

No. 760,294.

PATENTED MAY 17, 1904.

W. S. ADAMS.
MAXIMUM TRACTION TRUCK.

APPLICATION FILED AUG. 29, 1903.

NO MODEL.

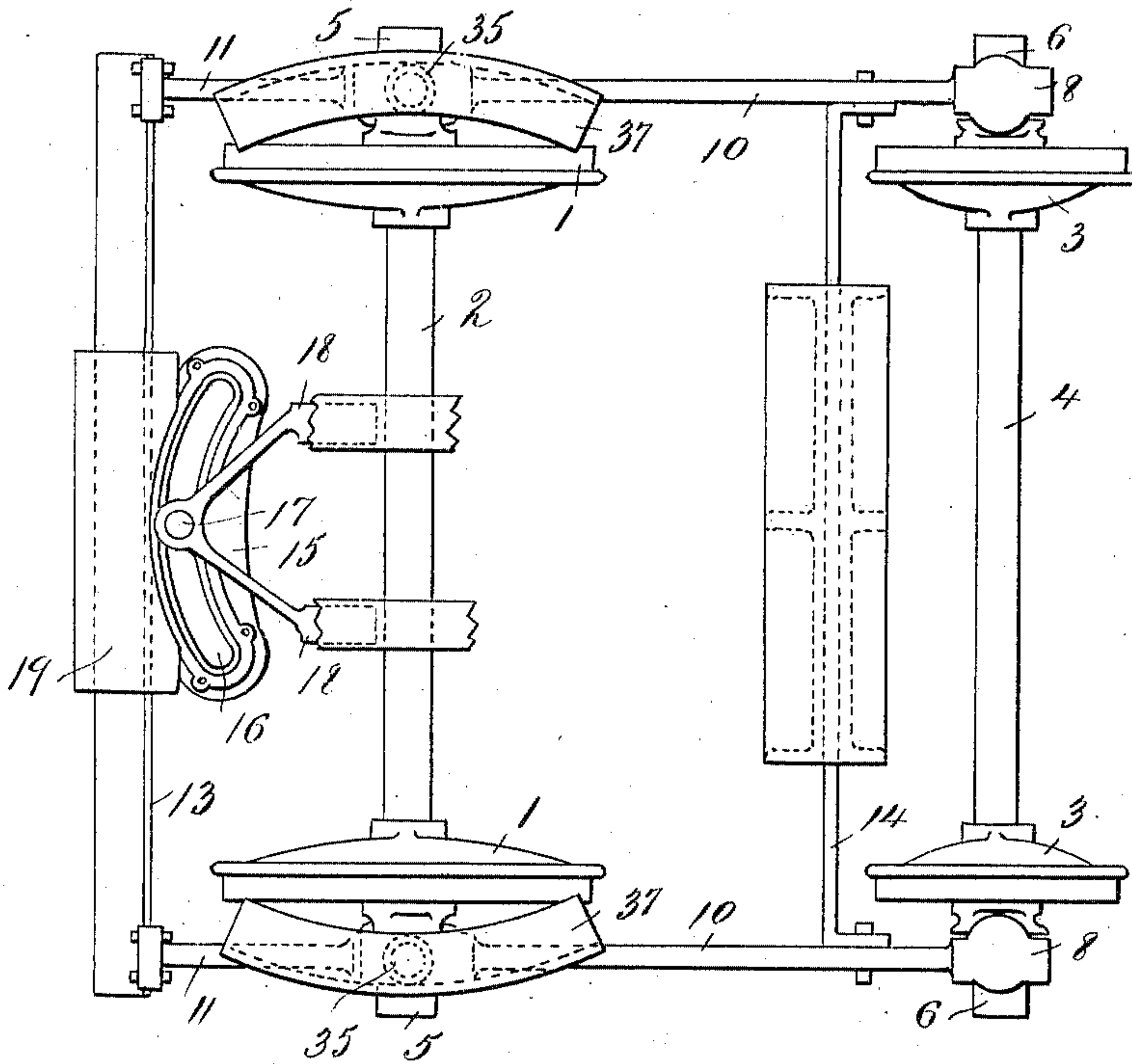


Fig. 1.

