

No. 35,745.

PATENTED JULY 1, 1862.

D. C. BROWN.
RUNNING GEAR FOR VEHICLES.

Fig. 2.

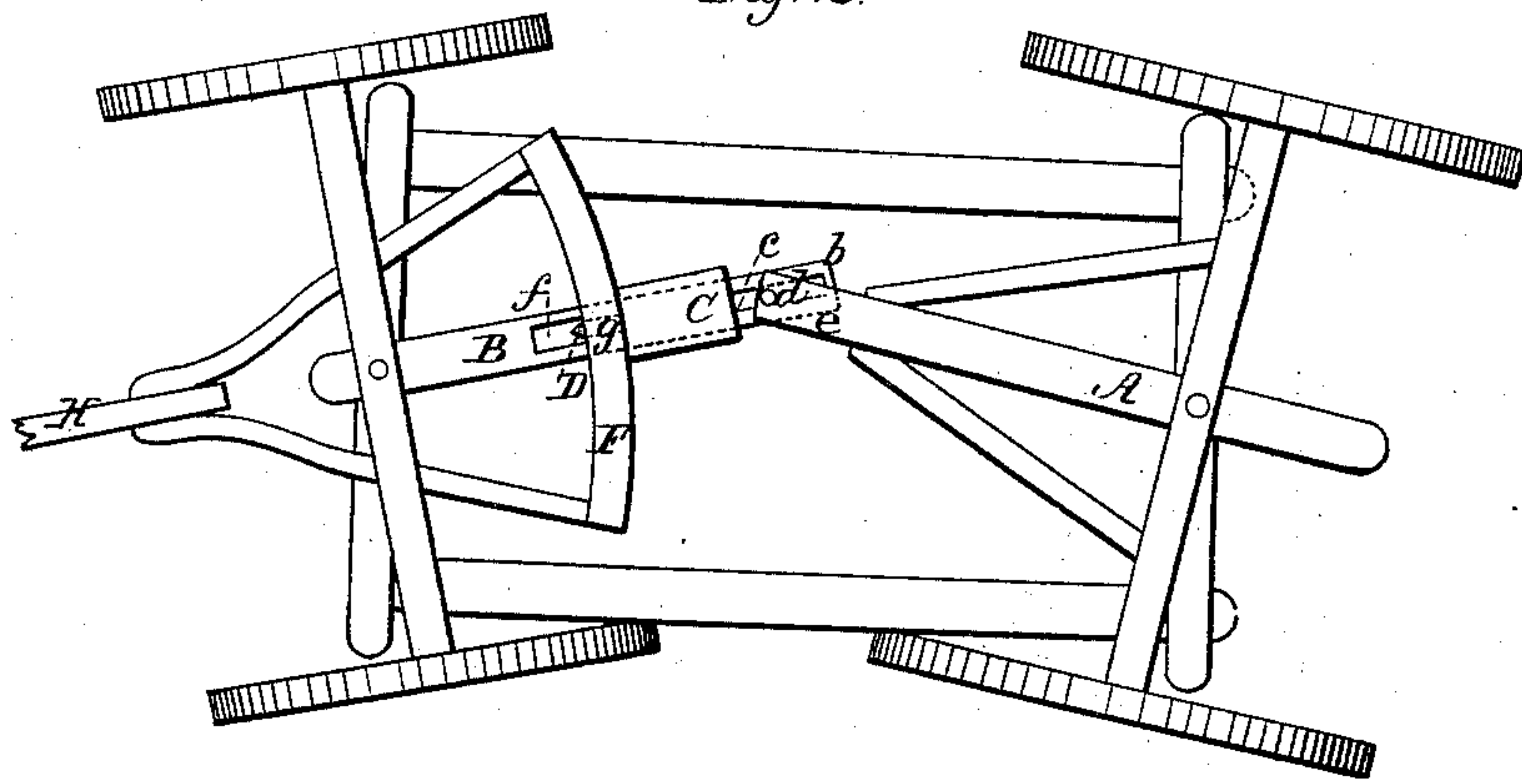


Fig. 1.

