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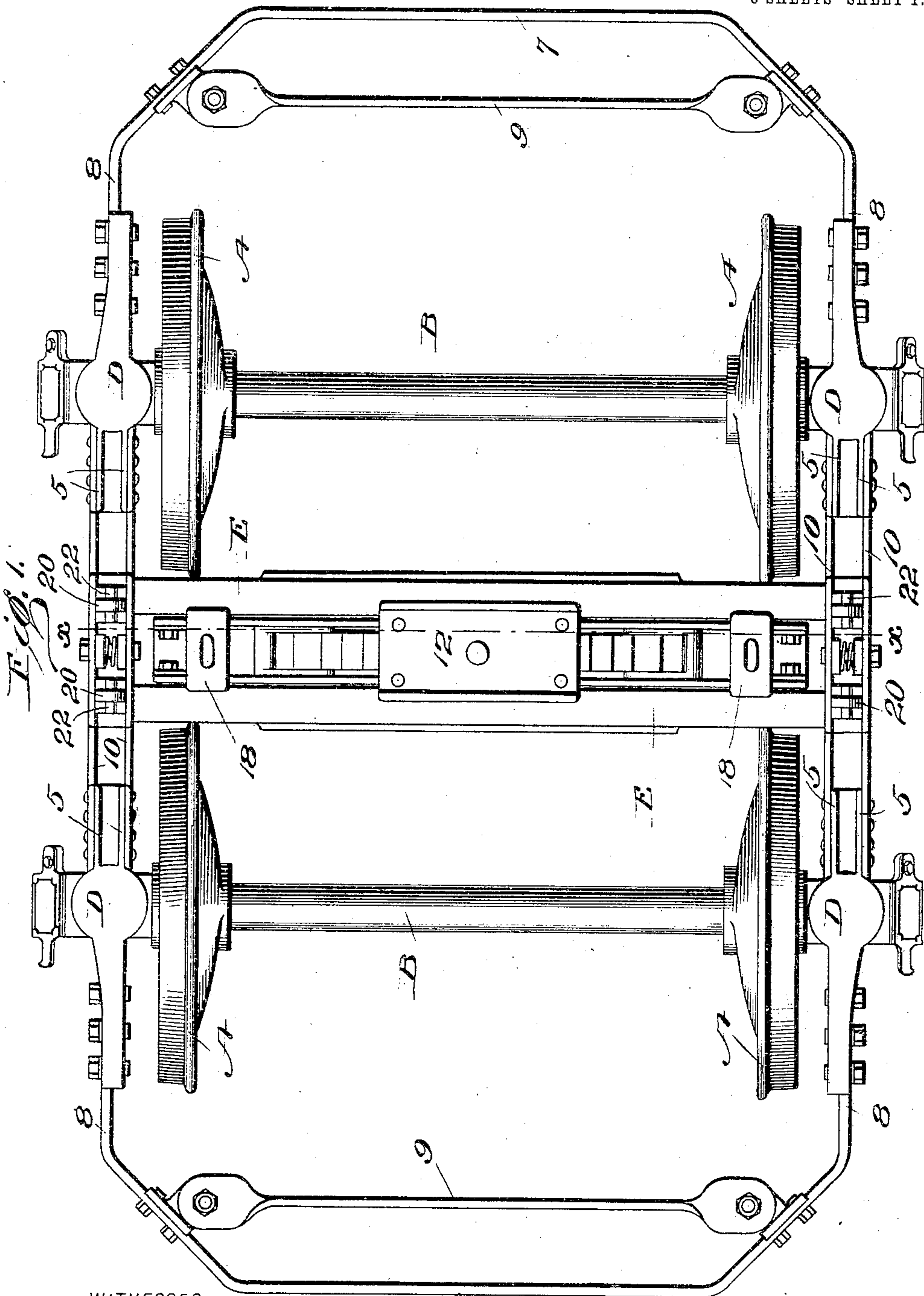
PATENTED JULY 26, 1904.

