

GEORGE E. BROWN & WILLIAM BELL.

Improvement in Railway Car Trucks.

No. 120,935.

Patented Nov. 14, 1871.

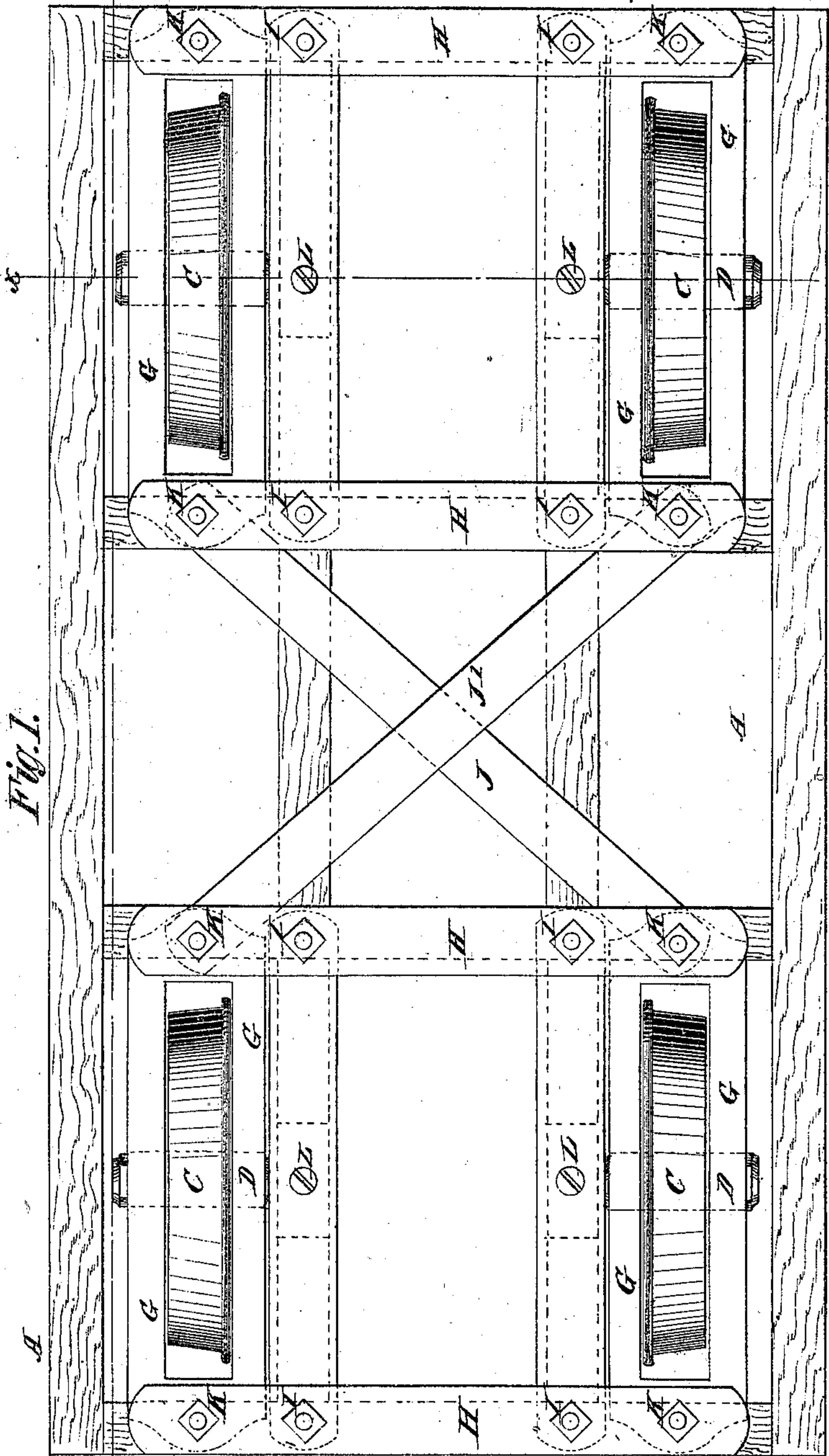


Fig. 1.

