

No. 705,049.

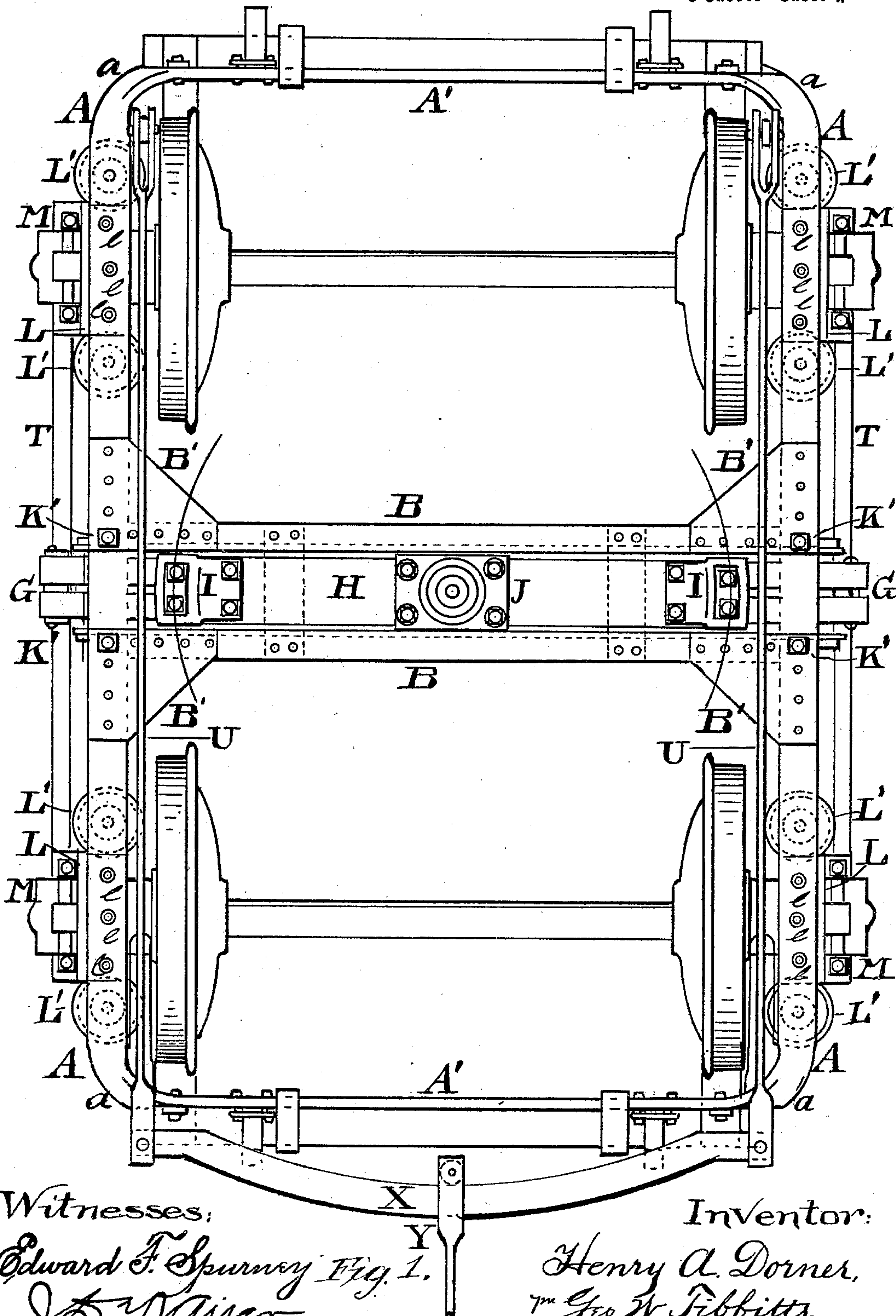
Patented July 22, 1902.

H. A. DORNER.
CAR TRUCK.

(Application filed Nov. 18, 1901.)

(No Model.)