E. PECKHAM.
CAR TRUCK.

APPLICATION FILED APR. 8, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



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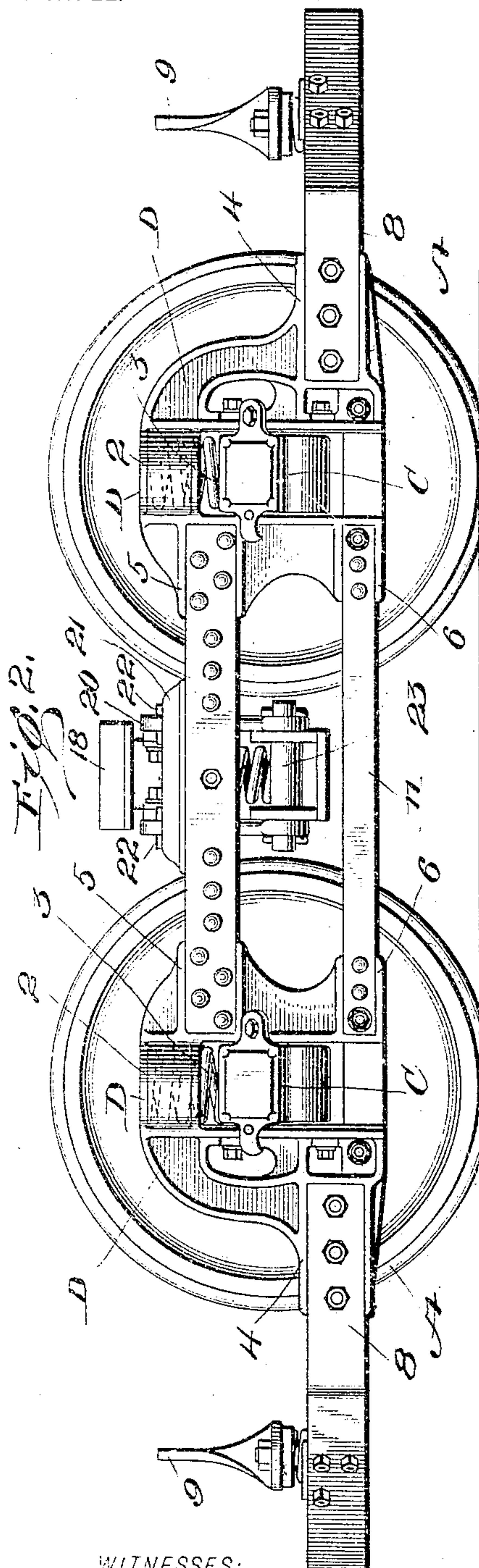
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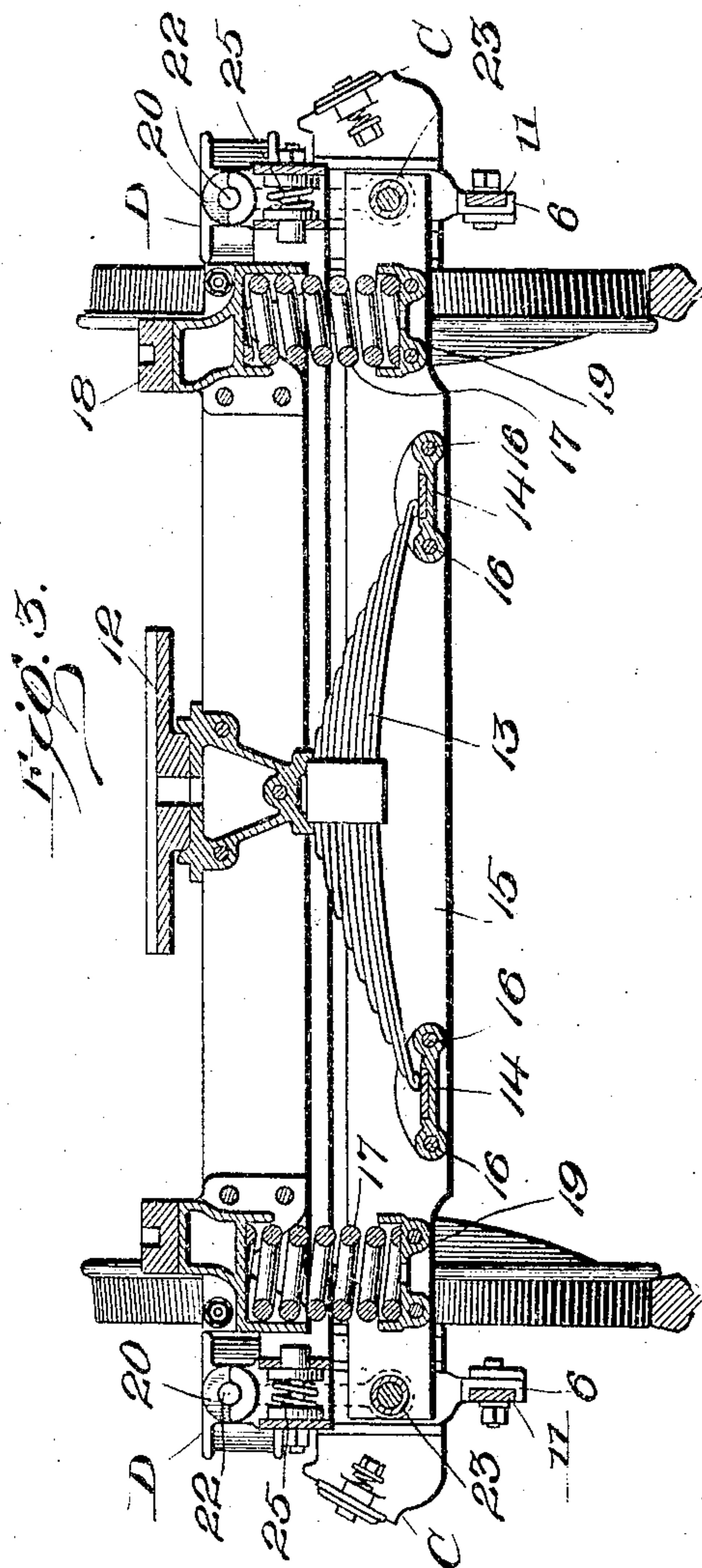
NO MODEL.