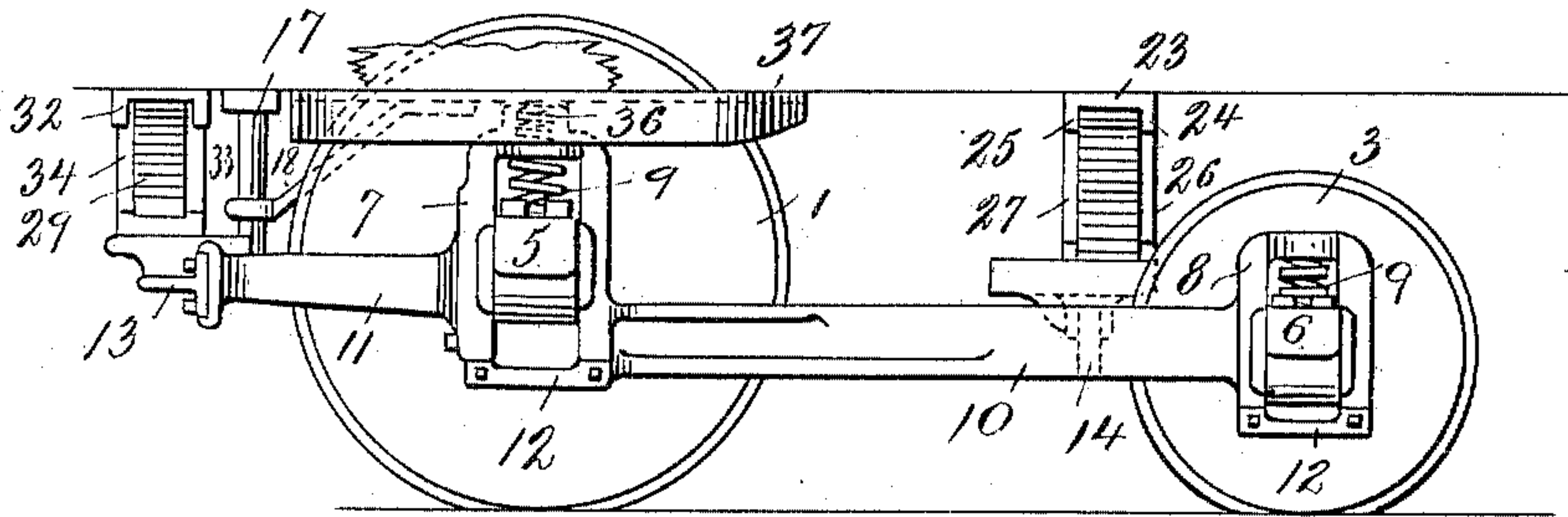


Fig. 2.