3 Sheets—Sheet 1.



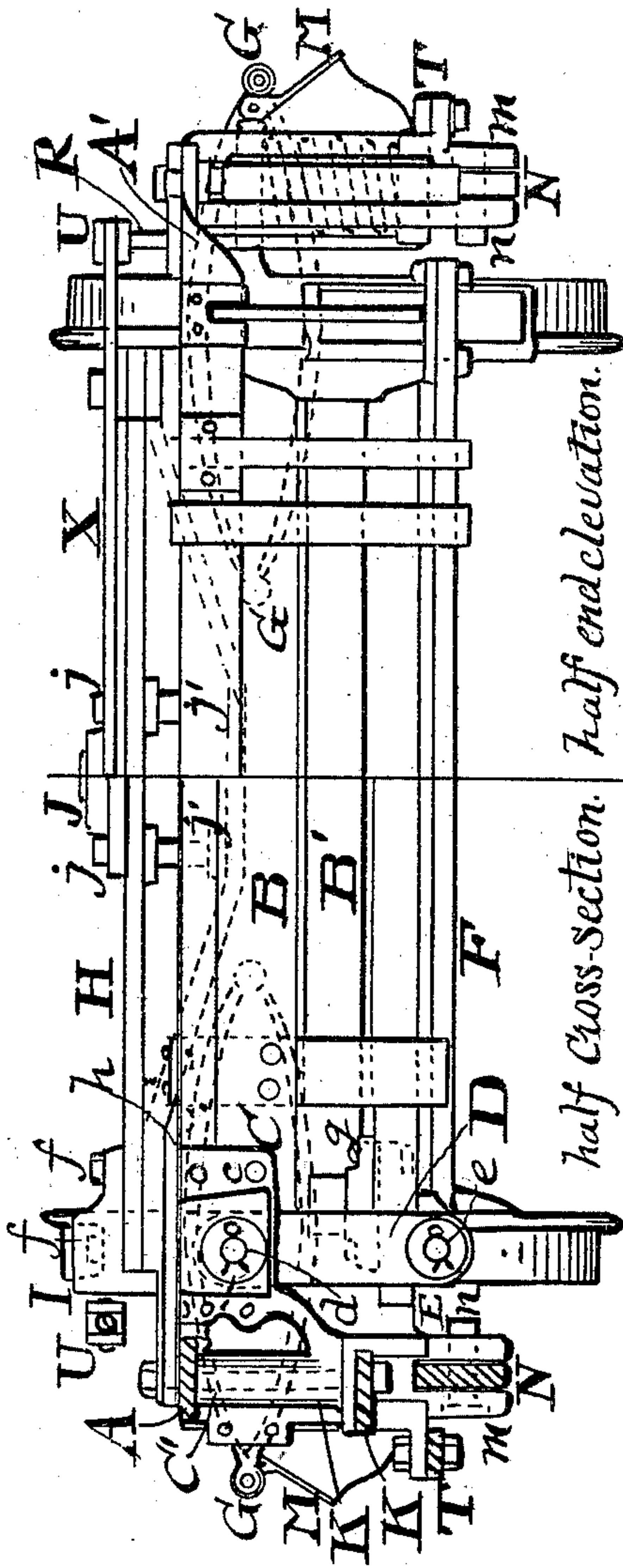
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3 Sheets—Sheet 2.



half cross-section, half end elevation.

Fig. 3.

