H. A. F. CAMPBELL.

CAR TRUCK.

APPLICATION FILED DEC. 10, 1910.

985,657. Patented Feb. 28, 1911.

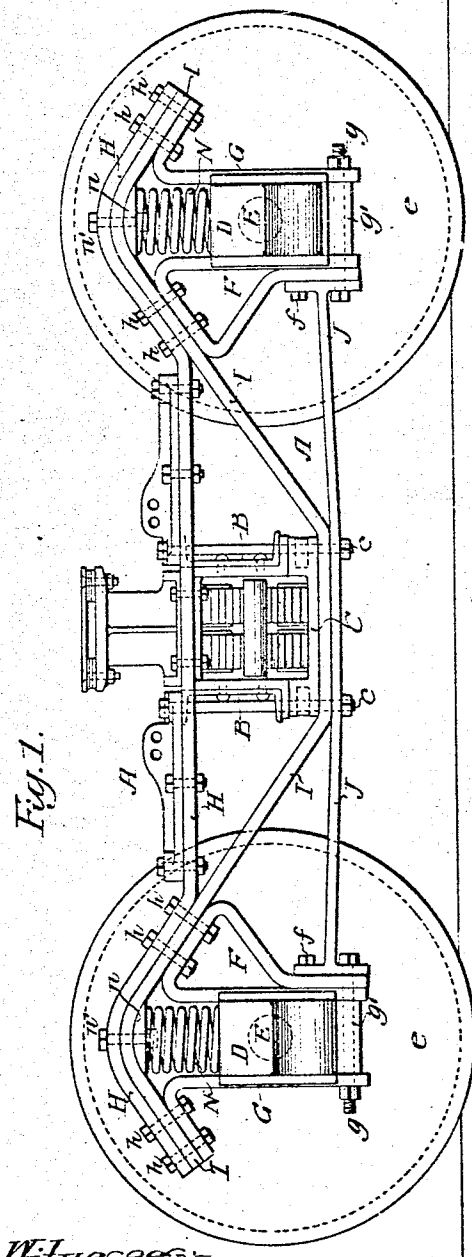

Fig. 1.

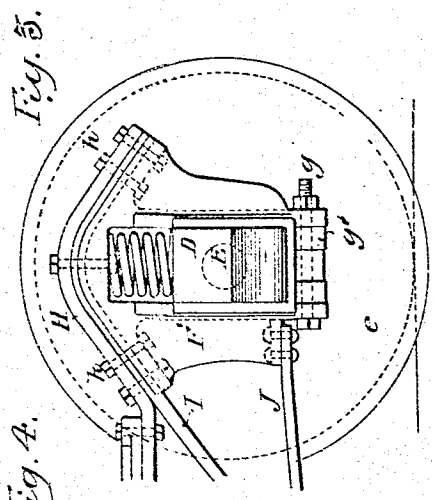

Fig. 5.

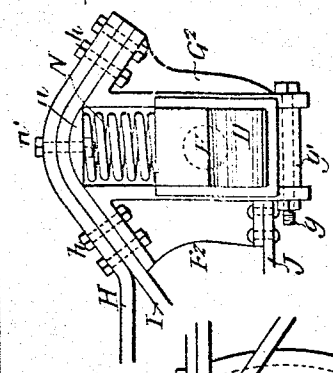

Fig. 4.

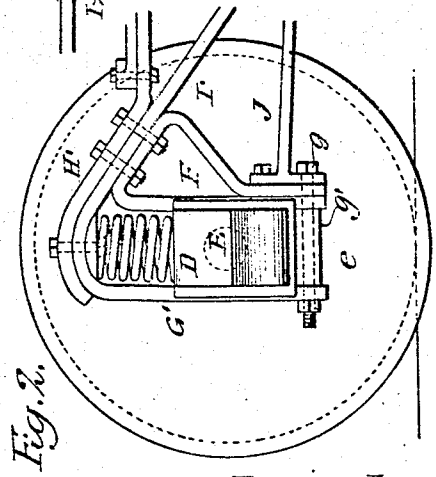

Fig. 3.

Witnesses:-
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UNITED STATES PATENT OFFICE.

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CAR-TRUCK.

985,657. Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed December 10, 1910. Serial No. 596,687.

To all whom it may concern:

Be it known that I, HARRY A. F. CAMPBELL, a citizen of the United States, residing in Cynwyd, Pennsylvania, have invented certain Improvements in Car-Trucks, of which the following is a specification.

My invention relates to certain improvements in the construction of railway trucks especially those adapted for use under passenger cars.

The object of my invention is to make a comparatively light and substantial truck, which will be properly braced and which will allow the car to ride smoothly.

In the accompanying drawings:—Figure 1, is a side view of my improved truck; and Figs. 2, 3 and 4, are views illustrating modifications of the invention.

A is one of the side frames of the truck. The two side frames are identical and are connected by channel beams B—B, in the present instance, and are secured to the center structure or filling piece C. The usual spring plank, elliptical springs and bolster are used and are of the ordinary construction.

D—D are the boxes for the axles E on which are mounted the wheels *e—e*. These boxes are confined laterally in pedestals F and G and the pedestals are connected together at the base by the usual tie bolt *g* on which is mounted a sleeve *g'*.