3 SHEETS—SHEET 2.



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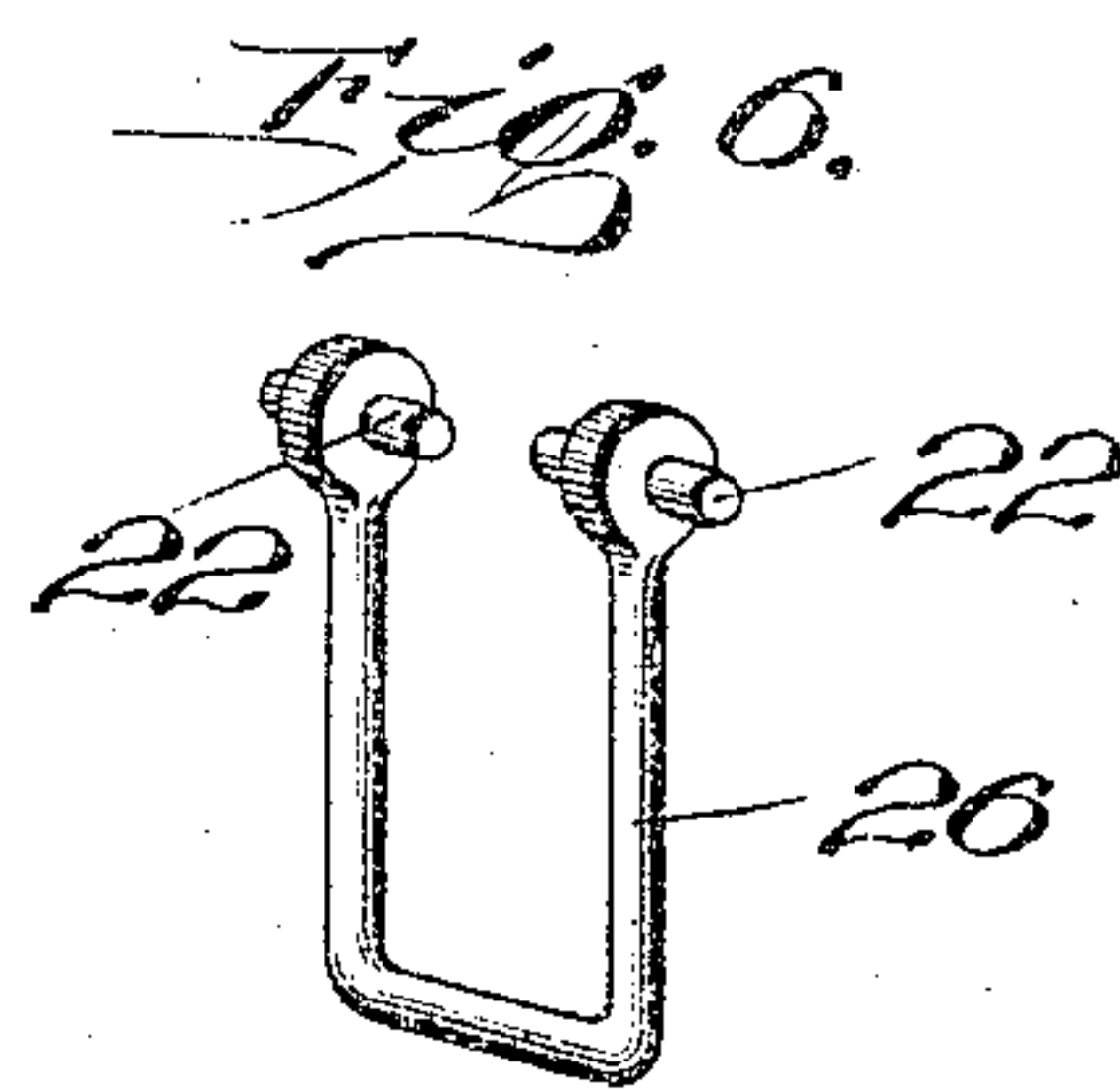
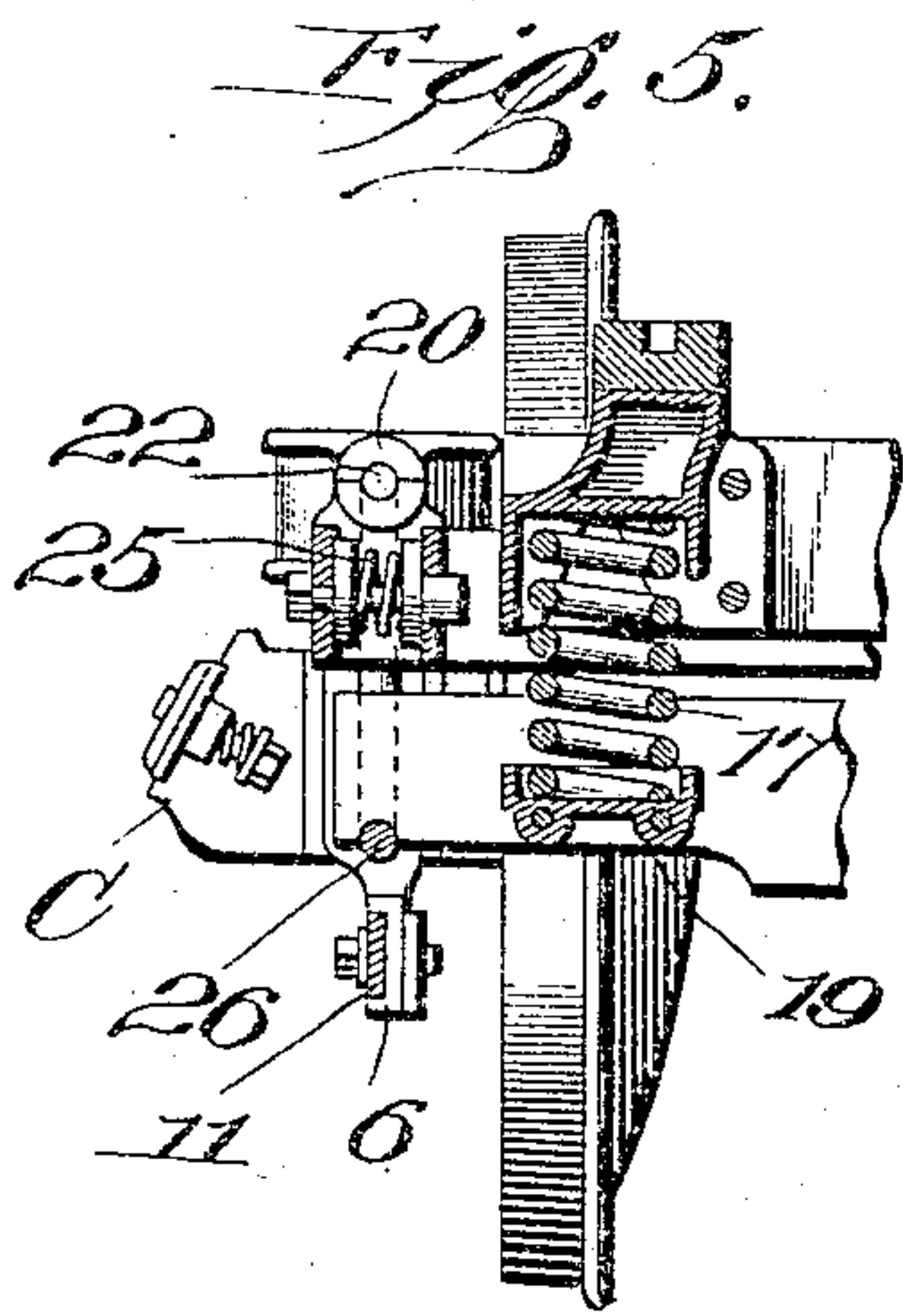
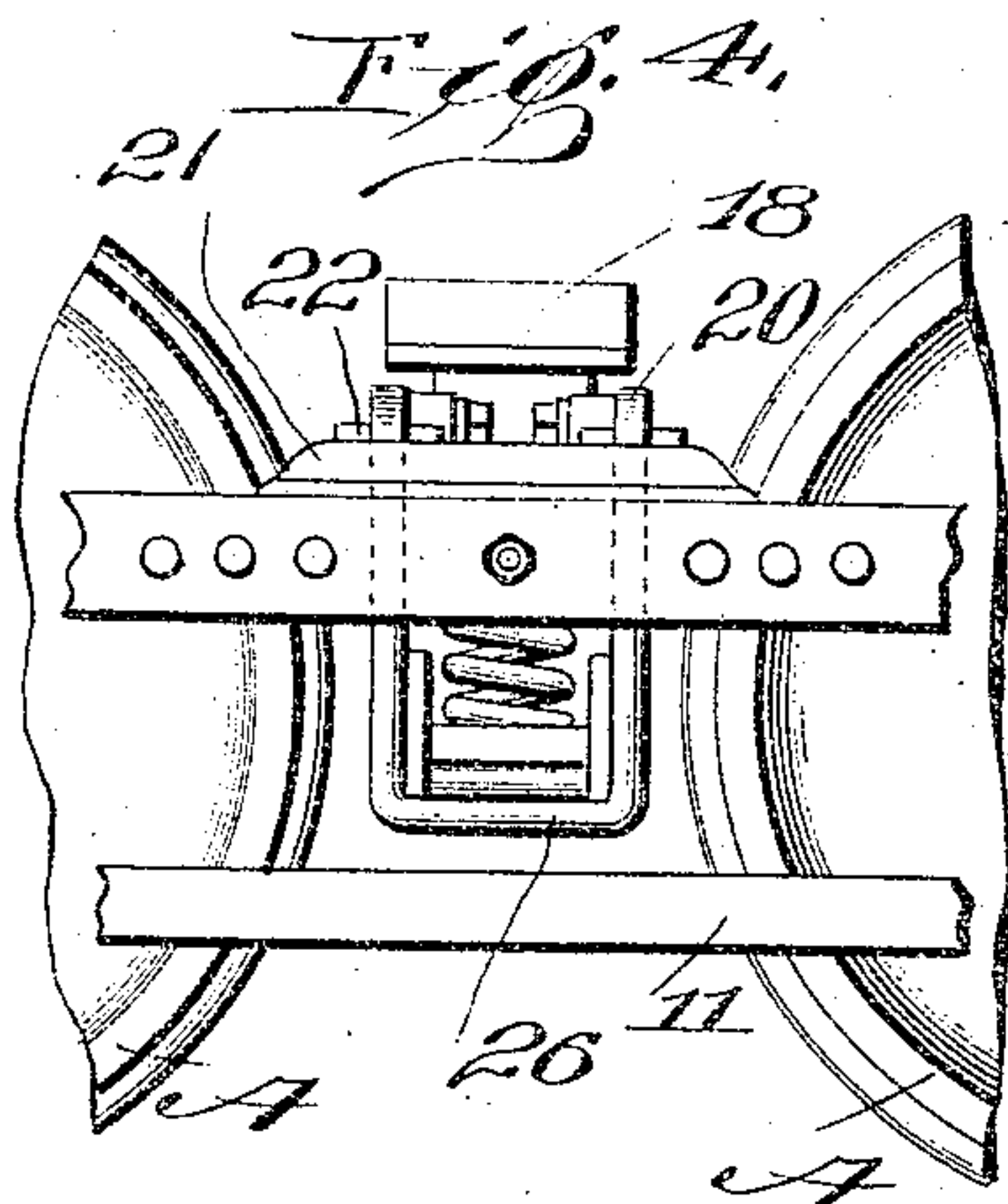
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APPLICATION FILED APR. 8, 1902.