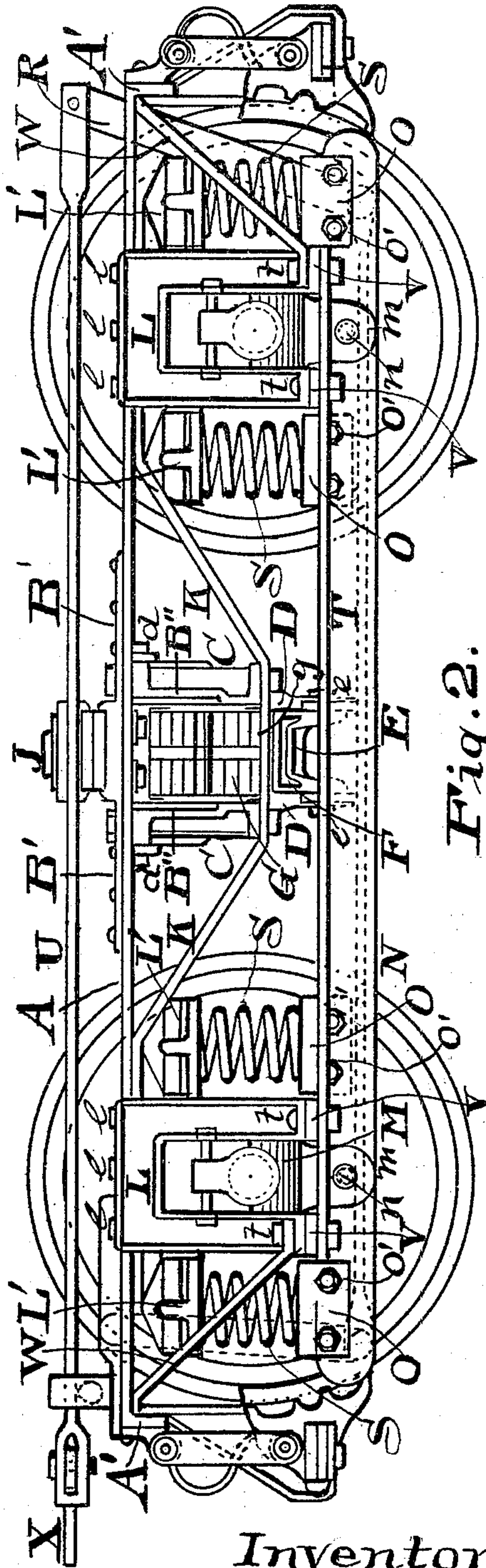


Fig. 2.

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3 Sheets—Sheet 3.

