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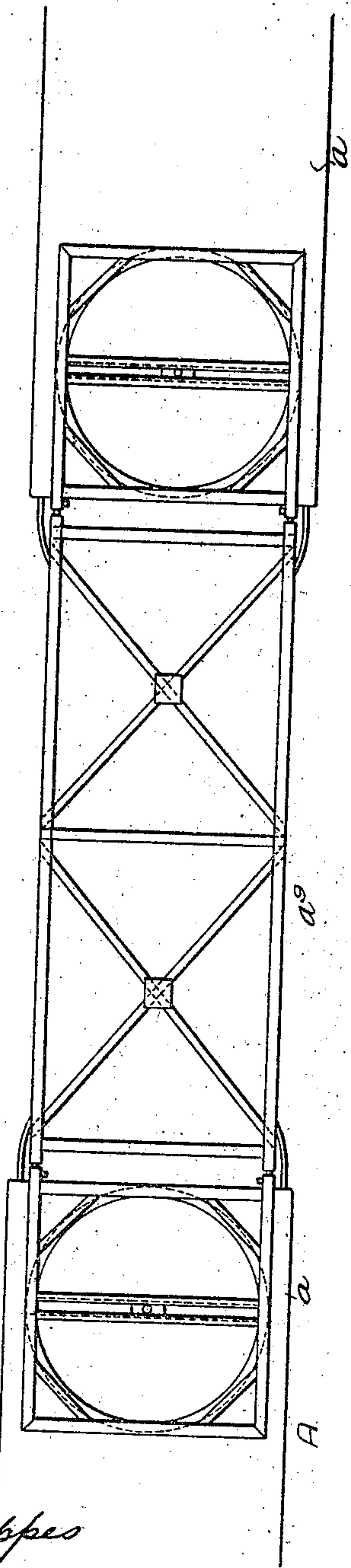
PATENTED JAN. 23, 1906.

C. B. VOYNOW & G. B. TAYLOR.
CRANE STRUCTURE FOR CARS.

APPLICATION FILED APR. 4, 1905.

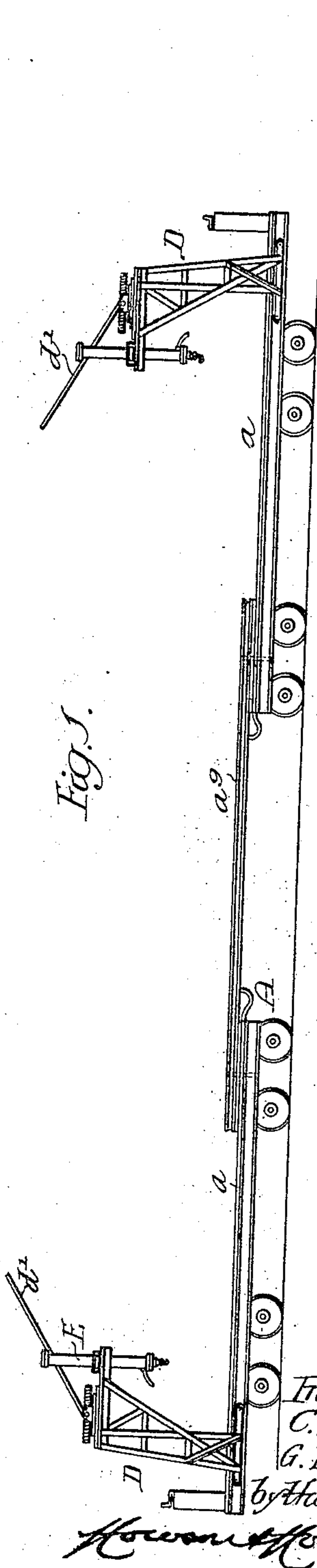
2 SHEETS—SHEET 1.

Fig. 2.



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Fig. 1.



