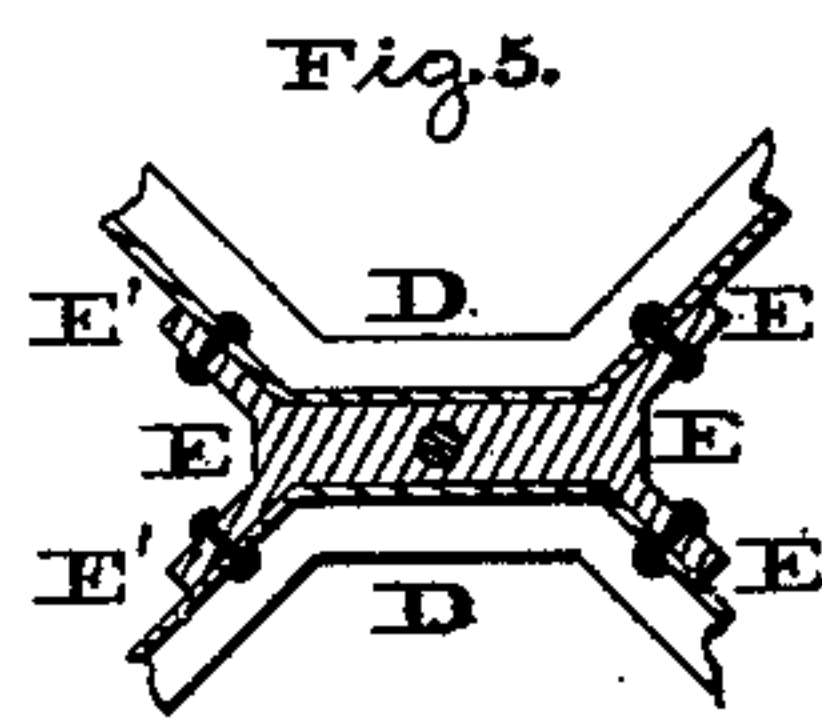
