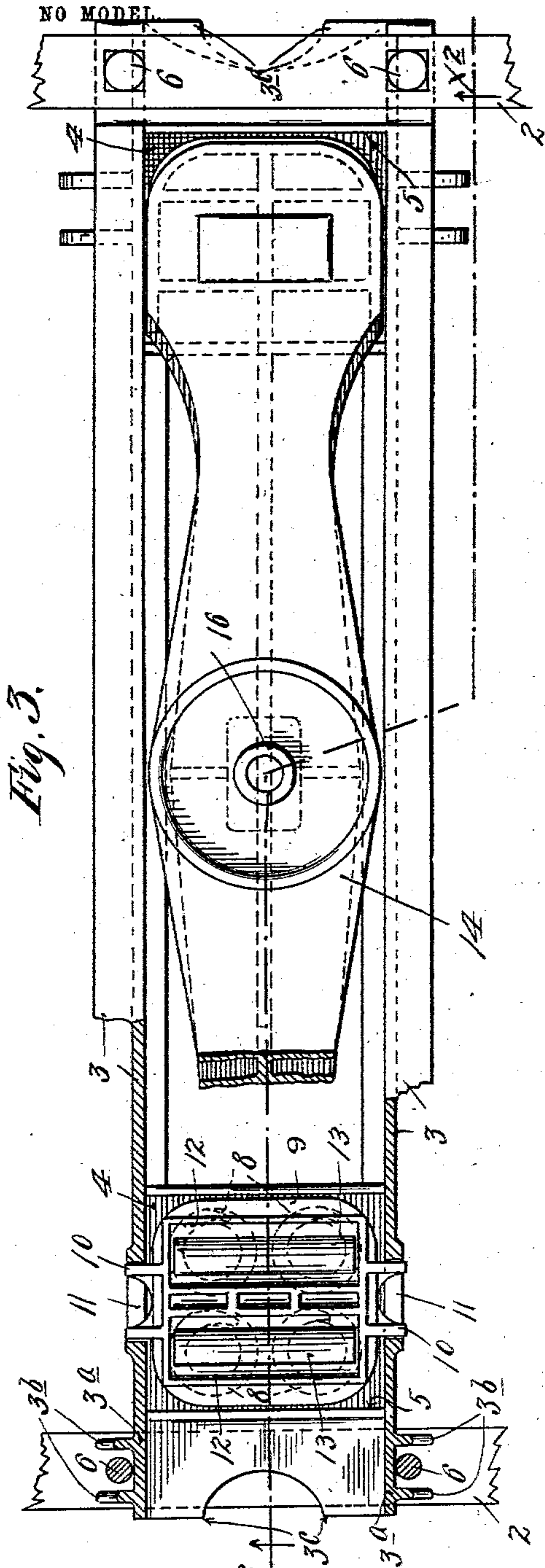
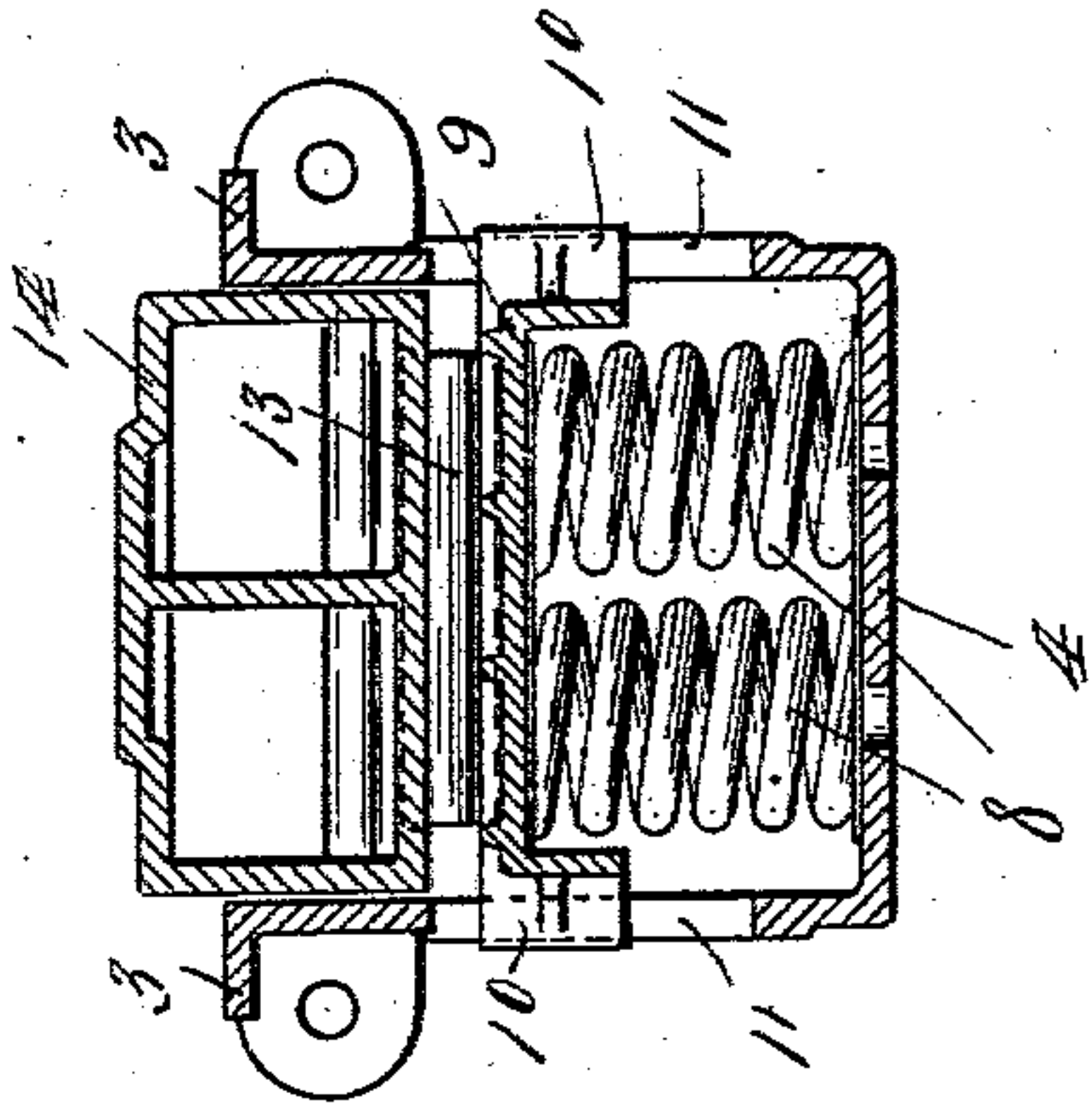