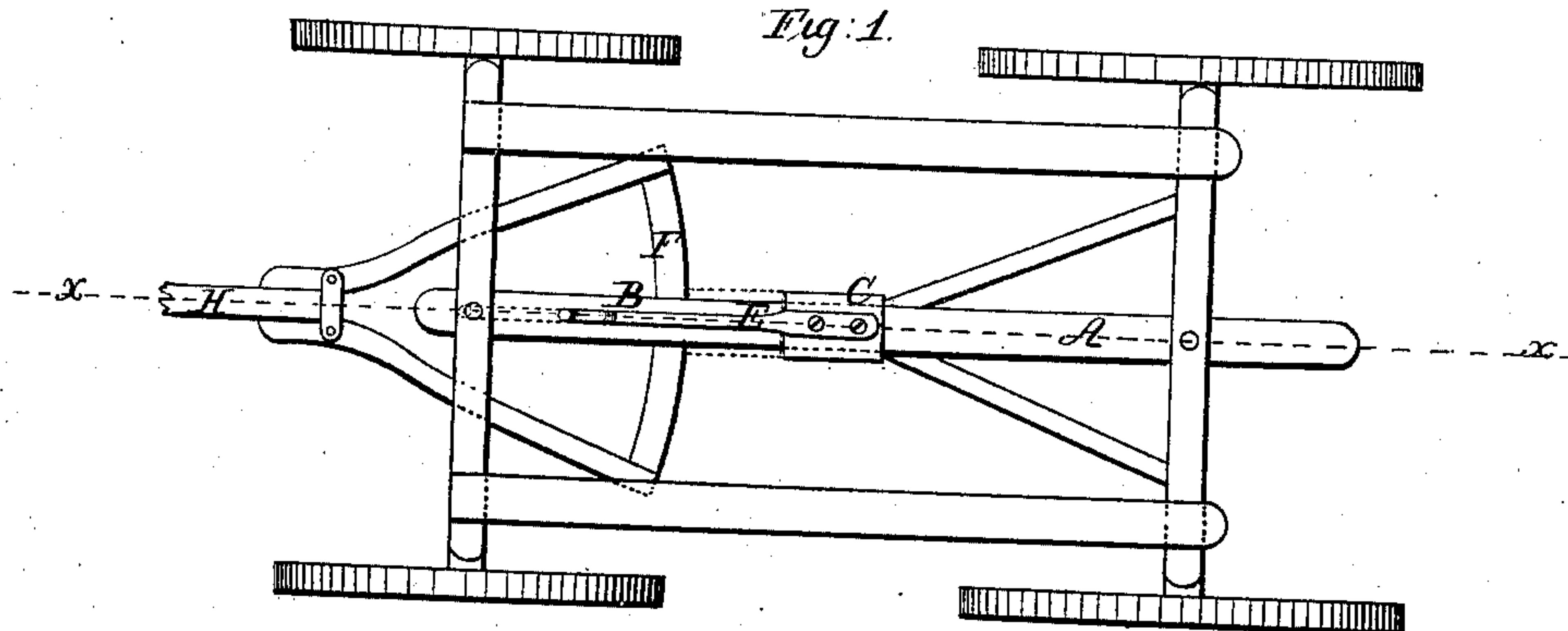
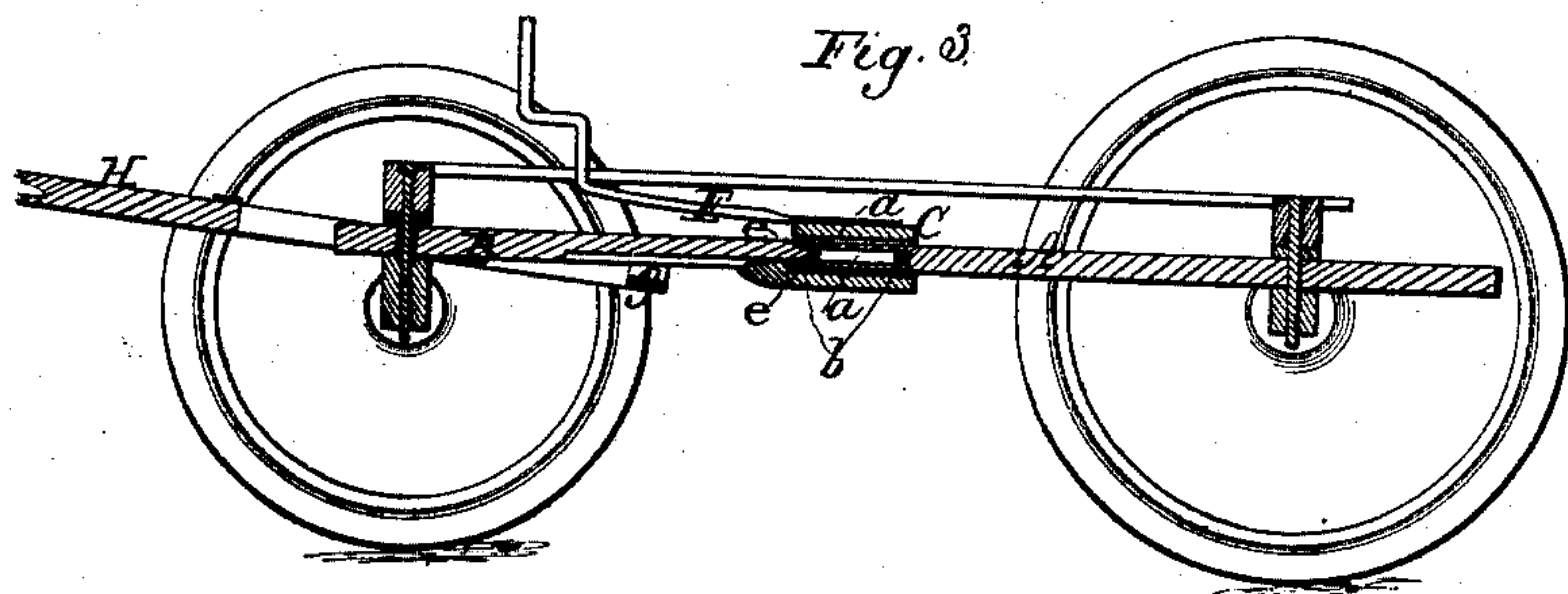


