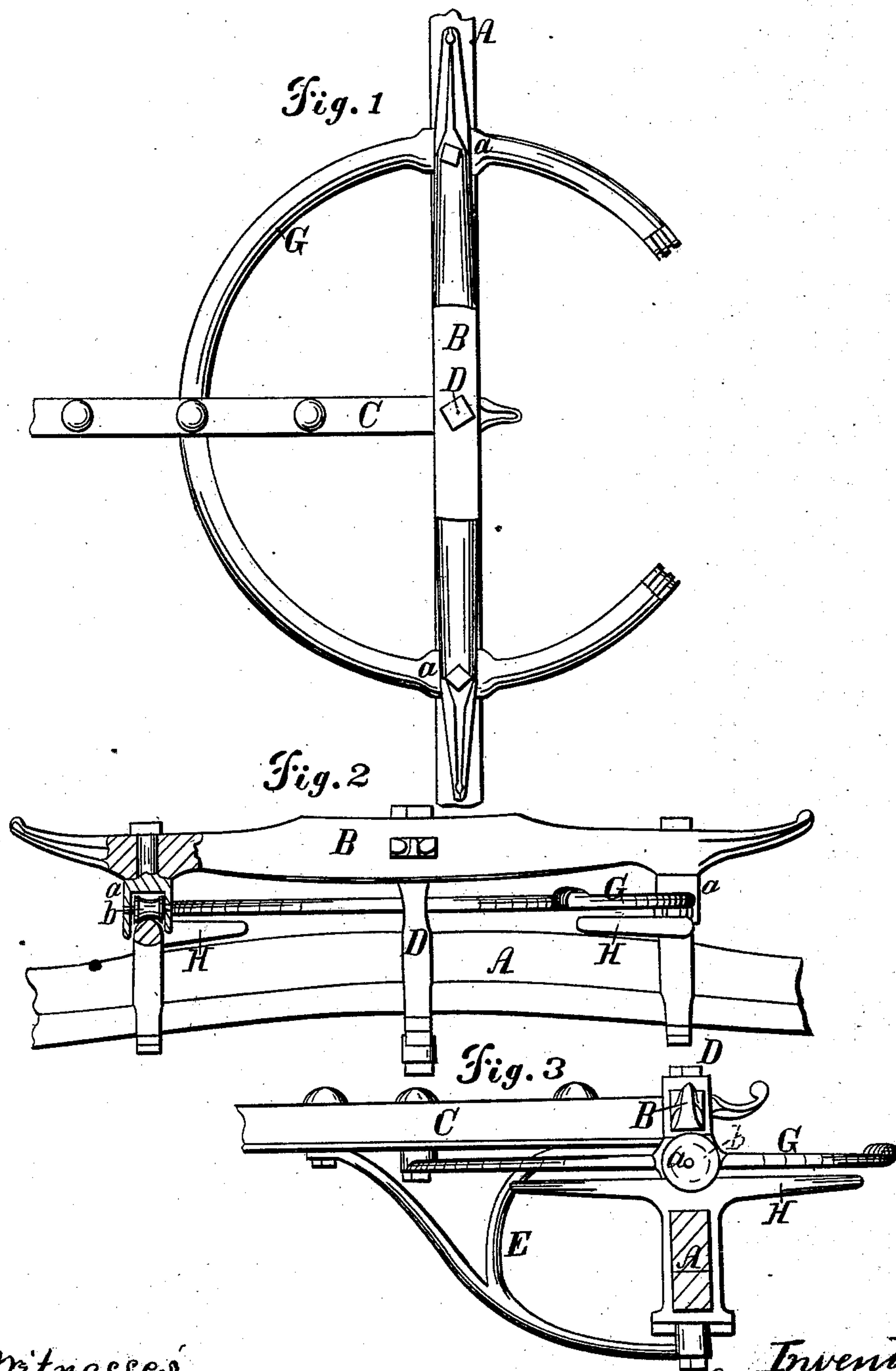


J. LAWRENCE.
Fifth Wheel for Carriages.

No. 72,051.

Patented Dec. 10, 1867.



Witnesses:
J. A. Davis
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Inventor,
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Atty.

United States Patent Office.

JOSHUA LAWRENCE, OF PALMYRA, NEW YORK

Letters Patent No. 72,051, dated December 10, 1867.

IMPROVEMENT IN FIFTH-WHEEL FOR CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOSHUA LAWRENCE, of Palmyra, in the county of Wayne, and State of New York, have invented a certain new and useful Improvement in Fifth-Wheel for Carriages; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a plan of my improved arrangement.

Figure 2, a rear elevation, with a portion in section.

Figure 3, a side elevation.

Like letters of reference indicate corresponding parts in all the figures.

The design of my improvement is to obviate, to as great degree as possible, cramping in turning.

The invention consists in constructing the upper bow or circle with housings or covered bearings, at suitable points, enclosing rollers that move upon the lower bow, thereby separating said bows and preventing any cramping action.

As represented in the drawings, A is the axle, B the bolster, and C the draught-pole. The bolster is connected with the axle by a king-bolt, D, substantially of the form shown, whereby the parts are securely retained and the necessary turning action allowed. The draught-pole and the king-bolt, below the axle, are connected by a brace, E. The upper and lower bows G H are connected, respectively, with the bolster and axle, as shown. They may form an entire or only a part circle, as may be desired. In the drawings the bow is shown as open in the rear, and the lower bow as in two separate sections, on the sides, of such extent as to allow the necessary turning movement. At the proper position the upper bow is provided with housings or covered bearings *a a*, enclosed on all sides except the bottom, and in these are situated small rollers, *b b*, which run upon the under bow H. I prefer to make the rollers grooved or concave, in which case the under bow is made convex on top, as shown most clearly at the left hand in fig. 2. In the drawings these housings and rollers are shown only on opposite sides of the axle, but if desired a greater number may be employed.

The great advantage of this arrangement consists in the employment of the housings in combination with the bows, whereby the rollers are shielded from all injury, and protected from the weather. Were the rollers situated outside, they would be liable to violence from the great wrenching action, and would soon become loose and worthless. The housings keep them always in place. Were they exposed to the weather, they would also soon rust and lose their value; but by being covered, no rain can reach them under ordinary circumstances. They also preserve the rollers from dirt and impediments that would clog them. This arrangement of the rollers will prevent, in a great degree, the cramping that arises in turning, by keeping the bows apart and reducing the friction.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the housings *a a*, enclosing the rollers *b b*, with the bows G H, the whole constructed and arranged as described, and operating in the manner and for the purpose set forth.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

JOSHUA LAWRENCE.

Witnesses:

R. F. OSGOOD,

J. A. DAVIS.