

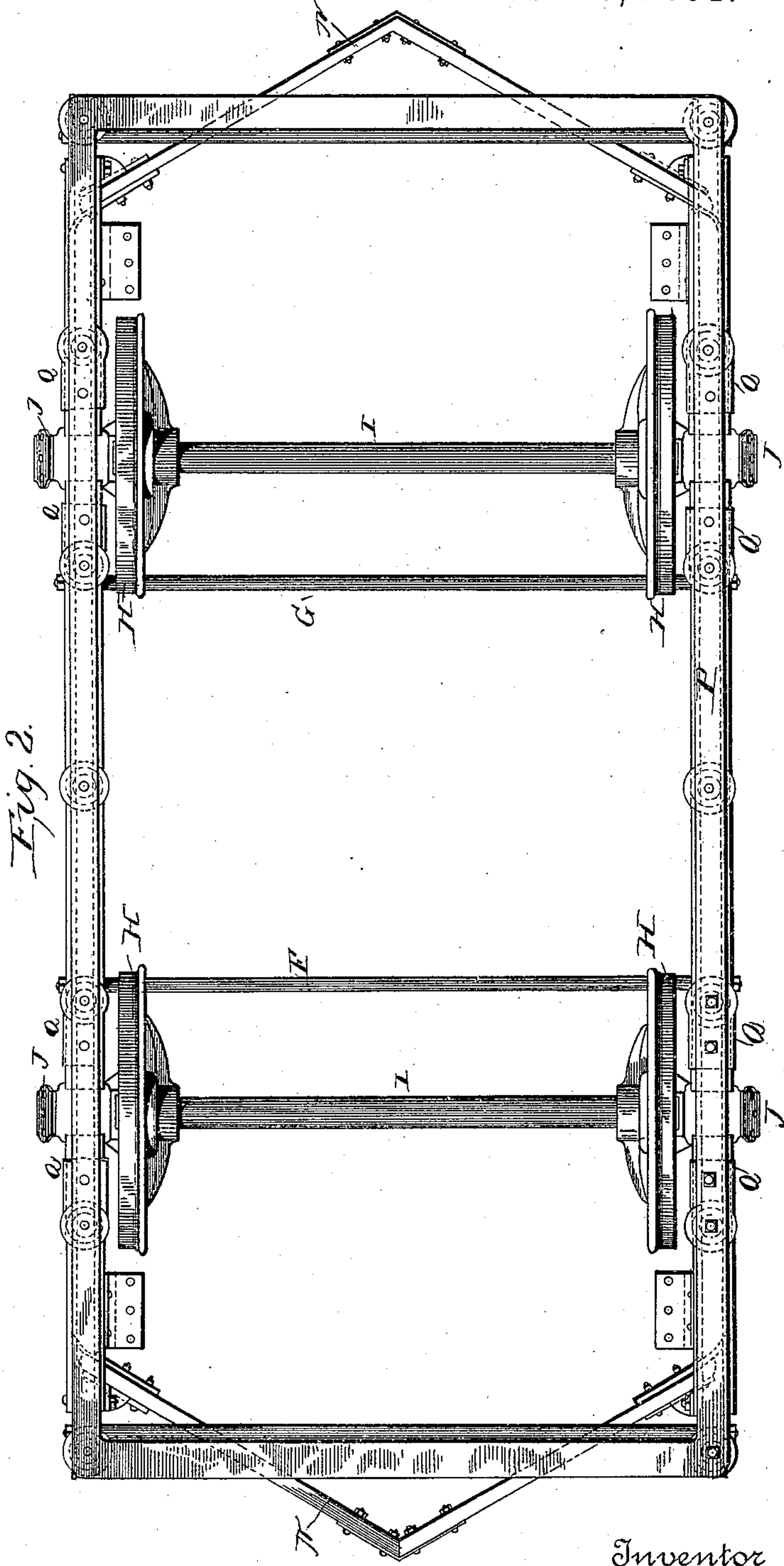
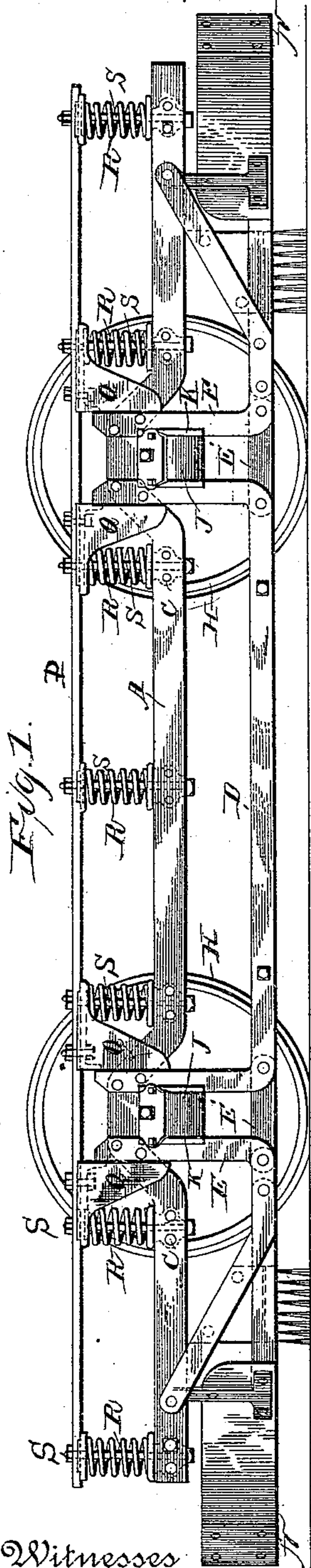
(No Model.)