Inventors:
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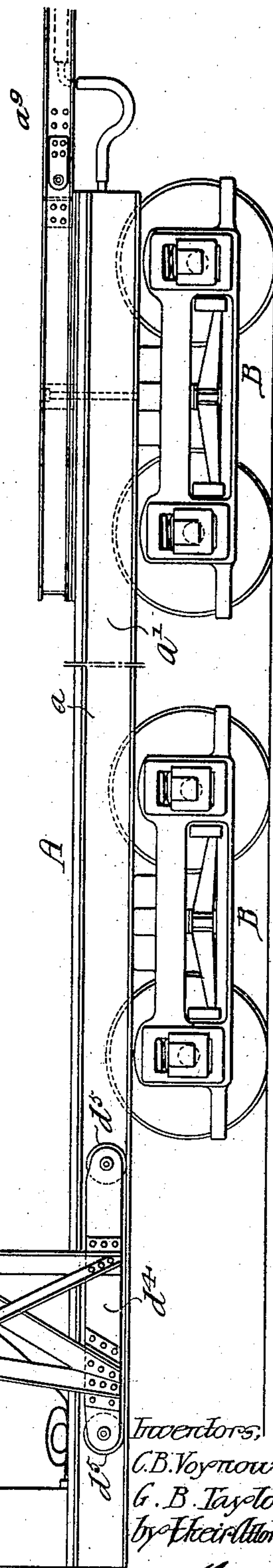
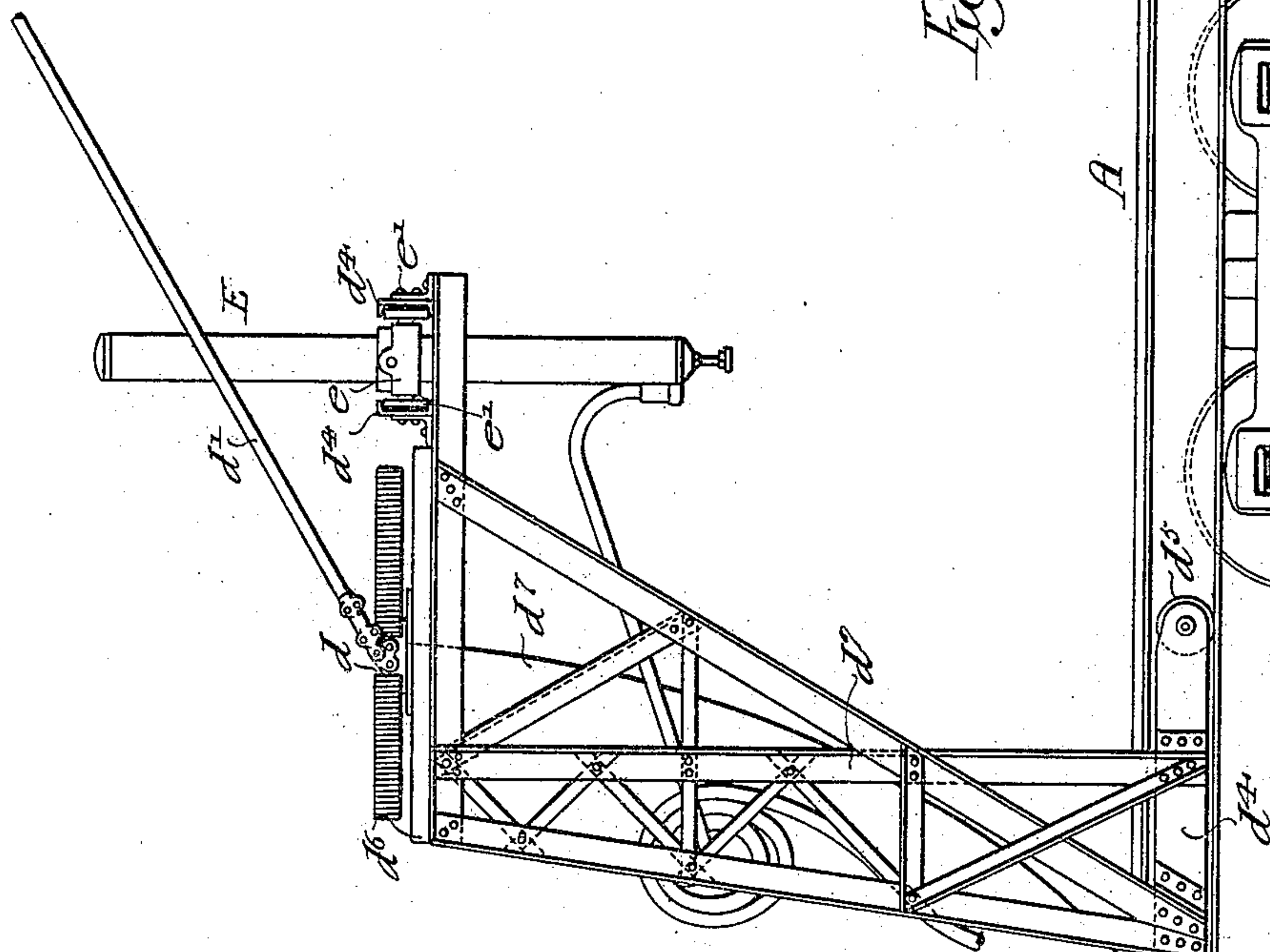
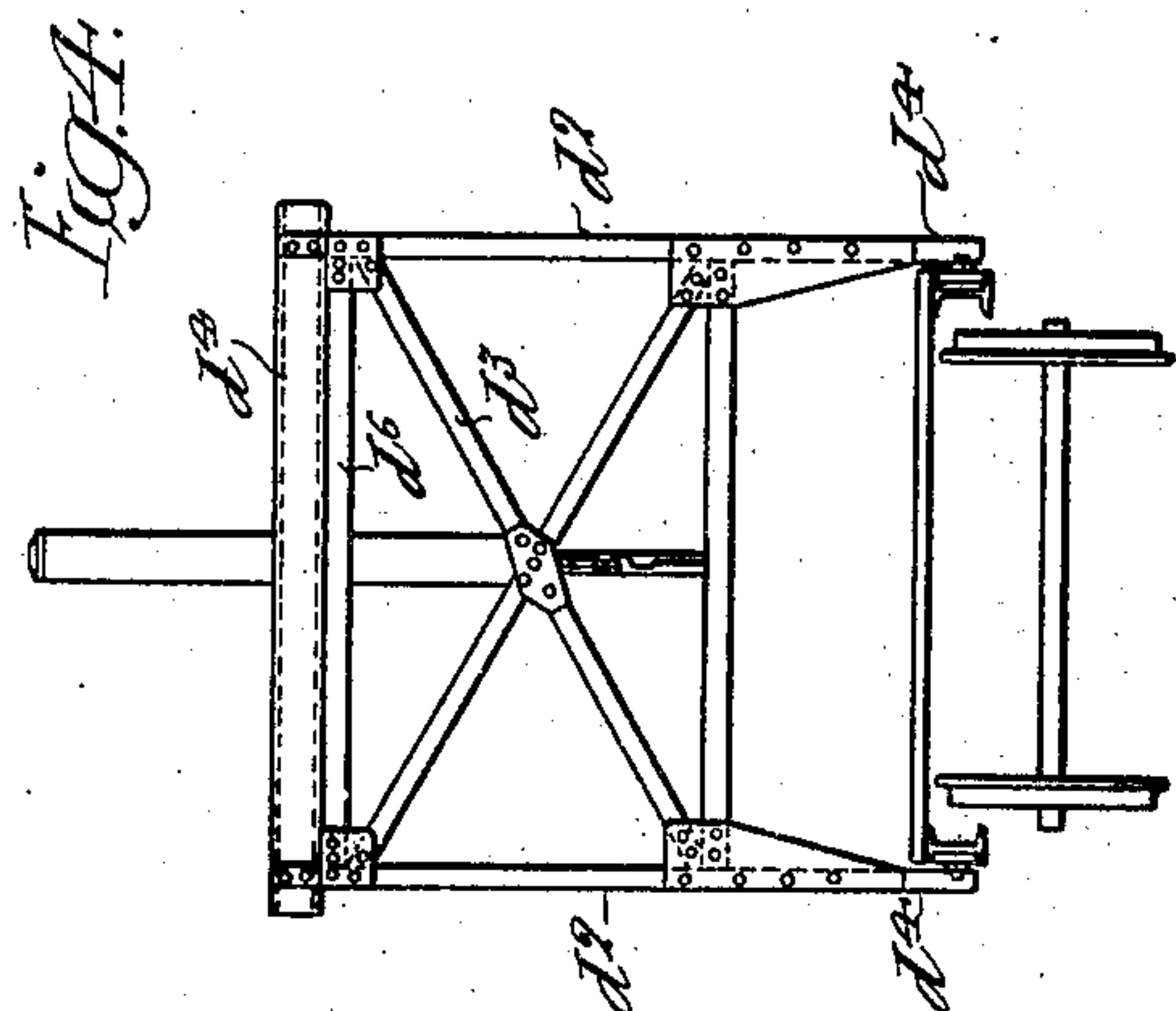
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CONSTANTINE B. VOYNOW AND GEORGE B. TAYLOR, OF PHILADELPHIA,
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CRANE STRUCTURE FOR CARS.

