

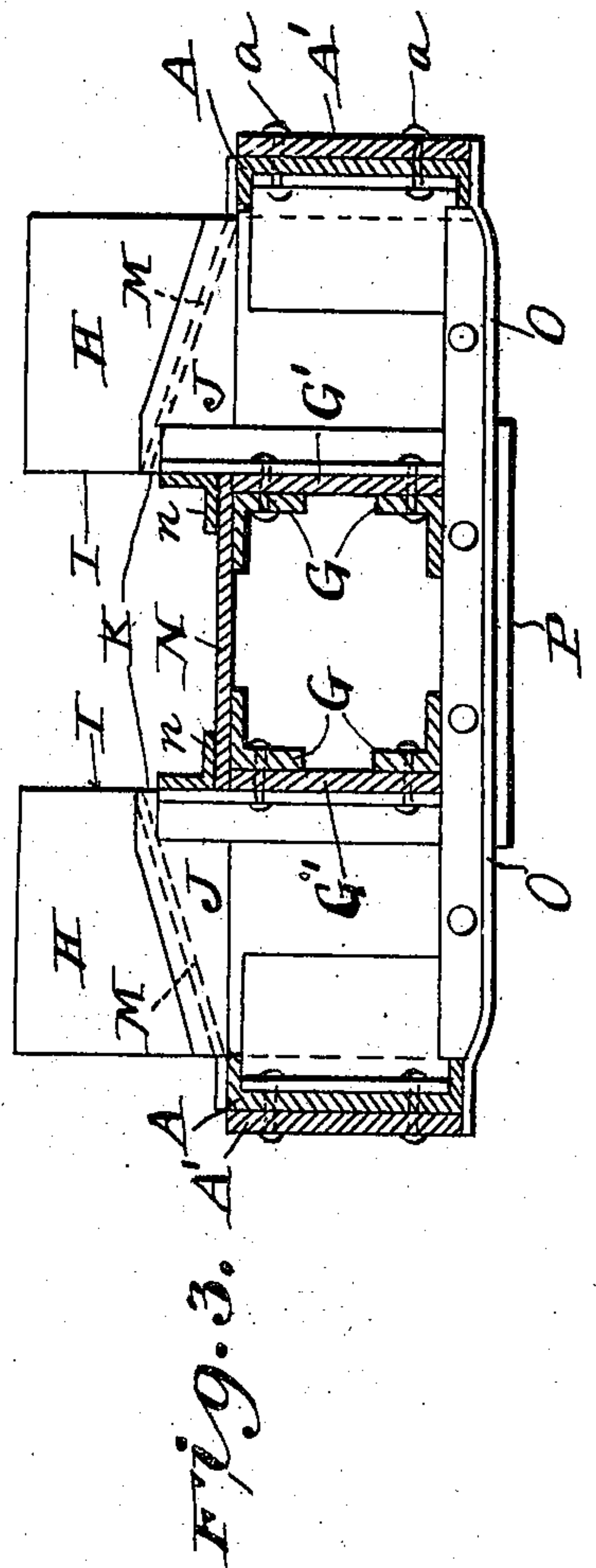
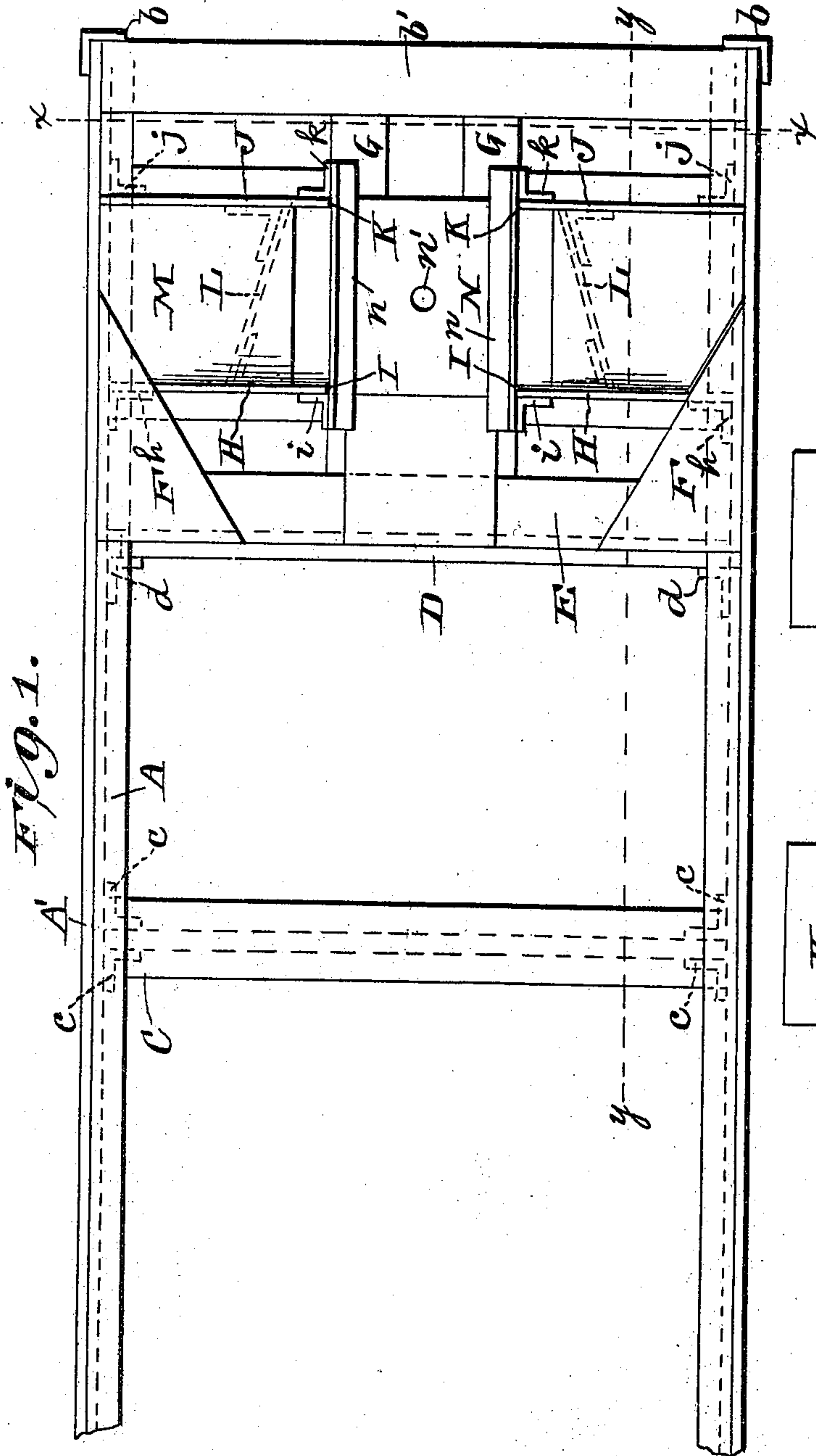
No. 896,082.