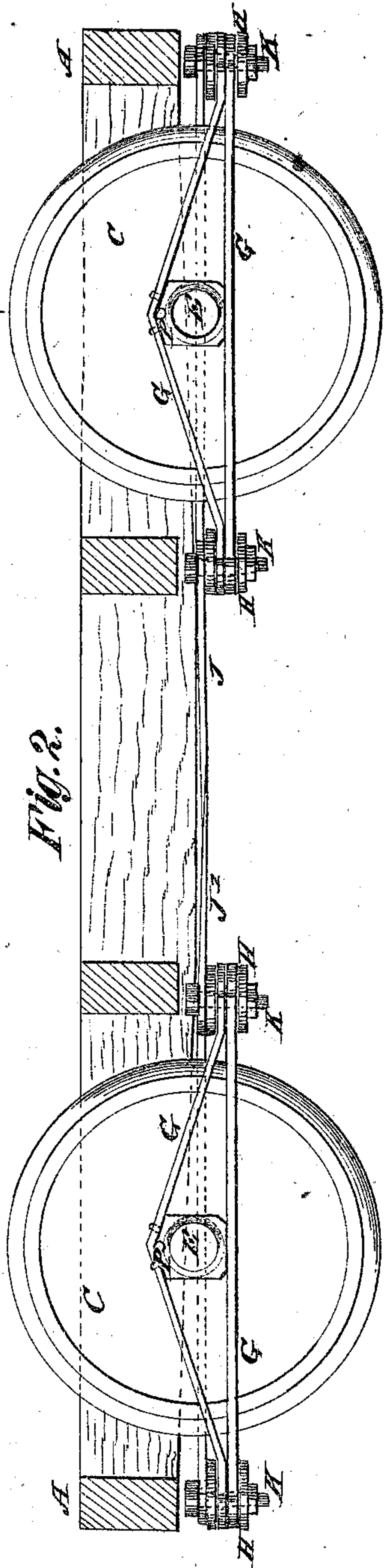


Fig. 2.