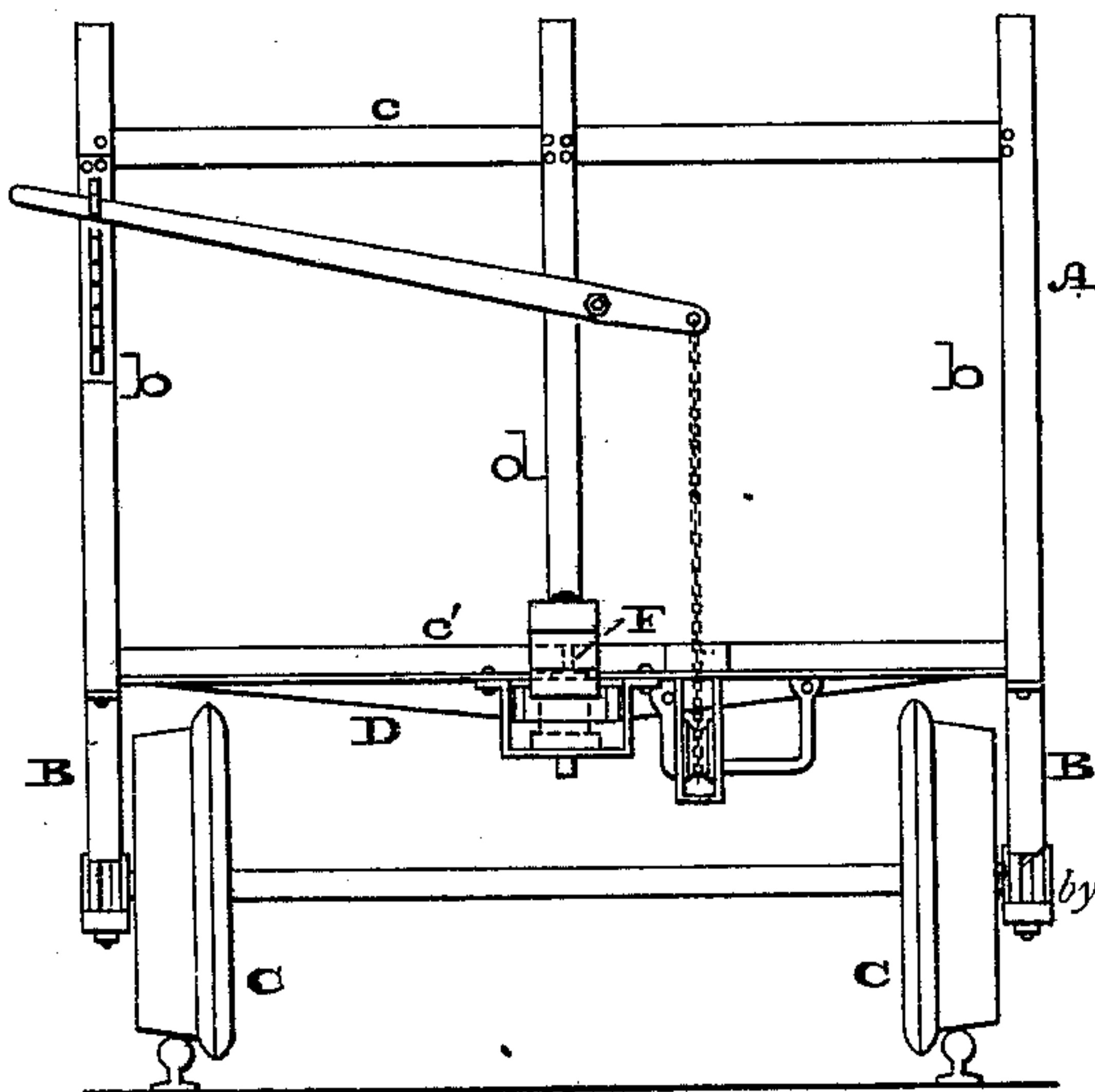
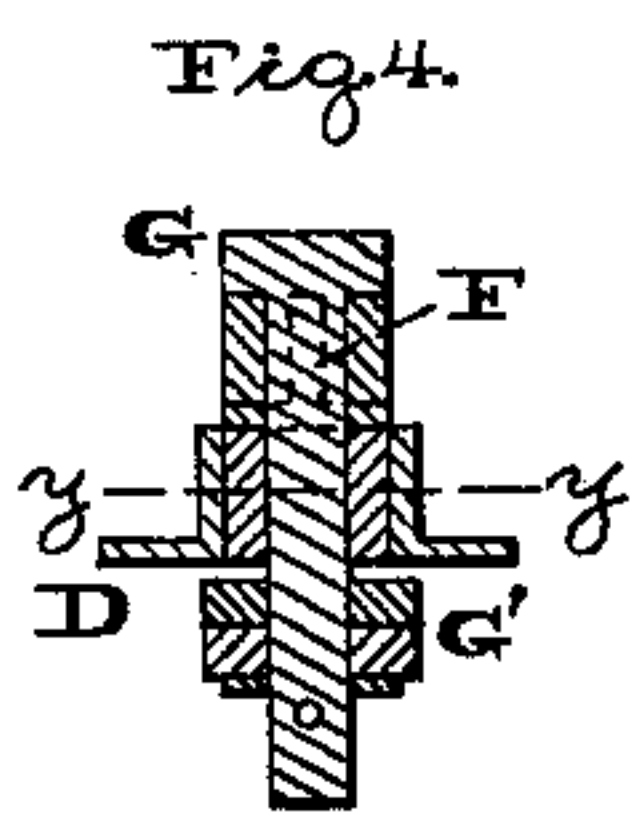