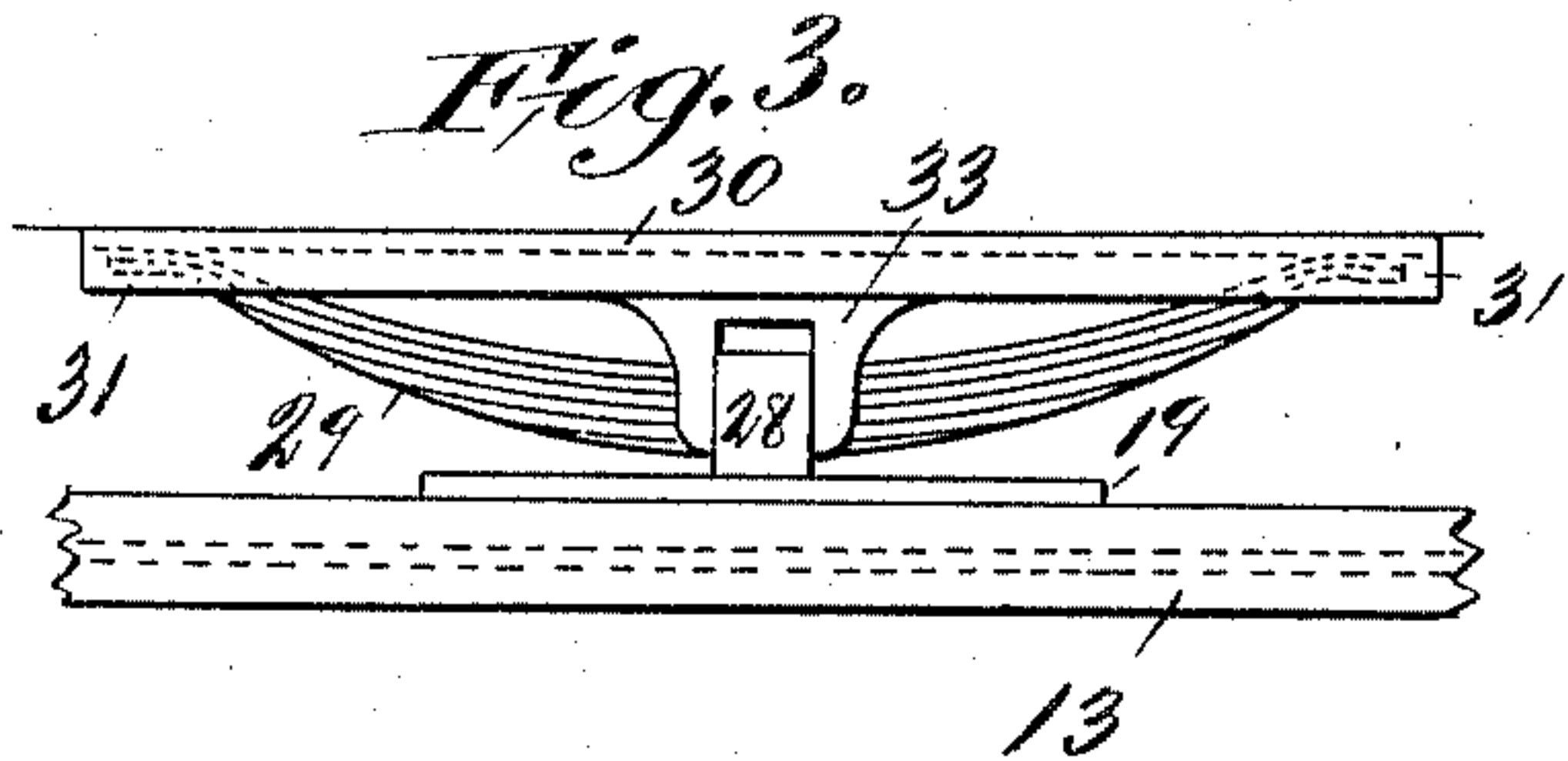


Fig. 3.

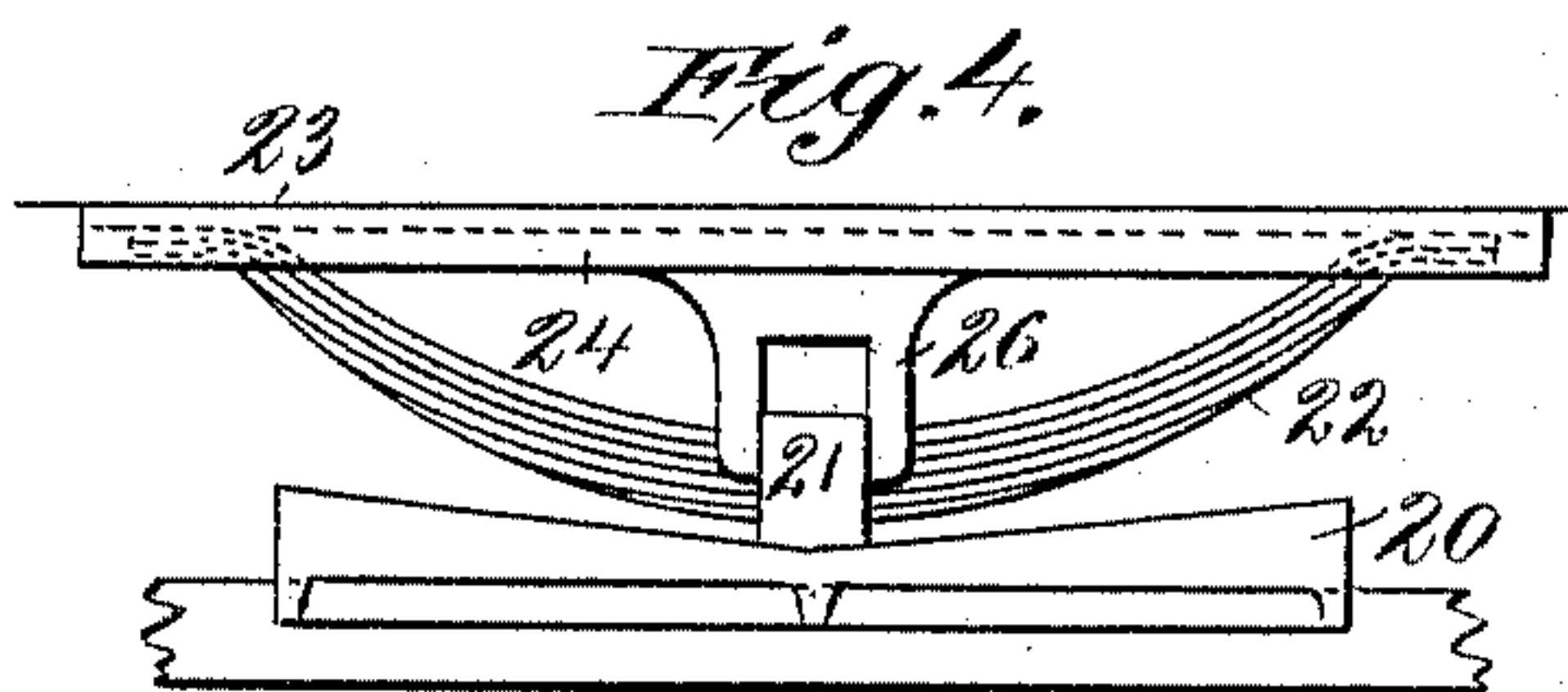


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

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MAXIMUM-TRACTION TRUCK.