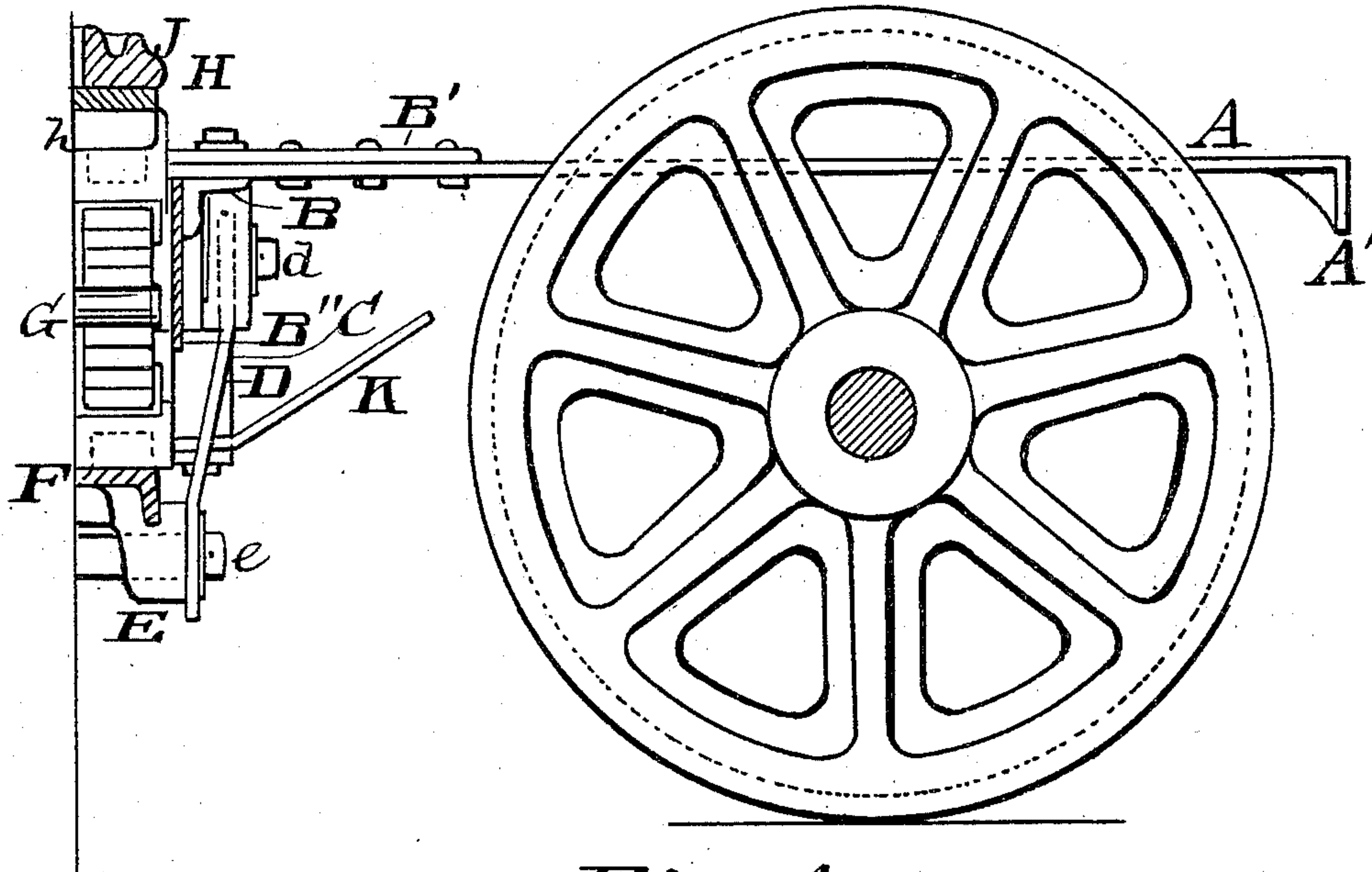


Fig. 4.