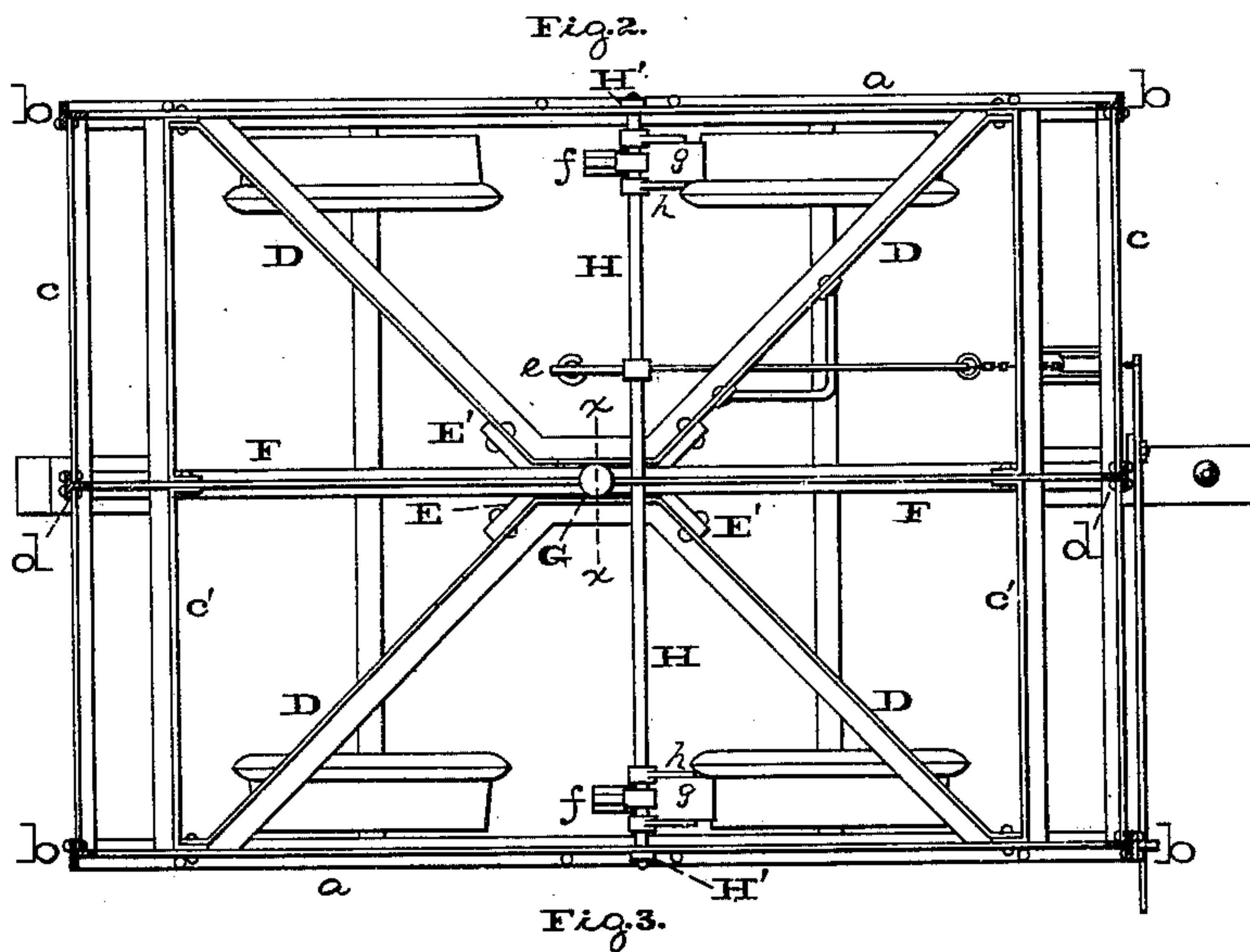