NO MODEL.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

EDGAR PECKHAM, OF KINGSTON, NEW YORK, ASSIGNOR TO THE
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CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 765,989, dated July 26, 1904.

Application filed April 8, 1902. Serial No. 101,881. (No model.)

To all whom it may concern:

Be it known that I, EDGAR PECKHAM, residing at Kingston, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Car-Trucks, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to car-trucks; and its object is to provide a new and improved truck especially adapted for high-speed service on electric railways, both elevated and suburban, but capable of use in a variety of relations.

15 More specifically the object of the invention is to provide a short wheel-base truck having low-down spring-supported side frames with low-down motor-supporting end sections and a swing-bolster supported from the side frames in such a manner that the truck is especially adapted for service on a road-bed having sharp curves and where it is desired to use long cars which are comparatively narrow between the sills. Moreover, this truck is especially adapted for open cars in that the end extensions which support the motor at one or both ends of the truck are low down, so that they will not come in contact with the steps of such open cars when turning corners.

30 The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts hereinafter fully set forth and the novel features of which will be more specifically pointed out in the claims at the end of this specification.

The invention will be understood upon reference to the accompanying drawings, in which—

40 Figure 1 is a top plan view constructed in accordance with this invention. Fig. 2 is a side elevation thereof. Fig. 3 is a section taken on the line *xx* of Fig. 1. Fig. 4 is a side elevation similar to Fig. 2, but with parts broken away, showing a modified construction of link. Fig. 5 is a section similar to Fig. 3, but with parts broken away, showing the same modification of link. Fig. 6 is a detail in perspective of the modified form of link.