No. 810,827.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed April 4, 1905. Serial No. 253,909.

To all whom it may concern:

Be it known that we, CONSTANTINE B. VOYNOW and GEORGE B. TAYLOR, citizens of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Crane Structures for Cars, of which the following is a specification.

Our invention consists of a novel structure carried by and preferably forming part of a car especially designed for the loading or unloading of large objects, such as poles, rails, or the like.

One object of our invention is to provide crane structures so supported as to be longitudinally adjustable upon the car in order to permit them to handle objects of different lengths.

A further object of the invention is to provide a car with a crane structure so supported as to be movable longitudinally of the car and including supporting means for a crane-trolley, whereby the latter is free to move transversely of the car.

We also desire to construct the crane structure so that it may be employed as a support for the trolley base and pole of the car.

These objects we attain as hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a car, showing the adjustable crane and trolley-pole-supporting structures in position thereon. Fig. 2 is a plan view illustrating the construction by which the two crane-supporting ends of the car are connected. Fig. 3 is an enlarged side elevation of one end of the car illustrated in Fig. 1, showing in greater detail the construction of our invention; and Fig. 4 is an end elevation further illustrating the detail construction of one of the crane-supporting structures.

In the above drawings, A represents the framework of the car made in three parts a , a , and a^9 , of which each of the two end parts is mounted upon two independent trucks B of any desired construction and in the manner well known to the art. The sections a are pivotally connected by means of an intermediate member a^9 , and each of said sections is provided with longitudinal side members preferably formed of I-beams a' , although it will be understood that, if desired, channel or other suitable sections may be employed for this purpose. Guided upon and

supported by each set of these beams a' is a movable structure D, serving as a support for a trolley-base d and a trolley-pole d' , as well as for a crane E, employed in handling material carried by the car. The framework comprising the structure D consists in the present instance of two vertically-placed side members d^2 , braced together by sections d^3 and provided at their lower ends with an elongated member d^4 , extending parallel to the sections a' . This member has in it bearings for the spindles of wheels or rollers d^5 , and the device is so constructed and proportioned that these wheels operate upon the inside surfaces of the flanges of the sections a' , so as to permit the structure D being moved longitudinally of the car. Extending between and suitably fixed to the top portion of the framework D is a piece d^6 , upon which is carried the trolley-base d , as best shown in Fig. 3. It will be noted that the top portions of the side members of said framework D overhang the car-body and provide support for two channels d^4 , which extend between them. A crane trolley or carriage e , having wheels e' , is placed to operate upon the flanges of these channels, so as to be movable transversely of the car, and thereby permit the crane structure E carried thereby to be adjusted to operate upon material at various parts of the car.