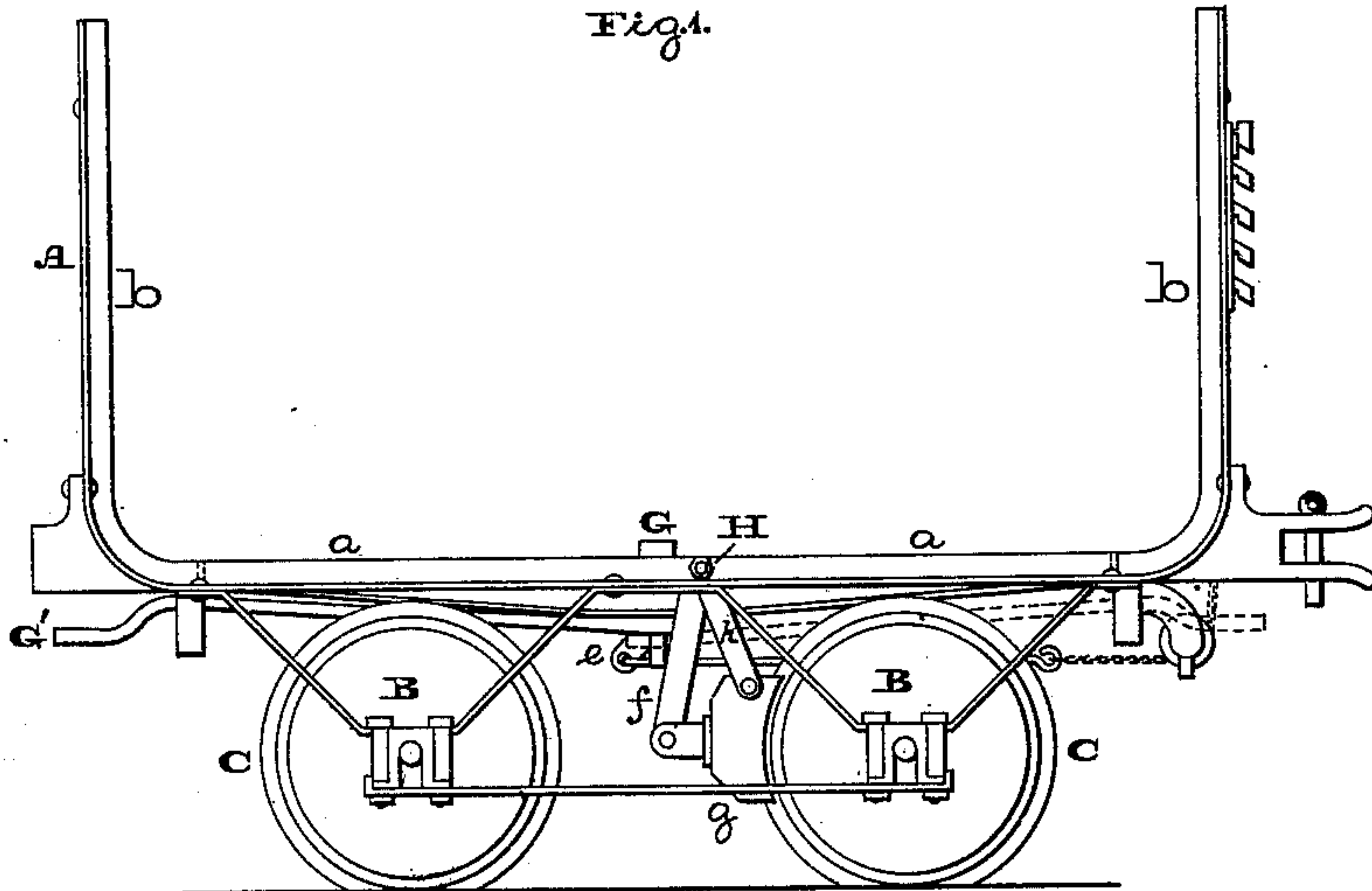