SPECIFICATION forming part of Letters Patent No. 760,294, dated May 17, 1904.

Application filed August 29, 1903. Serial No. 171,224. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. ADAMS, a citizen of the United States, and a resident of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Maximum-Traction Trucks, of which the following is a specification.

The object of my invention is to provide a truck of this class which will be simple, durable, and efficient. This I accomplish by supporting the car-body on a peculiar combination of inverted semi-elliptic springs and in other features incidental thereto.

For a more particular description of one embodiment of my invention reference is to be had to the accompanying drawings, forming a part hereof, in which—

Figure 1 is a plan view of a truck provided with my improvements. Fig. 2 is a side elevation of the same. Figs. 3 and 4 are detailed views showing the inverted semi-elliptic springs.

Throughout the various views similar reference characters designate similar parts.

The truck comprises the usual driving-wheels 1, with their connecting-axle 2, and the trailing wheels 3, with their connecting-axle 4. The axles 2 and 4 support axle-boxes 5 and 6, which slide in pedestals 7 and 8 and support them through the axle-box springs 9. The pedestals 7 and 8 are connected by the chord 10, and the pedestals 7 are provided with the arms 11, which extend laterally from points intermediate of the ends. The arms of the pedestals 7 and 8 are connected by the tie-bars 12, which prevent the separation of the pedestals and axle-boxes. The arms 11 and chords 10 are connected by any suitable crossings, such as 13 and 14, respectively.

The crossing 13 is preferably made of a T-iron and is provided with a slotted plate 15, which is fixed at its center and on each side thereof. The slot 16 in this plate is curved in the arc of a circle the center of which is the pivoted axis of the truck, and the walls of this slot are engaged by a pin 17, which is fixed to the car-body and held securely by

braces 18. A portion of the upper surface of this plate forms a bearing or rub plate 19. The crossing 14 is also provided with a centrally-located rub-plate 20, which is concaved on its upper surface symmetrically on each side of its center and of sufficient breadth to support the band 21 of a semi-elliptic spring 22 regardless of the relative positions of the truck and car-body when passing round a curve. This prevents the inclined car-body from reducing the pressure on the bearing-plate 20 and holds the trailing wheels firmly to the track.

The spring 22 has its band 21, as above mentioned, on the bearing 20, and its upper ends engage the lower face of a flanged plate 23, which is fixed to the car-body. The ends of the spring 22 are guided by the flanges 24 and 25, and these flanges are projected at their centers to form guides 26 and 27 for the band 21.

The band 28 on the spring 29, which is also inverted, engages the rub-plate 19, and this spring engages with its ends the flanged plate 30, which is provided with flanges 31 and 32 and guides 33 and 34, projecting therefrom, all of which are similar to the flanges 24 and 25 and guides 26 and 27 and for the same purpose.

Coiled springs 35 are located in small housings 36 above the springs 9 on the pedestals 7, and these springs 35 engage curved and flanged rub-plates 37, which are fixed to the car-body whenever the said car-body is inclined, as when passing round a curve. These plates 37 are curved on the arc of a circle which is concentric with the pivotal axis of the truck.

From the above the operation of my improvement will be apparent. When in use the propelling power is transmitted through the pin 17, which has free vertical movement in the slot 16, thus permitting the springs 22 and 29 to flatten without any transverse or other strains. The flanged guides 23 and 30 at all times hold the springs in place and the bands 21 and 28 to the bearings 20 and 19, respectively, so that the car-body is resiliently supported under all conditions of service.

The housings 35 engage the flanged bearing-plates 37 and assist the pin 17 in guiding the truck under the car-body.

While I have shown and described one form of my invention, it is obvious that it may be embodied in many other forms which are equivalents and which are covered by the following claims.

What I claim is—

10 1. In a car-truck or similar device, a combination of the wheels, axles, axle-boxes, pedestals, chords, arms, and crossings, with rub-plates on said crossings, semi-elliptic springs with their bands on said rub-plates and guides
15 which determine the movement of said semi-elliptic springs.

2. In a car-truck or similar device, the combination of the wheels, axles, axle-boxes, pedestals, chords, arms, and crossings, with rub-
20 plates on said crossings, one of said rub-plates

being provided with a concave face, semi-elliptic springs with bands resting on said rub-plates, and guides determining the movement of said springs.

3. In a car-truck or similar device, the combination of the wheels, axles, axle-boxes, pedestals, chords, arms and crossings, with rub-plates on said crossings, semi-elliptic springs with bands resting on said rub-plates, guides determining the movement of said springs, housings on some of the pedestals, and springs
30 in said housings which are adapted to engage rub-plates on the car-body.

Signed in the city and county of Philadelphia, State of Pennsylvania, this 27th day of
35 August, 1903.

WALTER S. ADAMS.

Witnesses:

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