The trolley-base d is connected, by means of a flexible conductor d^7 , with an electric controller F, and it will be understood that the car is equipped with electric motors suitable to the work to be performed, as well as with a complete air-brake system, including a compressor and small electric motor for operating the same, together with the customary reservoir for compressed air. None of these devices have been shown, inasmuch as they are of the well-known construction and do not properly form any part of the present invention.

In the present instance the hoisting mechanism of the crane structure proper consists of a pneumatic cylinder and a piston designed to be operated by compressed air obtained from the air-brake system, there being piping connections and operating mechanism such that it is possible to simultaneously supply air to the two cylinders E at the opposite ends of a car to raise or lower objects engaged by them. For this purpose there are air-pipes

extending the entire length of the car and provided with flexible connections, as shown in Figs. 2 and 3, where they pass from one end of the car to the other.

5 Under operating conditions long objects, such as poles or rails, are placed upon the central section a^9 of the car, which may be of the construction illustrated in our above-noted patent, the crane-supporting structures
10 D at the ends of the car being moved longitudinally of the same, so as to permit their hoisting devices E to readily engage such objects.

It will be seen that by our invention rails or poles of widely-different lengths may be
15 conveniently handled, and that after the crane-supporting structures have been moved toward or from each other, so that their hoisting devices E are over the ends of the objects to be lifted, said devices may be moved trans-
20 versely of the car to conveniently load or unload it.

The flexible connections d^7 permit adjustment of the crane, supporting structures without in any way interfering with the functions
25 of the trolley-pole, and consequently without interrupting the electrical connection between the motor-controller and the trolley-wire.

We claim as our invention—

30 1. The combination of a car having a supporting-framework including side members formed of longitudinally-extending beams, with a crane structure adjustable longitudinally of said car upon said beams and having
35 wheels operative upon and held from vertical movement by the flanges of the beams, substantially as described.

2. The combination of a car having a framework including side members formed of structural sections, a structure having wheels operative upon said sections so as to move longitudinally of the car, and a hoisting device carried by said structure, substantially as described.

45 3. The combination of a car having a structure longitudinally adjustable thereon, a track on said structure extending transversely of the car, and a hoisting device movable on said track, substantially as described.

50 4. The combination of a car having longitudinally-extending tracks, a structure having side frames connected together and movable on said tracks, a track extending be-

tween said side frames, a carriage movable on said latter track, and a hoisting device supported by said carriage, substantially as described. 55

5. The combination of a car, longitudinally-extending structural sections at each side of the same, a framework at each end of the car movable upon the said structural sections, said frameworks having portions held from vertical movement by the flanges of said sections, and a crane carried by each framework. 60

6. A car having at each end a body including two longitudinally-extending beams, a structure having side members provided with rollers operative upon the flanges of said beams, and a hoisting device carried by each of said structures, substantially as described. 65 70

7. A car having a pair of longitudinally-extending beams, a framework operative upon said beams, said framework including elongated pieces carrying wheels operative upon the flanges of the beams, side members extending upwardly from said pieces, means for connecting the side members, a guide or guides also extending between the side members, and a hoisting device movable transversely upon said guides, substantially as described. 75 80

8. The combination of a car having at each end a frame movable longitudinally of the car, each of said frames having portions overhanging the car, with hoisting mechanism carried upon the overhanging portion of each frame and bodily movable transversely of the car, substantially as described. 85

9. The combination of a car having two truck-supported end sections and an intermediate section connecting said two end sections, crane structures respectively carried on the end sections so as to be movable longitudinally of the car and hoisting devices on said structures placed to deposit upon or remove elongated objects from the intermediate section, substantially as described. 90 95

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses. 100

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Witnesses:

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