2 Sheets—Sheet 1.

H. F. PROBERT.
CAR TRUCK.

No. 446,392.

Patented Feb. 10, 1891.



Witnesses
James J. Feltner.
E. P. Erwell.

Inventor
Hubert F. Probert.
By his Attorneys
Hopkins and Atkins

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

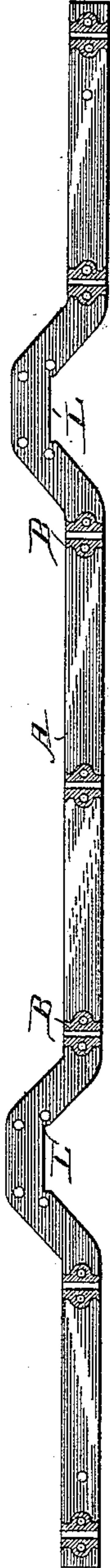


Fig. 4.

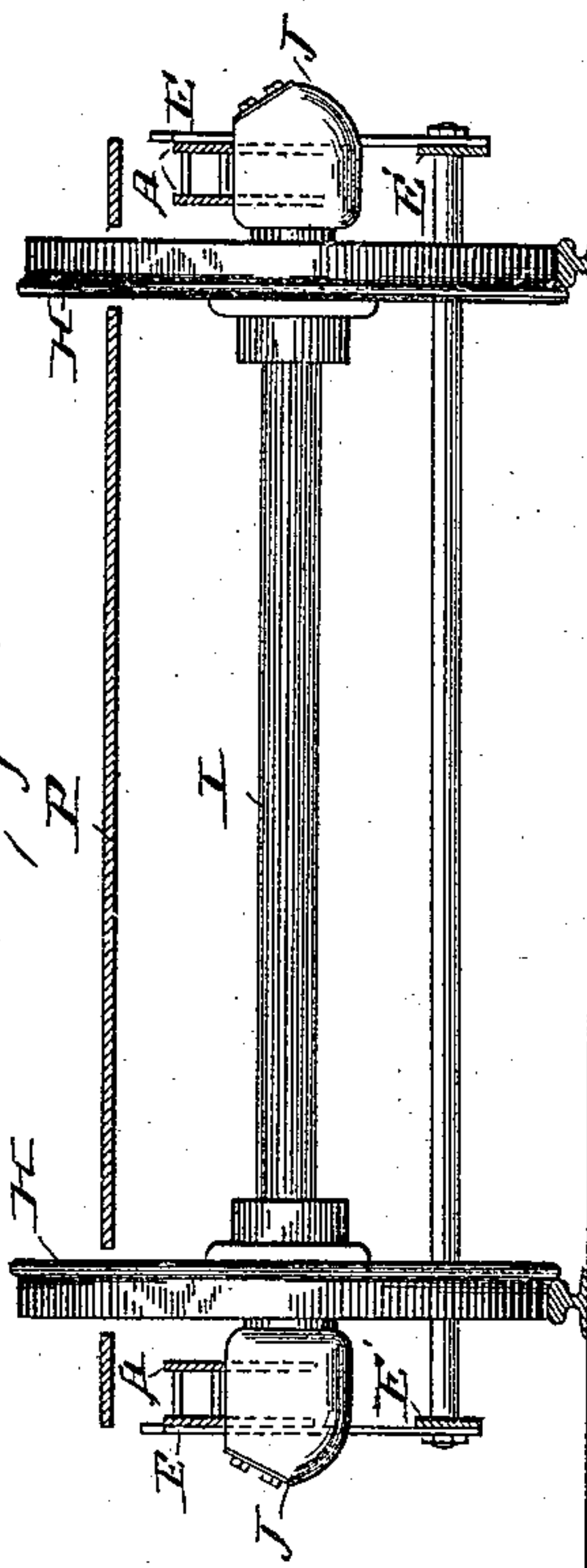
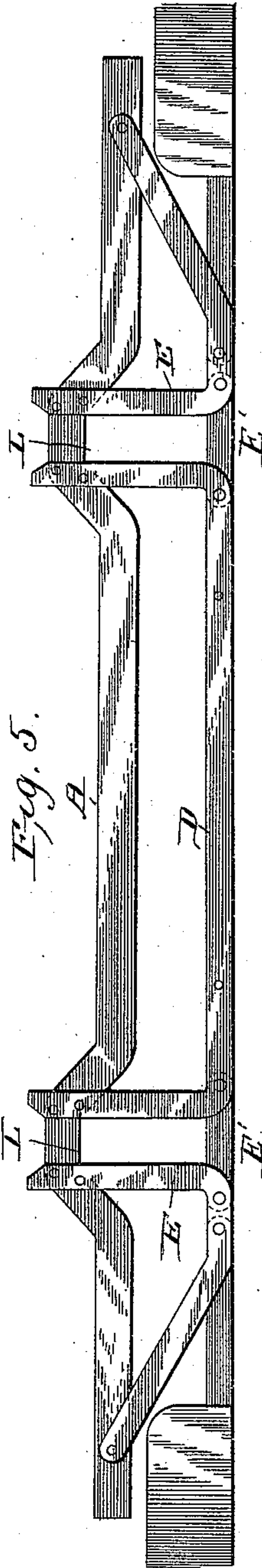


Fig. 5.



WITNESSES:

Louis J. Juchow.
C. P. Howell.

INVENTOR.

Hubert E. Probert.

BY

Hopkins and Atkins
ATTORNEYS

UNITED STATES PATENT OFFICE.

HUBERT F. PROBERT, OF THREE RIVERS, MICHIGAN.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 446,392, dated February 10, 1891.

Application filed August 15, 1890. Serial No. 362,092. (No model.)

To all whom it may concern:

Be it known that I, HUBERT F. PROBERT, of Three Rivers, in the county of St. Joseph, State of Michigan, have invented certain new and useful Improvements in Car-Trucks, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce a truck that is complete in itself, that is adapted to carry interchangeably any sort of body that may be attached to it, that is so constructed as to carry its body evenly and smoothly without jarring or swaying, and is also so constructed that the wheels, boxes, and axles may be conveniently removed from the truck and afterward replaced without detaching the truck from its body.

In the accompanying drawings, Figure 1 is a side elevation of my improved truck; Fig. 2, a top plan view of the same. Fig. 3 is a view of a part of one of the side frame-pieces detached. Fig. 4 is a front view of a pair of truck-wheels, showing the relations to it of parts of my truck. Fig. 5 is a side elevation of the frame-work of one side of my truck detached.

Referring to the letters on the drawings, A indicates the side frame-pieces, each of which preferably consists of a pair of flat metal bars set edgewise and separated by blocks B or the like and bound together by bolts C.

D indicates the lower middle bars, each being preferably made of flat metal, bent at each end at right angles, and bolted at its ends to the outside of the frame-piece A.

E indicates the lower end bars, each being preferably made of flat metal and bent at one end at right angles and at the other end at an oblique angle and bolted at its ends to the outside of one of the frame-pieces A.

E' indicates a pair of bars that are separated from each other by thimbles and are bolted to the inner side of the bars D and E.