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN C. BARBER, OF CHICAGO, ILLINOIS.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 752,946, dated February 23, 1904.

Application filed April 27, 1903. Serial No. 154,444. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BARBER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Trucks; 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 relates to car-trucks of the general character known to the trade as the "Barber Lateral-Motion Trucks," the broad features of the construction of which have been disclosed and claimed by me in a large number of prior United States Letters Patent. The present invention is directed to certain improvements in car-trucks of the general character indicated; and to this end the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

In prior constructions of my lateral-motion trucks I have applied the spring-caps and springs of the lateral-motion devices in several different ways. For instance, they have been applied to the truck-columns, to the truck-bolster, and to the journal-boxes. In the present invention they are applied to the transoms or cross-tie bars inward of the side frames and columns of the truck. By this arrangement a shorter truck-bolster may be employed—to wit, a truck-bolster which does not project through the side frames of the truck or between the columns thereof. With this arrangement the truck-columns or the end portions of the transoms which afford columns may be much more rigidly tied together than in the constructions in which the truck-bolster is projected through the side frames and between the columns. In fact, both transoms at their ends or column-forming portions may be braced or tied together both at top and bottom of the side frames by means of integrally-formed parts. This latter indicated form of the combined transoms and columns also constitutes a novel feature of the present invention, all as will hereinafter more fully appear.

The invention is illustrated in the accom-

panying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 shows the improved truck in side elevation, some parts being sectioned and others being removed. Fig. 2 is a transverse vertical section on the irregular line $x^2 x^2$ of Fig. 3. Fig. 3 is a horizontal section on the irregular line $x^3 x^3$ of Fig. 2, and Fig. 4 is a vertical section on the line $x^4 x^4$ of Fig. 2.

The numeral 1 indicates the wheels, and the numeral 2 the trussed side frame of the trucks. In the drawings the journal-boxes are not shown; but they may be secured to the side frames in the ordinary or any suitable way.