A represents the wheels mounted upon the axles B and provided with suitable journal-boxes C. The pedestals (designated in a general way by D) are formed with spring-pockets 2 for the springs 3, seated upon the journal-boxes and which form a part of the spring-base by which the car-body is supported. 55 The outer leg of each pedestal is provided with a socket or seat 4 at its lower end and the inner leg of each pedestal with two sockets or seats 5 at the upper end thereof and a single socket 6 at the lower end thereof. 60 Sockets 4 receive the inturned ends of bars 7, which form the transverse end bars of the truck-frame and are preferably formed, as shown, of a single integral bar extending transversely of the truck-frame for a suitable distance and having their ends inturned and seated in the sockets at the lower outer end of each pedestal, as at 8. A spring-mounted motor-supporting cross-bar 9 may be mounted in any desired way with relation to the end bar 7. These end bars fit closely in the pedestal-sockets and are firmly secured therein by rivets, and it has been proved in practice that with such construction, wherein there are provided sockets in the pedestals and beams or bars constituting parts of the truck-frames, which are fitted close to such sockets and have their outer faces entirely within the socket-flanges or flush therewith, there is practically no shearing strain upon the rivets 80 and a strong and durable truck-frame is provided. In similar way the two pedestals on each side of the truck are connected at their upper ends by duplex upper beams 10 10, which are seated in sockets 5, before mentioned, while a single lower longitudinal beam 11 connects the lower corners of the pedestals and has its ends seated in the sockets 6. This provision of a single lower longitudinal beam leaves room for the brake-rigging and brake-shoes without detracting from the strength of the frame, while the duplex upper beam provides means for the proper suspension of the swing-bolster. This bolster is in its general construction similar to that shown in my prior patent, No. 604,784, May 31, 1898, in 95

that it has a central semi-elliptic spring and outerspiral springs, the supporting-points for the ends of the elliptic springs and for the spiral springs being well toward the outer ends of the spring-plank; but it differs therefrom in certain details of construction which are important and novel in this relation, as will be apparent. The transoms E E are of ordinary construction. A center bearing 12, provided with means whereby the car-body may be pivotally attached thereto, is strapped to and supported by the semi-elliptic spring 13, which rests at its ends upon the cross-pieces 14. These cross-pieces extend between the two beams 15, which are simple flat bars set on end, and they may be connected thereto by the pins or bolts 16 or otherwise, as desired. In like manner the spiral springs 17, which support the side bearings 18 at the ends of the bolster, are themselves supported by cross-pieces 19, extending between and supported on the two vertical beams 15. It will thus be seen that the two beams 15, with the connecting members by which the bolster-springs are supported, form a spring-plank or spring-trough which constitutes a strong and stable support stiffened at all necessary points and yet is without superfluous metal or parts. The ends of the beams 15 15 are supported from between the duplex upper beams 10 of the side frame by means of links 20, having eyes at their upper and lower ends. Upon or between each duplex upper beam is mounted a casting 21, which is provided with seats for the support of the pins 22, which pass through the eyes at the upper end of each link 20. These pins extend longitudinally of the truck-frame, and the space between the two beams from which they are supported is such that these links, together with the spring-plank and bolster, to which they are connected by means of the pins or bolts 23 passing through the spring-plank 15 and through the eyes at the lower ends of the links, may have a certain transverse swing whereby the necessary transverse movement of the bolster of the truck-frame is provided. Buffer-springs 25 may be seated in the side frames and arranged to bear against the ends of the bolster to limit the transverse movement thereof, as in a well-known manner. By this arrangement of the duplex upper beams and bolster having its ends supported by links extending between said beams I am enabled to obtain a truck having a very short wheel-base, as will be evident from an inspection of Fig. 2. Other advantages in construction and operation will be apparent from the description already given without further elaboration thereof.

It will be obvious that various changes in detail may be made without destroying the identity of this invention—as, for instance, the links 20 and connecting-bolt 23 could be made in one piece, constituting thus a stirrup or supporting-strap for the spring-plank.

Such construction is illustrated in Figs. 4, 5, and 6, wherein 26 is a one-piece link supporting the beams 15 15, which constitute the spring-plank, and the links 26 thus constitute, in the same manner as do the links shown in Figs. 1, 2, and 3, U-shaped hangers which are supported from the side frames so as to be capable of swinging transversely thereof and which have the spring-plank mounted thereon.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a truck in combination with the wheels and axles, the side frame comprising pedestals and duplex upper beams connecting said pedestals on each side of the truck, a bolster-supporting spring-plank and links supporting the ends of said spring-plank, said links being supported from between said duplex upper beams so as to be capable of pivotal movement transversely of the truck-frame substantially as and for the purposes set forth.