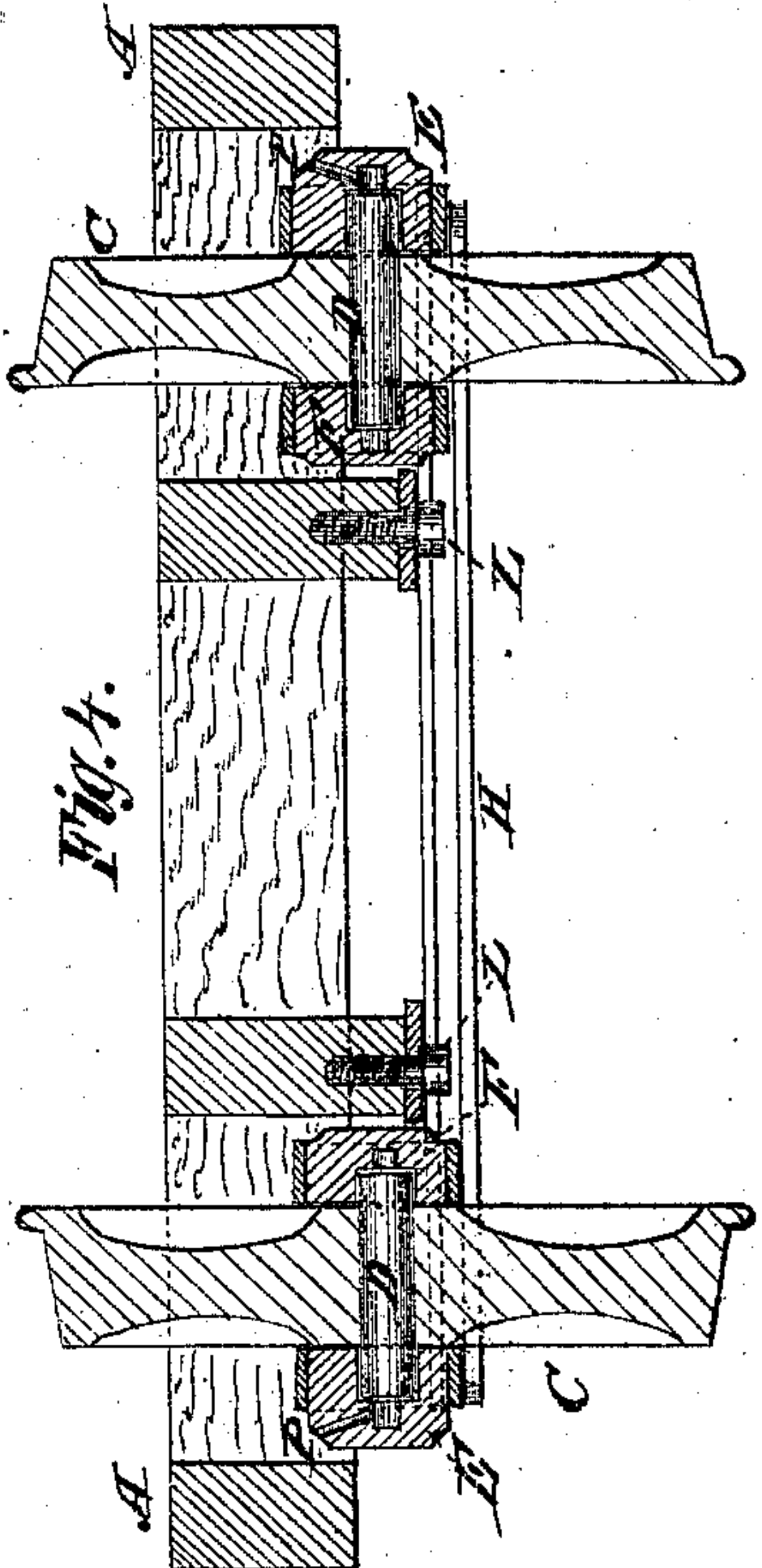
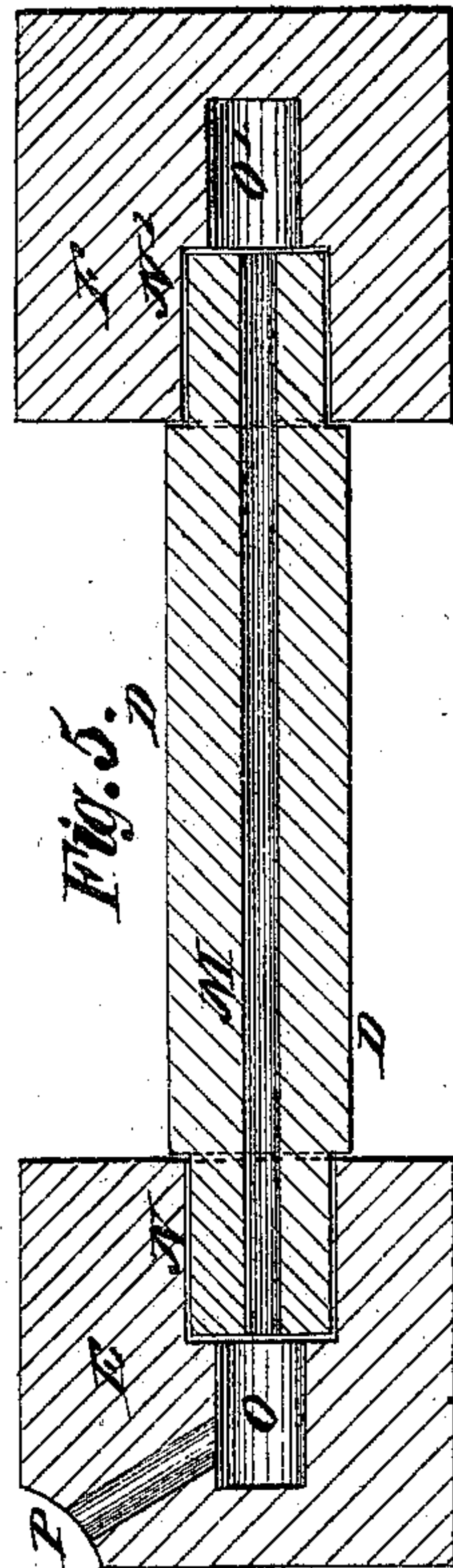
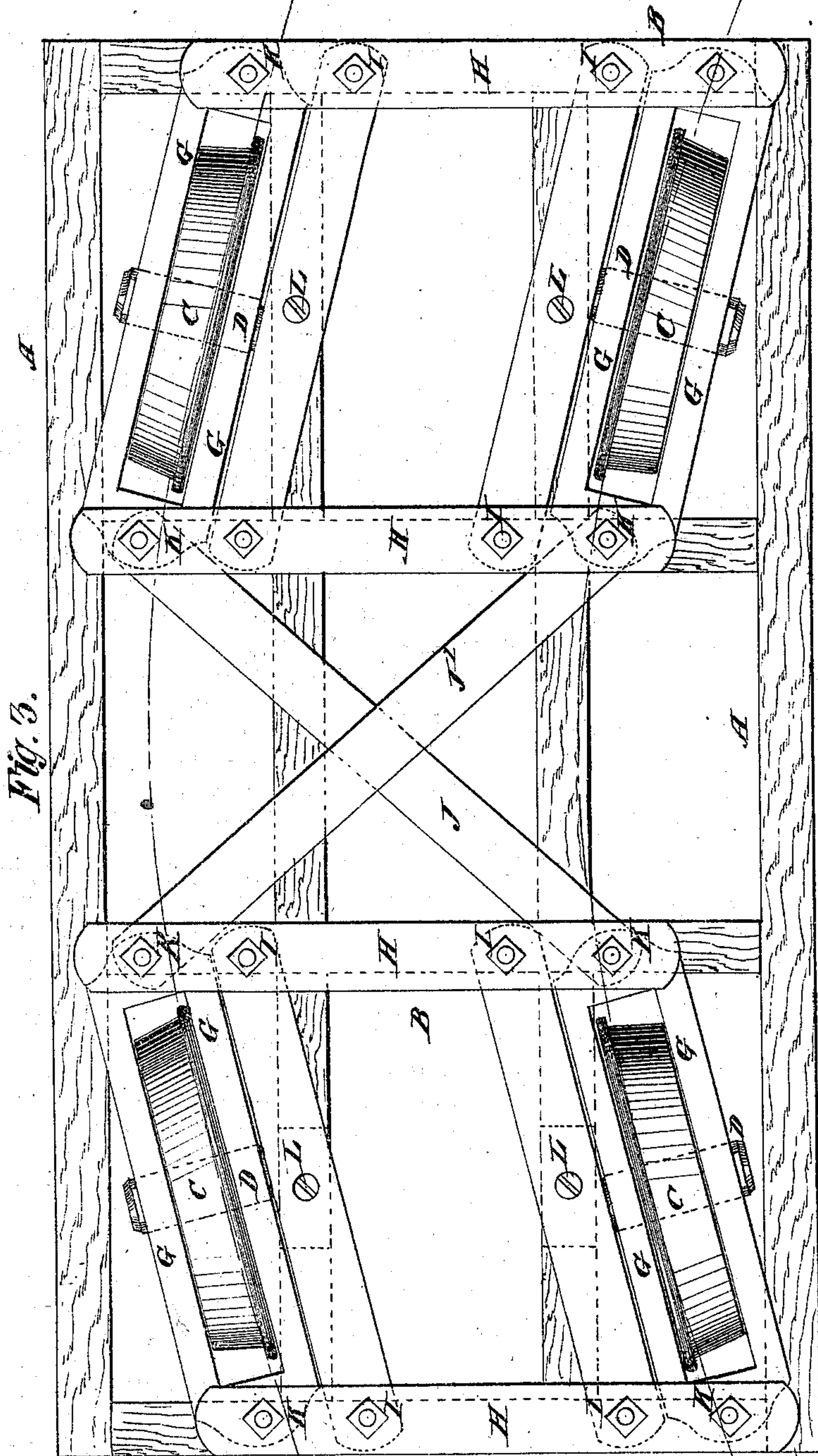
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2 Sheets--Sheet 2.
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 Improvement in Railway Car Trucks.
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UNITED STATES PATENT OFFICE.

