T. H. BROWN.

Carriage.

No. 230,399. Patented July 27, 1880.

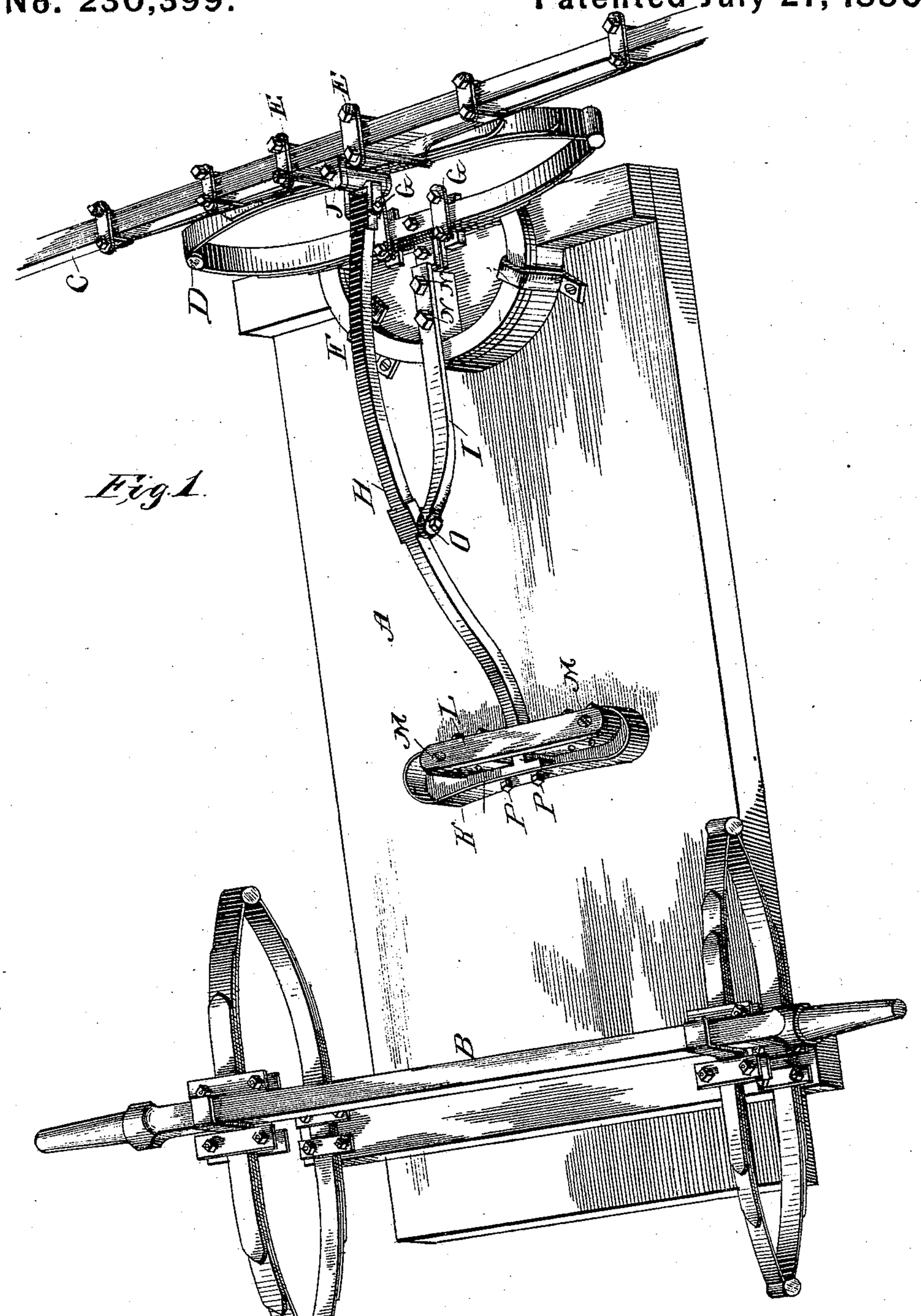

Fig. 1.

Witnesses:
C. G. Asmus
Charles F. Hunter

Inventor:
Thomas H. Brown.
By Jas. B. Erwin
Attorney.

UNITED STATES PATENT OFFICE.

THOMAS H. BROWN, OF MILWAUKEE, WISCONSIN.

CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 230,399, dated July 27, 1880.

Application filed February 9, 1880.

To all whom it may concern:

Be it known that I, THOMAS H. BROWN, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Carriages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters or figures of reference marked thereon, which forms a part of this specification.

My invention relates to improvements in carriages.

The objects of my improvements are, first, to apply the draft required in moving the carriage simultaneously to both the body and front axle; second, to dispense with the use of the common reach and transmit the draft from the front to the rear axle through the carriage-body; third, to rigidly retain the carriage-body in its proper position above and at right angles to the spring, and to relieve the springs from all twisting strains to which, in ordinary carriages, they are subjected.

These desired objects I attain by the peculiar device with which the front axle is connected to the carriage-body, all of which is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a perspective elevation.

A is the body of the carriage. B is the rear axle. C is the front axle. D is the front spring, which is rigidly secured to the axle C by clips E E. The upper half of spring D is rigidly secured to circle-plate F by clips G G. The front axle, C, is connected with the body A by bar H and spring-bar I. Bar H is connected with axle C by a universal joint, J, and to the body A by spring K, block L, and bolts M M. Spring-bar I is rigidly secured to the body A by bolts N N, and to bar H by joint O, which joint is formed at a point equally distant from both the upper and lower halves of spring D, by which arrangement all forward or backward strains upon the body A are resisted by bar I, and the respective halves of the spring are retained in a true vertical position one above the other, and are thus relieved from the liability of being twisted out of their proper shape.

The draft upon the front axle is transmitted through the front end of bar H and bar I to the front end of body A, and from thence through body A to the rear springs and axle. Bar H extends through a slot in the center of block L, and is attached to the center of spring K by bolts P P. The spring K thus supports the rear end of the bar in its proper relative position to the body and prevents it from being withdrawn from the slot, and at the same time permits of the required lateral movement caused by the upward and downward movement of the body. The rear end of bar I is bowed or curved downward, by which peculiar shape it is adapted to conform to the lateral movement of bar H. The respective ends of bar H are slightly curved in opposite directions on a line parallel to body A, thus giving it a symmetrical shape and bringing the bearings at the points of contact directly against its ends.

I am aware that jointed braces have previously been used in connection with the springs of a common carriage, having a reach in which the rear end of the longer brace was connected to the body by a slotted guide-plate, and the front end of both braces connected to the upper and lower halves of the spring respectively; but in such a construction the reach was required to render the carriage sufficiently safe and strong. It is also obvious that the longer brace was liable to be drawn from the slotted guide-plate when, by the rebound of the springs, the body of the carriage is thrown upward, while it is obvious that by my improved attachment I obviate this defect, as bar H is retained securely in the slot of block L by spring K, to which it is attached; also, that by substituting the spring-bar I and spring K for the joints previously used all liability of rattling is obviated.

In view of said previous invention, I do not claim jointed or hinged braces, broadly, as my invention; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. In no-perch vehicles, the device herein

described for connecting the rear end of brace H to the body A, consisting of the combination of bow-shaped spring K and slotted block L, respectively attached to the body and brace, substantially as set forth.

2. In no-perch vehicles, the combination of body A, curved spring-bar I, brace H, axle C, connected to brace H by universal joint J, spring K, and block L, secured to body A, all substantially as and for the purpose specified.

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

THOMAS H. BROWN.

Witnesses:

JAMES B. ERWIN,

W. SINNOTT.