2. In a truck in combination with the wheels and axles, the truck-frame comprising pedestals, duplex upper side beams having their ends supported in sockets or seats integral with said pedestals, lower side beams connecting the lower ends of said pedestals and seated in sockets thereon and transverse cross-bars having their ends bent inwardly and seated in sockets in the lower outer ends of said pedestals, said cross-bars being substantially in the same horizontal plane with said lower side beam.

3. In a truck in combination with the wheels and axles, pedestals provided with sockets 5 and 6, the duplex upper beams 10 and the lower beam 11, fitting closely in said sockets and entirely within or flush with the flanges thereof, bolster-springs, a transverse support or supports for said springs, links by which the ends of said supports are carried, said links being mounted between said duplex upper beams so as to be capable of movement transversely thereto.

4. In combination with wheels and axles, a truck-frame, comprising pedestals D having sockets 5 in the upper inner corners thereof, sockets 4 at the lower outer corners thereof, sockets 6 at the lower inner corners thereof, the end bars 7 seated in sockets 4, the duplex upper beams 10, 10 seated in the sockets 5, the lower beams 11 seated in sockets 6, and the bolster-supporting means comprising the links 20, 20 mounted between said duplex upper beams for pivotal movement relatively thereto, and suitably connected to the bolster substantially as and for the purposes set forth.

5. The combination with a truck-frame, of the castings secured to the sides thereof, the stay-bars connecting the side frames adjacent to the castings, U-shaped hangers suspended from said castings and capable of swinging transversely of the frame, the spring-plank

supported by said hangers, the springs on said plank, and the bolster supported by said springs and guided between said stay-bars.

5 6. The combination of a truck-frame having a pair of transverse stay-bars connecting its upper side members and castings secured to the side members opposite the ends of said stay-bars, the U-shaped hangers depending from said castings, the spring-plank mounted
10 on the hangers, the springs on said plank, and the bolster mounted on the springs and lying between and guided by said stay-bars, for the purpose and substantially as described.

15 7. The combination of a truck-frame having a pair of transverse stay-bars connecting its upper side members and castings secured to the side members opposite the ends of said stay-bars, the laterally-swinging U-shaped hangers depending from said castings, the
20 spring-plank mounted on and connecting the hangers, the elliptic springs on said plank, and the bolster mounted on the springs and lying between and guided by said stay-bars, for the purpose and substantially as described.

25 8. In a truck in combination with the wheels and axles, the truck-frame comprising pedestals, duplex upper side beams having their ends supported in sockets or seats connected with said pedestals, lower side beams connecting the lower ends of said pedestals and
30 seated in sockets thereon and transverse cross-bars having their ends bent inwardly and seated in sockets in the lower outer ends of said pedestals, said cross-bars being substantially in the same horizontal plane with said
35 lower side beam.

9. In a car-truck, a truck-frame, U-shaped

hangers suspended immediately from and below the side members thereof, a spring-plank connected to said hangers, springs on said plank, and a bolster supported on the springs. 40

10. In a car-truck, a truck-frame, U-shaped hangers suspended from the side members thereof outside the wheel-base, a spring-plank connected to said hangers, springs on said plank, and a bolster supported on the springs. 45

11. In a car-truck, a truck-frame, U-shaped hangers suspended immediately from and hanging directly below the side members thereof, a spring-plank connected to said hangers, elliptic springs on said plank, and a bolster supported on said springs. 50

12. In a car-truck, a truck-frame, U-shaped hangers suspended from the side members thereof outside the wheel-base, a spring-plank connected to said hangers, elliptic springs on said plank, and a bolster supported on said springs. 55

13. In a car-truck, a truck-frame, castings secured to the upper side members thereof, U-shaped hangers suspended from the said castings and extending downwardly and immediately below said side members outside the wheel-base and capable of swinging transversely of the frame, a spring-plank connected to the hangers, springs on said plank, and a bolster supported on the springs. 60 65

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

EDGAR PECKHAM.

Witnesses:

G. H. BOWERS,
HARRY BRADY.