F and G indicate transverse stays that pass through the frame-pieces A and the bars D, respectively, and hold the parts rigidly together.

H indicates the wheels of the truck, that are carried inside of the frame by axles I in boxes J. These boxes are carried in the spaces be-

tween the bars D and E, and each is provided with vertical grooves K, that prevent them from sliding laterally. The tops of these boxes enter depressions or pockets L, preferably formed in the frame-pieces A by bending them into suitable shape.

By means of the foregoing construction the frame is carried rigidly upon the top of the boxes, which are confined within fixed limits and are susceptible only of vertical motion. The bars E' lend rigidity to the frame and prevent the boxes from being removed without first separating the bars E' from bars D and E.

It may be added that fenders N may be carried by any suitable means upon the frame at each end.

The above-described truck is a complete thing in itself, and, being carried rigidly upon the axles, is adapted to carry a motor, where one is used, either upon the axles or frame or to supports secured thereto, as may be desired, which are adapted to give it a firm and rigid support.

Upon the top of the main frame above described is carried a body-supporting frame P, of corresponding dimensions with the main frame and preferably made of flat metal.

Q indicates vertically-sliding brackets that are bolted in pairs to the lower side of the body-supporting frame P and are adapted to move smoothly and freely along the outer sides of the adjacent bent ends of the bars D and E, as upon ways, and also to bear laterally on the outer sides of the frame-pieces A. By this means the body-supporting frame is carried securely upon the main frame, but may move freely in a vertical direction upon it.

The brackets shown and described are a convenient means of movably securing the body of the frame to ways upon the main frame; but I do not desire to limit myself to the exact details in this respect. Any sort of ways upon the main frame, and a traveler upon the body-frame are contemplated by my invention.

R indicates springs, preferably made of metal in spiral form; but any kind of spring may be used. They are distributed along the sides of the truck in suitable numbers, and are carried in bearings adapted for them between the body-supporting frame and the

main frame, so as to support the former yieldingly upon the main frame.

Sindicates guide-bolts that secure the body-supporting frame within fixed limits upon the
5 main frame. These bolts pass through the body-supporting frame and the main frame, the springs and their bearings, and are loosely fixed in position, so that the body-supporting
10 frame may move toward the main frame under pressure upon the springs.

As will be readily understood from the foregoing, the body of any desirable form may be secured by any suitable means to its supporting-frame and may be readily detached from
15 it when it is desirable to change one body for another.

By means of the construction above described I am able to distribute the springs between the body-supporting frame and the
20 main frame, so as to attain a very effective equalization of all motions, shocks, and strains that may be imparted through the main frame to the body-supporting frame and the body carried thereon. By this means
25 and the location of the wheels within the frame I am able to prevent the swaying motion incidental to many kinds of street-cars, for instance, and thereby to contribute to the ease and comfort of passengers. At the same
30 time I do this without disturbing the firmness of the parts that carry the car-motor when it carries one.

What I claim is—

1. In a street-car truck, the combination,
35 with its wheels and their axles, of side frames and bars D and E, secured thereto and bent

so as to form spaces for the bearings of the axles, substantially as set forth.

2. In a car-truck, the combination, with its frame, wheels, and axles, of vertical pockets 40 in the frame, adapted to receive the bearings of the axles, and bars detachably secured to the sides of the pockets for closing them, whereby ready means for securing and detaching the frame from the wheels, axles, or
45 bearings is provided, substantially as set forth.

3. In a car-truck, the combination, with the main frame, of a body-frame carried thereon, the main frame being provided with bars D and E, secured to it and bent so as to form 50 ways, and brackets upon the body-supporting frame, adapted to move vertically upon said ways and to otherwise hold the body-supporting frame in fixed relations to the main frame, substantially as set forth. 55

4. In a car-truck, the combination, with the main frame, of a yieldingly-supported body-supporting frame adapted to be carried thereon, the ways upon the main frame, and brackets upon the body-supporting frame, adapted 60 to travel upon the ways and while restraining motion in every other direction to permit free vertical motion of the body-supporting frame upon the main frame, substantially as set forth. 65

In testimony of all which I have hereunto subscribed my name.

HUBERT F. PROBERT.

Witnesses:

E. H. HENDERSON,
M. J. HUSS.