GEORGE E. BROWN, OF SOUTH RIVER, AND WILLIAM BELL, OF PERTH AMBOY,
NEW JERSEY.

IMPROVEMENT IN RAILWAY CAR-TRUCKS.

Specification forming part of Letters Patent No. 120,935, dated November 14, 1871.

To all whom it may concern:

Be it known that we, GEORGE E. BROWN, of South River, and WILLIAM BELL, of Perth Amboy, in the State of New Jersey, have invented certain new and useful Improvements in Car-Trucks; and do hereby declare that the following is a full and correct description of the same.

These improvements consist: First, in a construction of truck-frame, whereby each wheel therein is rendered to some extent independent of its opposite wheel, but preserving the relation between them, so that in moving over curves each wheel shall be perfectly normal to the rail upon which it moves, and easy in its action thereon. Second, in a construction of axle that will permit of the bearings of each wheel being oiled from the outside of the truck.

In the drawing which serves to illustrate these improvements in a car-truck, Figure 1 is a bottom view of the truck. Fig. 2 is a longitudinal section on the line *y y* of Fig. 1. Fig. 3 is a bottom view, showing the position of the wheels on a curve. Fig. 4 is a cross-section taken on the line *x x*, Fig. 1. Fig. 5 is a longitudinal central section of the bottom axle and axle-boxes of one wheel.

A is the car-body. B is the truck. C C, &c., are the wheels. Each wheel has an axle, D, independent of its opposite wheel. The bearings of each axle are in axle-boxes E F, one of said axle-boxes E being situated upon the frame G exterior to the wheel, and the other upon the same frame on the opposite side of the wheel. The frame containing each pair of wheels is connected with the frame H at the points I I' I'', &c., in such a manner that such frame will adjust itself through the change of direction of the periphery of the wheels on the curve, as illustrated in Fig. 3. The frames of each pair of wheels are again connected with each other by means of the cross-bars J J' at the points K K, &c., which, by reason of such connection, permits of the retention and uniform change of the frames of both pairs of wheels as the wheels move from the straight track onto curves, and vice versa. The car-body is attached to and supported upon this truck at the points I I, &c., within the wheels at or near the central line of each pair of wheels.

These points of attachment and support may be outside of the car-wheels, but should be in the same relative position to the central line of the car-wheels. The base-line of the car-body may rest near or within the plane of the centers of the wheels, or may be suspended to some distance below it; thus the bottom of the car is brought nearer the rail, a desideratum with respect to narrow-gauge railroads. Each axle is made hollow or is bored through longitudinally, as at M, and back of the recess N in each axle-box, retaining the end of the axle, is made another and smaller recess, O, to receive and distribute the oil on the bearings. The front axle-box has a tube or orifice, P, leading to this oil-receiver, for the purpose of introducing the oil to the bearings. Both front and back axle-boxes may be constructed in the same manner in this respect, if desired. By reason of such hollow-bored axle oiling at one end is sufficient to keep both journals well lubricated. The axle being short and having a single wheel only on it, it is relieved of the strains it is subjected to in the ordinary construction when running over curves. Again, all the wheels being normal to the curves, they adapt themselves thereto with the same facility as upon a straight track.

These improvements are applicable to broad and narrow-gauge railroads and to city-cars.

I claim—

1. The construction a of car-truck frame, each wheel thereof contained within a frame, and each of said frames being pivoted to the main frame of the truck, substantially as described, so that said truck shall automatically adjust itself through the change of direction of the wheels on a curve.

2. The hollow car-axle, arranged in connection with an orifice leading thereto at the outer bearing of the axle, substantially as described, so as to introduce oil at the same time to the outer and inner bearings from the outside of the truck.

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Witnesses:

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