The truss members of the side frame A of the truck as illustrated in Fig. 1, are made of merchant bar. The upper truss member H extends from one end of the truck to the other and is secured to the upper end of the filling piece C, and is curved upward at each end over the boxes, as clearly illustrated in the drawings.

I is the diagonal truss member, which extends under the filling piece C and diagonally over the boxes D—D. In the present instance the bend of the upper truss member H is on a line with the angle of inclination of the truss member I and the two bars are curved alike over the boxes and are secured together and to the inclined sections of the pedestals F and G by bolts *h—h*. The pedestal F, in fact, is also a truss, and is made in the form of a triangular loop the two ends extending down to the tie bolt *g*. The lower truss member J is secured to the lower portion of the triangular pedestals by bolts *f—f*. This lower truss member also extends under the filling piece and through bolts *c—c* confines the parts together at this point.

In the curved portions of the frame are the spring seats *n* secured to the frame by bolts *n'* and between this bearing plate and the top of the box D is a coiled spring N. By bending the frame in the manner illustrated, I am enabled to place comparatively long springs directly above the boxes, thus doing away with the equalizing beams usually employed on this type of truck when used under passenger cars. Furthermore, by making the truck of the material and in the manner illustrated, I am enabled to make a very light truck, which will be substantial.

It will be noticed that the diagonal truss members I extend from the edge of the center structure C to a point directly above the boxes, materially strengthening the side frame and as the pedestals F are formed to produce a triangular truss, a very strong truck is assured. Moreover, the bolts are all easily accessible so that the truck can be assembled very quickly.

In some instances, I make the truck as illustrated in Fig. 2, in which the diagonal member I' is continued down one side to form the pedestal G'; the upper truss member H' being discontinued slightly beyond a vertical line drawn through the center of the axle and this upper frame may be discontinued at any point desired depending somewhat upon the capacity of the truck.

In Fig. 3, I have illustrated a pedestal F' in the form of casting or forging. This casting or forging has webs which add to its strength and are bolted to the upper truss H and diagonal member I, the heavy web *f'* acting as a truss member.

In Fig. 4, I have shown the two independent pedestals F^2 and G^2 made of cast metal and secured to the truss members of the side frame.

My invention is essentially an improvement on the type of truck known as the arch bar truck, in which a diagonal truss member is used. In this type of truck, when adapted for passenger car service, equalizing beams extending over the boxes and intermediate springs are used between the equalizing beams and the truck frame, so that the weight is taken at a point comparatively near the center of the truck, whereas

in my spring truck the weight is taken by the truck directly above the axles as no equalizing beams or intermediate springs are used, consequently, in order to stiffen the truck, I provide not only the truss of the arch bar type which extends from the center toward each end, but I make each inside pedestal in the form of a truss whether made of a bar bent into triangular shape, as illustrated in Fig. 1, or a casting, as illustrated in Figs. 3 and 4.

I claim:—

1. The combination in a car truck, of a side frame consisting of a central filling piece, an upper truss member, a diagonal truss member and a lower truss member and pedestals, with boxes mounted between the pedestals, the outer ends of the upper truss member and diagonal truss member being bent upward, the pedestals being secured to the bent portions of the said upper and diagonal truss members.

2. The combination in a car truck, of a side frame consisting of a central filling piece, an upper truss member, a diagonal truss member, said diagonal truss member extending under the filling piece, the two truss members being bent at their outer ends, and pedestals secured to said members at their outer ends, with boxes mounted between the pedestals, and spring plates secured to the underside of the diagonal truss member at the point where it is bent directly above the boxes, and a spring mounted between each spring plate and the boxes.

3. The combination in a car truck, of a side frame consisting of a central filling piece, an upper truss member extending over the filling piece, a diagonal truss member extending under the filling piece and uniting with the upper truss member, and pedestals secured to the ends of the diagonal and upper truss members, with boxes mounted between the pedestals, the upper truss member and the diagonal member being bent upward at a point directly above the boxes, and coiled springs mounted between the boxes and the truss members, the inner pedestal being made of a bar bent to form a triangular truss and secured to the upper and diagonal truss members and to the lower truss member.

4. The combination in a car truck of the arch bar type, of a side member consisting of upper, lower and diagonal truss members and a central filling piece, and pedestals at each end for the reception of boxes, the inner pedestal at each end being in the form of a truss, with boxes mounted between the pedestals and springs mounted above the boxes.

5. The combination in a car truck, of a side member consisting of upper, lower, and diagonal truss members and a central filling piece and pedestals at each end, the inner pedestal at each end being in the form of a triangular truss, with boxes and springs mounted between the pedestals.

6. The combination in a car truck, of a side frame having upper and diagonal truss members made of merchant bars and bent to form upwardly projecting portions at each end, pedestals made from merchant bars and secured to the upper and diagonal truss members, each inner pedestal being bent in the form of a triangle to form a truss.

7. The combination in a truck frame bearing for an axle box, of inner and outer pedestals having inclined sections at their upper ends, with a curved top section having inclined portions to which the inclined sections of the pedestals are attached.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HARRY A. F. CAMPBELL.

Witnesses:

AUGUSTUS B. COPPES,

WM A. BARR.