Fig. 3.



Witnesses.

G. A. C. Smith.

J. M. Shugart.

Inventor.

D. C. Brown

Per his atty.

C. A. Little

UNITED STATES PATENT OFFICE.

D. C. BROWN. OF NEW YORK, N. Y.

IMPROVEMENT IN RUNNING-GEAR OF VEHICLES.

Specification forming part of Letters Patent No. 35,745, dated July 1, 1862.

To all whom it may concern:

Be it known that I, D. C. BROWN, of the city, county, and State of New York, have invented certain new and useful Improvements in the Running-Gear of Four-Wheeled Vehicles; and I do hereby declare that the following is a description thereof, in terms which I now think sufficiently full, clear, and exact, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view; Fig. 2, an under side view, and Fig. 3 a vertical section through the line *x x* of Fig. 1.

The nature of my invention consists in dividing the reach and so connecting it that, in connection with a box sliding thereon, the rear and forward wheels may be turned simultaneously when the said box is in one position, and when in another that the said reach may be made rigid and the forward wheels and tongue left free to adapt themselves to the motion of the team.

My object is to produce a running-gear which shall admit of turning short curves and the employment of large forward wheels.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The reach is divided into two parts, A and B, the contiguous ends of which are connected together, so as to form a flexible joint, in the manner now to be explained. The forward end of the section of reach A is mortised horizontally, as seen at *a*, Fig. 3, to receive the tenon *b*, cut on the rear end of the section of reach B, the said tenon having a vertical mortise, *c*, through which and the forks *e e* of the mortise *a* passes the pin *d*. Between the hounds and the rear braces, and encircling the divided reach A B, is the sliding box C, provided on its forward end with a finger, D, and having attached to its upper side the operating-lever E. The under side of the section of reach B is grooved or channeled longitudinally, as seen at *f*, Figs. 1 and 3, and the cross-brace F of the hounds is correspondingly grooved or channeled transversely, as represented at *g*.

The operation of the devices thus described is as follows: Supposing the sliding box C to be in the position represented in Figs. 1 and 3. The joint in the reach is then rigid and the vehicle is not unlike others, the tongue H and forward axle being left free to accommodate themselves to the traveling motion of the team; but suppose it to be desirable to turn the vehicle, or to avoid an obstacle in the road, the driver then places his hand or foot on the operating-lever E, which may project up through the bottom of the body of the vehicle, and moves forward the sliding box C until its front end comes in contact with the cross brace F of the hounds, as represented in red lines in Fig. 1. In this position the flexible joint is uncovered or released and the finger D has entered the transverse groove *g*, which, in connection with the longitudinal groove *f*, locks the hounds to section B of the reach and forces them both to follow the motion of the tongue H. It is obvious from this that in turning the rear wheels must follow the path marked out by the forward wheels, as represented by the curved red line in Fig. 2; that the vehicle may be turned in a much closer space than is usual, both sets of wheels turning in an equal degree; that because of this large forward wheels may be used, which is a desirable object, as it facilitates the draft, and that the avoidance of an obstacle is attended with but little difficulty, as if the forward wheels escape it the rear wheels must necessarily do likewise.

Having thus described my invention and pointed out the manner in which it operates, what I claim therein, and desire to secure by Letters Patent of the United States, is—

1. The flexible joint between the sectional reaches A and B, in combination with the sliding box C, substantially as and for the purpose described.

2. The finger D on the sliding box C, in combination with grooves or channels *f* and *g*, substantially as and for the purpose set forth.

D. C. BROWN.

Witnesses:

P. G. THORP,
ALEX. P. SHARP.