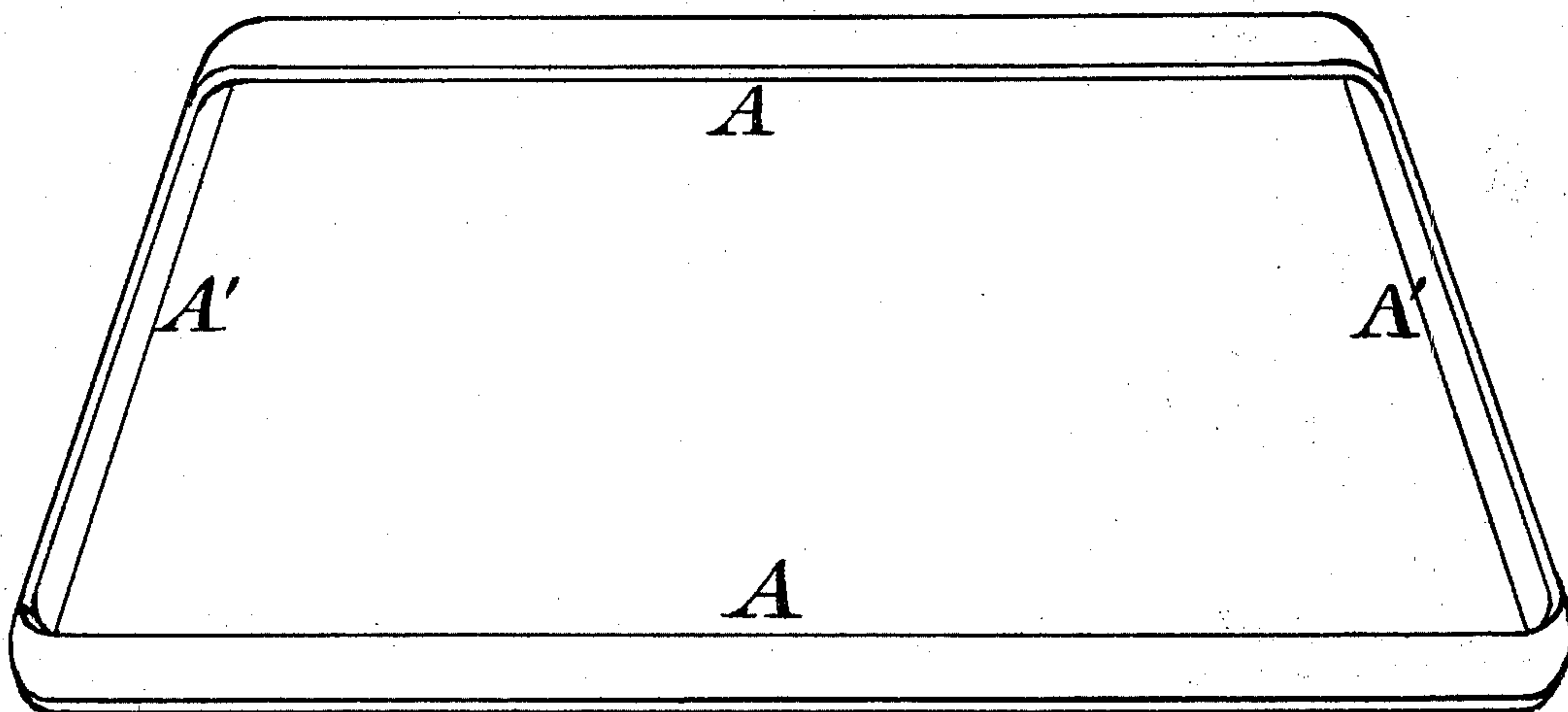


Fig. 5.

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UNITED STATES PATENT OFFICE.

HENRY A. DORNER, OF LOGANSPORT, INDIANA, ASSIGNOR TO THE DORNER TRUCK & FOUNDRY CO., OF LOGANSPORT, INDIANA.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 705,049, dated July 22, 1902.

Application filed November 18, 1901. Serial No. 82,811. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. DORNER, a citizen of the United States of America, and a resident of Logansport, Cass county, State of Indiana, have invented certain new and useful Improvements in Car-Trucks, of which the following is a specification.

This invention relates to car-trucks, and has for its object to improve and strengthen the construction of the truck.

The special feature of this improvement consists in the peculiar construction of the sill-plate or top frame of the truck, which consists in making it of one continuous piece or flat bar, the sides of the frame being flat or horizontal, with the ends turned in a perpendicular plane. The purpose of thus turning the ends of the frame is to make the ends strong and capable of sustaining the weight and strain of the parts of the structure that it is required to support. It is found that the ends of the frames now in use are liable to bend and render the truck useless. This danger and damage my improvement is designed to overcome and obviate.

The invention also consists in other features of construction, substantially as hereinafter described, and pointed out in the claim.

In the accompanying drawings, consisting of three sheets, Figure 1, Sheet 1, is a top or plan view of the truck, showing the ends of the top frame in the perpendicular plane and with the connecting-rods of the brake mechanism located outside of the wheels. Sheet 2: Fig. 2 is a side elevation of the truck. Fig. 3 is an end elevation and a half cross-section of the new truck. Sheet 3: Fig. 4 is a vertical section of a part of the truck, showing the construction of the transom, with the space between it and the axles for providing ample room for the motors. Fig. 5 is a perspective view of the new sill or top frame.

A is the sill or top frame of the truck and is composed of but one piece of flat bar-steel, having its ends welded together to form a continuous rectangular frame having rounded corners. The ends of said frame are twisted near the corners to change the position of said ends into a perpendicular plane to the

sides, as shown at A', Figs. 1 and 5. This makes a plain and simple sill-frame having very strong end bars.