PATENTED AUG. 18, 1908.

T. F. BURKE.
FREIGHT CAR SUPPORTING FRAME.

APPLICATION FILED JULY 27, 1906.

2 SHEETS—SHEET 1.



Witnesses
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Fig. 2.

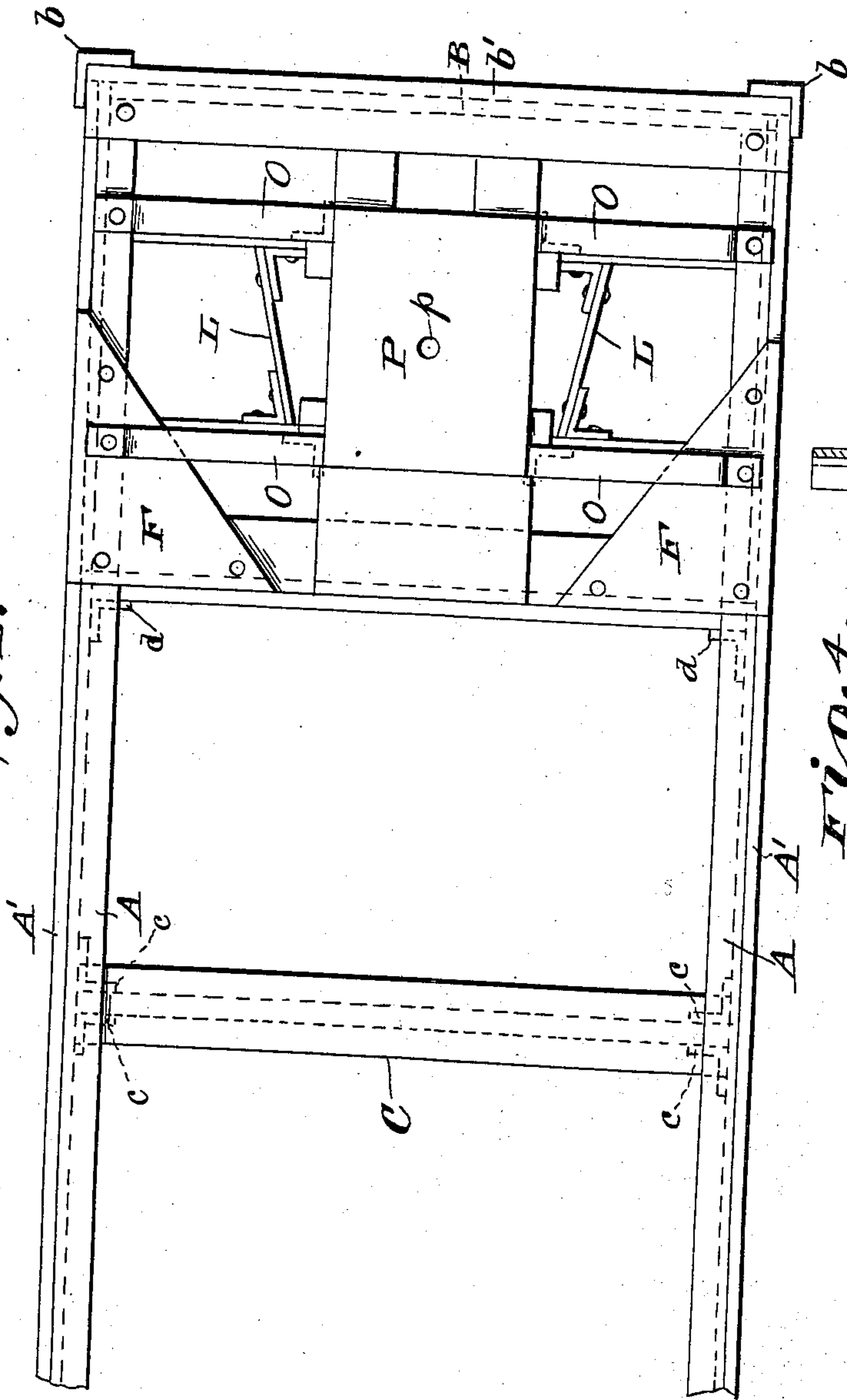
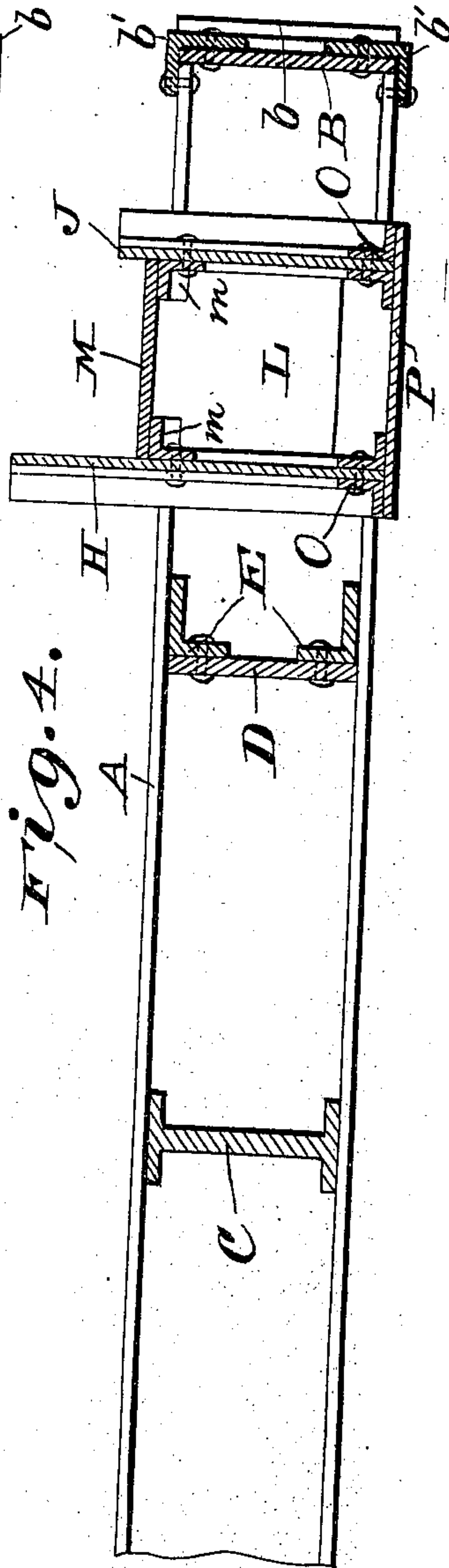


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS F. BURKE, OF NEW CASTLE, PENNSYLVANIA.

FREIGHT-CAR-SUPPORTING FRAME.

No. 896,082.

Specification of Letters Patent.

Patented Aug. 18, 1908.

Application filed July 27, 1906. Serial No. 328,112.

To all whom it may concern:

Be it known that I, THOMAS F. BURKE, a citizen of the United States, residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Freight-Car-Supporting Frames, of which the following is a specification.

My invention relates to the supporting frames of freight cars and especially to what are known as gondola cars for transporting coal, broken stone, etc., where the load is very great, the object being to construct the frame of reinforced channel-beams extending longitudinally of the car and cross-beams so positioned and braced as to give the maximum support compared with the weight of material used in its construction.