The transoms or cross-tie bars 3 of the truck are in the most approved construction cast integral with each other, being connected at their ends by horizontally-extended lower plates or webs 4 and by angular upper cross-ribs 5. The ends of the transoms are of such vertical width that they fit between the top and lower bars of the side frames, and thus afford truck-columns through which and the bars of said side frames are passed heavy column-bolts 6, having nuts 7 at their lower ends, said bolts and nuts serving to rigidly clamp the said parts together. Those portions of the transoms which constitute truck-columns are marked by the character 3^a , and they are advisably stiffened by pairs of vertical ribs 3^b , which embrace the corresponding column-bolts 6. The upper extremities of the columns 3^a are slightly channeled, so as to fit the upper bars of the side frames, while at their lower extremities they are formed with inwardly-extended channeled feet 3^c , that embrace the tops of the lower trussed bars of the side frames.

The tie-plates or webs 4, which unite the lower end portions of the transoms, extend horizontally inward from the side frames and afford bearing-plates or rests, upon which are placed the bolster-springs 8, which, as shown, are coiled springs arranged in groups of four. Spring-caps 9 rest upon each group of springs 8. At their front and rear portions the spring-caps 9 are formed with guide-lugs 10, that work vertically in guide-slots 11, formed in the transoms inward of the side frames of the truck and inward of the column-forming ends.

of said transoms. In their tops or upper surfaces the spring-caps are formed with concave roller-seats 12, upon which rest bearing-rollers 13, which rollers extend from front to rear of the truck and are movable laterally or transversely thereof.

The truck-bolster 14, which, as shown, is of cast-steel construction, is of such length that it works with considerable endwise play or movement transversely of the truck between the angular tie-bar portions 5, which unite the upper end portions of the transoms. The ends of the bolsters 14 are formed at their under surfaces with concave roller-seats 15, that rest upon the bearing-rollers 13 and cooperate with said rollers and the concave seats of the spring-caps to yieldingly hold the bolster normally in an intermediate position, but with freedom for endwise movements transversely of the truck. The cross-ribs 5, heretofore noted, afford stops against which the ends of the bolsters strike to limit the movement of the said bolster. At its central portion the bolster is formed with a central bearing 16, which includes a seat for the king-bolt of the truck. The ends of the bolster are hollow or of box-like form and are expanded laterally, so that they work freely between the adjacent portions of the transoms, but with such close engagement that the transoms afford vertical guides and chafing-surfaces therefor. It will thus be seen that the bolster is, as it were, housed in by a rectangular frame afforded by the transoms.

The construction described is very strong, durable, satisfactory in operation, and comparatively cheap to build. It is of course capable of considerable modification within the scope of the 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 car-truck, the combination with side frames, of transoms connecting said side frames, said transoms being rigidly connected together and spaced apart from each other, springs supported by said transoms, spring-

caps supported by said springs, and guided vertically by said transoms, and provided on their faces with concave roller-seats, rollers resting in said seats of said spring-caps, and a truck-bolster of less length than the distance between said side frames and provided with concave roller-seats resting on said rollers, substantially as described.

2. In a car-truck, the combination with side frames, of transoms connecting said side frames, said transoms being rigidly connected together and spaced apart from each other, at their ends, by upper and lower cross-ties, springs resting on the lower cross-ties, spring-caps supported by said springs, and guided by said transoms, with freedom for vertical movement and provided on their faces with concave roller-seats, rollers in said seats of said caps, a truck-bolster of less length than the distance between the side frames and provided, at its ends, with concave roller-seats resting on said rollers, one of said cross-ties being disposed so as to serve as end stops for said bolster, substantially as described.

3. In a car-truck, the combination with side frames, of the transoms 3 uniting said side frames, said transoms being connected by the lower tie-plates 4 inward of the said side frames, and by the upper tie-ribs 5, said transoms also being provided with vertical guide-slots 11 inward of the said side frames, the springs 8 resting on the lower tie-plates 4, the spring-caps 9 on said springs and provided with the concave roller-seats 12 and also having guide-lugs 10 which work in the slots 11 of said transoms, rollers 13 resting in said concave seats 12, and the bolster 14 of less length than the distance between the side frames and provided with the concave seats 15 resting on said rollers, the said upper tie-ribs 5 serving as end stops for said bolster, all for cooperation substantially as described.

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

JOHN C. BARBER.

Witnesses:

L. W. BARBER,
A. M. LOVE.