The transom consists of two cross-bars of angle-steel B B, joined to said frame A at the middle part by means of the triangular brace-plates B' B', riveted onto both the bars A and B, forming a stiff and strong joint. B'' B'' are wide cross-plates riveted to the cross-bars B B and depending therefrom. C C are cast-metal brackets secured to the said bars B B and plates B'' B'' by means of rivets c c. D D are strong links suspended from the brackets C C by large bolts d d. The lower ends of said links are connected to blocks E E by large bolts e e. The brackets C C have a vertical tubular side projection C'. The upper ends of said tubular projections abut against the under side of the side-bars A A, and their lower ends rest upon the arch brace-bars K K. Large bolts K' pass through the plates B', the frame-bars A, the tubular projections C', and the arch-bars K, thus making a strong support for the springs G G and the bolster.

F is a channel-bar extending across the frame A, having its ends resting upon and supported by the blocks E E and forms the lower cross-bar of the transom.

G G are elliptic springs supported in the seats g g on the transom cross-bar F.

H is a top or bolster cross-bar having its ends resting upon and secured to the spring cap-blocks h h on the said springs.

I I are rub-blocks secured on the ends of the bolster-bar H and cap-blocks h h by the bolts f f.

J is a center turning-plate on the bolster H. The bolster-bar H is strengthened by the truss-bar H', secured at its ends between the ends of the bolster-bar and the spring cap-blocks h h by the bolts f f. The bolts j j, which secure the center plate J to the bar H, pass through sleeves j' j', put between the bolster-bar H and the truss-bar H'.

L L are pedestals, provided on each side with heavy projections L' L', which form the upper bearings for the coil-springs S S. The pedestals are secured to the sill-frame A by the bolts l l l. The ends of the arch-bars K K

are also secured between the tops of the pedestals and the frame A by the same bolts *l l l*.

M M are the axle journal-boxes, on the under sides of which are provided the heavy lugs *m m*.

N N are heavy equalizing-bars, having eyes near their ends connecting the two axle-boxes on each side of the truck by inserting them in the lugs *m m* and securing them therein by bolts *n n*.

O O are the lower spring-seats, secured to the equalizing-bars *N N* by the bolts *O'*.

T T are tie-bars connecting the lower ends of the pedestals at the sides of the truck and secured thereto by bolts *t t* through the lugs *v v* on the lower ends of the pedestals.

W W are brace-bars connecting the lower ends of the pedestals with the corners of the sill-frame A.

U U are the long connecting-rods for operating the brakes. They, together with the brake-levers *R R* and the lower connecting-rods connecting the brake-beams, are located outside of the car-wheels. The pulling ends of the long connecting-rods *U U* are joined to a curved cross-beam X, and Y is a movable connecting-rod connecting said beam X with the brake-operating mechanism. The object of the curved beam X and the movable connecting-rod Y is to accommodate the pull on said beam as a car is rounding a curved track. The object of this construction of the brake-levers and their connections is to remove them

from between the car-wheels to provide ample room for placing the motors.

Having described my invention, what I claim is—

The improved car-truck consisting of the sill-frame A consisting of a continuous flat bar having rounded corners and perpendicular end bars A', in combination with the angle-piece cross-bars B B and plates B'' B'' secured to said cross-bars B B, the gusset-plates B' B' secured to the frame-bars A A and cross-bars B B, the brackets C C secured to the cross-bars B B and the gusset-plates B' B' and plates B'' B'', the arch brace-bars K K extending between the pedestals; the tubular projections C' on the brackets C C, bolts K' through the plates B' frame A, tubular projections and the arch-bars K, binding them together, the blocks E E supported on the arch-bars K K, the links D D suspended from the brackets C C by the bolts *d d*, and connected to the blocks E E by the bolts *e e*, and the lower cross-bar F supported on the blocks E E, the springs G G supported on the cross-bar F, and the bolster H supported on the springs G G, constructed and combined substantially as described.

Signed by me at Cleveland, Ohio, this 17th day of October, 1901.

HENRY A. DORNER.

Witnesses:

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GEO. W. TIBBITTS.