T. E. ALLISON.
Iron Railway Car.

No. 218,361.

Patented Aug. 12, 1879.



Witnesses:

Do. P. Grant,
W. F. Kircher

Inventor:

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UNITED STATES PATENT OFFICE.

THOMAS E. ALLISON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN IRON RAILWAY-CARS.

Specification forming part of Letters Patent No. **218,361**, dated August 12, 1879; application filed March 17, 1879.

To all whom it may concern:

Be it known that I, T. ELWOOD ALLISON, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Portable Iron Cars, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of the car, embodying my invention. Fig. 2 is a top or plan view thereof. Fig. 3 is an end view. Fig. 4 is a vertical section of a portion in line *x x*, Fig. 2. Fig. 5 is a horizontal section in line *y y*, Fig. 4.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in diagonally-extending braces from the center of an iron car to the corners thereof, and in a brace-bar extending from side to side of the car through the sills, and in a central block in combination with the diagonal braces.

Referring to the drawings, A represents the body of the car, B the truss-hangers, and C the wheels. The body A is formed of the sills *a*, corner uprights *b b*, transverse or horizontal bars or rails *c c'*, and the vertical bars or rails *d d*, which are connected to the transverse bars *c c'*. The sills *a*, corner-pieces *b*, and vertical bars *d* are formed of T iron or rails, and the bars *c c'* are formed of angle-iron, the connected parts being firmly riveted, bolted, or otherwise secured. The corner-pieces form continuations of the sills or are riveted, bolted, or otherwise secured thereto, and the end structures of the body consist of the corner-pieces *b b*, transverse bars *c c'*, and vertical-bars *d*.

D D represent braces, each of which, formed of angle-iron, extends diagonally from one corner of the body of the car to the center thereof, and thence to the opposite corner. The ends of said braces are riveted, bolted, or otherwise secured to the side pieces or sills and bars *c' c'*, if desired, and their inner ends or middle portions, if continuous, are riveted, bolted, or otherwise secured to a metallic block, E, arranged centrally at the bottom of the car, and formed at both ends with bifurcations E', which conform to the diagonal por-

tions of the braces D, and provide strong attachments and bracings therefor. By means of the braces D and central block, E, the bottom of the body is vastly strengthened and kept square.

Extending longitudinally at the center of the body of the car is a bar, F, of T-iron, which is riveted, bolted, or otherwise secured to the transverse bars *c'*, and its ends may support the bumper-blocks, said bar likewise resting on the central block, E, and imparting strength to the bottom of the car. The bars *d* may be continuations of the bar F. A bolt, G, is passed vertically through the bar F and central block, E, and forms a firm connection for the draw-bar G', by which the car is moved.

H represents a transversely-arranged metallic rod, which is passed through the vertical limb of the central bar, F, and its ends have journaled connections with the vertical limbs of the sides or sills of the body, and are secured by nuts H' to said sides or sills. To said rod there are rigidly connected an arm or crank, *e*, attached to the chain of the brake-lever, and arms or cranks *f*, attached to the brake-shoes *g*, and from the same are also suspended the hangers of the brake-shoes. The bar F provides for the rod H a central bearing, which is strong and serviceable, and said rod H also serves as a binder for the sides of the body, thus increasing the strength of the body.

It will be seen that I produce a car-body of skeleton form, and one that is admirably adapted for transportation of cane, lumber, &c., and loose articles in bulk, and for use on portable railways, plantation purposes, &c.

A car-body thus constructed is inexpensive, light, and easily produced, and possesses great strength, as is evident from the nature of the metal employed—viz., T-shaped and angle irons—and their manner of disposal and connection.

It is also evident that the parts are unaffected by heat or cold, and they will not warp. Moreover, the body is non-combustible, as are also the other parts of the car, and in the event of collisions the liability of complete breakage, splintering, &c., is materially diminished.

Furthermore, the several bars, rails, or irons may be transported to the place of use, and there set up as required.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The brace-rods *D D*, extending on each side from corner to center, and then continuously to the other corner, in combination with the center block, *E*, having the flanges *E'* to meet and secure the brace-bars, substantially as and for the purpose set forth.

2. The bar *H*, passing through the vertical

limbs of the T-shaped sills *a a* and bar *F*, and bearing the arms *e*, *f*, and *h*, in combination with the brake-shoes *g*, as and for the purpose set forth.

3. The bar *H*, passing through the vertical limbs of the T-shaped sills *a a* and the bar *F*, for the purpose of forming an additional central brace, as shown and described.

T. E. ALLISON.

Witnesses:

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