The construction and advantages of my invention will be explained in detail hereinafter and illustrated in the accompanying drawings in which—

Figure 1 is a top plan view of my improved frame, Fig. 2, a bottom plan view, Fig. 3, a cross sectional view on the line $x-x$ of Fig. 1, and Fig. 4, a longitudinal sectional view of one of the end fragments of the frame on the line $y-y$.

In the drawings similar reference characters indicate corresponding parts throughout the several views. The side sills of my improved car frame consists of channel beams A having secured to their flat sides a flat plate of metal A' of the same width and length as the beams A, the object of this construction being to reinforce the edgewise strength of the commercial channel beams without losing the rigidity imparted by the channel-beam flanges. The beams A and plates A' may be secured together by means of bolts or rivets a or other suitable means.

The ends of the sills have secured thereto plates B by means of angle plates b and angle beams b' . The middle of the sills are braced and strengthened by means of cross-beam C of the I-beam type secured in the channels of beams A by means of angle plates c . Intermediate of the end plates B and cross-beam C are cross-braces consisting of beams D secured in the channels of beams A by means of angle plates d and having secured to each edge an angle beam E. F indicates triangular plates secured to the plates A' and to angle beams E.

G G indicate angle beams reinforced by plates G' G' connecting each end plate B

and cross-brace beam D, the flanges of the angle beams G G being turned towards one another.

H H indicate plates secured to channel beams A by means of angle plates h and having their middle portions cut away as shown at I to receive beams G and plates G' and secured thereto by means of angle plates i , the upper edges of the plates H being extended upwardly an appreciable distance to support the slanting floor of the car body (not shown).

J J represent other plates secured to channel beams A by means of angle plates j , these plates being also cut away as shown at K to receive beams G and plates G' and are secured to plates G by means of angle plates k .

L indicates Z-shaped braces secured to plates H and J and M plates secured to the top flange of each channel beam A and to the inner sides of plates H and J by means of angle plates m .

N indicates plates secured to the top flanges of beams G and n angle plates secured over said plates N and to the exposed flanges of angle plates i and k .

O indicates angle cross-beams secured to the lower edges of plates H and J and having the outer ends of their vertical flanges cut away and the horizontal flange ends bent upwardly and secured to the lower flanges of beams A.

P indicates a plate secured under the middle portions of beams O. Plates N and P are provided with holes n' and p to receive the king pins (not shown) to attach the wheel trucks thereto.

It will be apparent that the body bolster comprising plates H and J and their connections including plates M and cross beams O form very efficient, braced bolsters which support the load with a minimum expenditure of material.

Having thus described my invention what I claim is—

1. In a supporting frame for freight cars, side sills extending the full length of the frame, plates connecting the ends of said sills, angle beams secured to said plates and the sills, cross-braces connecting said sills, longitudinal beams connecting the end plates and braces, and bolster plates secured to said sills and longitudinal beams, substantially as shown and described.

2. In a supporting frame for freight cars, side sills made of reinforced channel beams extending the full length of the frame, plates

connecting the ends of said sills, cross-braces connecting said sills intermediate of their ends, longitudinal, composite channel beams connecting the end plates and cross-braces, 5 and bolster plates secured to said sills and longitudinal, composite channel beams, substantially as shown and described.

3. In a supporting frame for freight cars, side sills made of channel beams reinforced 10 by plates secured to the back thereof, plates connecting the ends of said sills, angle beams secured to said plates and to the flanges of said sills, a cross-brace connecting the sills between each end and the middle thereof, 15 longitudinal, composite channel beams connecting each cross-brace and the adjacent end plate, plates connecting the sills having their middle portions cut away to receive said longitudinal, composite channel beams, angle 20 iron truss beams secured to the lower edges of said plates and to the side sills, and plates secured to the top of the longitudinal, composite channel beams and to the under side of the angle-iron truss beams and having 25 ing holes therein to receive the truck king pin, substantially as shown and described.

4. In a supporting frame for freight cars, side sills made of channel beams reinforced

by plates secured to the back thereof, plates 30 connecting the ends of said sills, angle beams secured to said plates and to the flanges of said sills, a cross-brace connecting the sills between each end and the middle thereof, longitudinal, composite channel beams connecting each cross-brace and the adjacent 35 end plate, plates connecting the sills having their middle portions cut away to receive said longitudinal, composite channel beams, a horizontal plate secured to each sill and to the plates aforesaid, the plates being secured 40 and braced by means of angle plates, truss beams made of angle-beams secured to the lower edge of said plates and to the side sills, a plate secured to said longitudinal, composite channel beams having a hole therein, and 45 another plate secured to the angle-iron truss beams and having a hole therein in alinement with the hole in above-named plate, substantially as shown and described.

In testimony whereof I hereto affix my 50 signature in the presence of two witnesses.

THOMAS F. BURKE.

Witnesses:

H. K. GREGORY,
EDWIN K. LOGAN.