No. 76,667. PATENTED APR. 14, 1868.

S. B. SMITH.

BEARING FOR FIFTH WHEEL OF CARRIAGES.

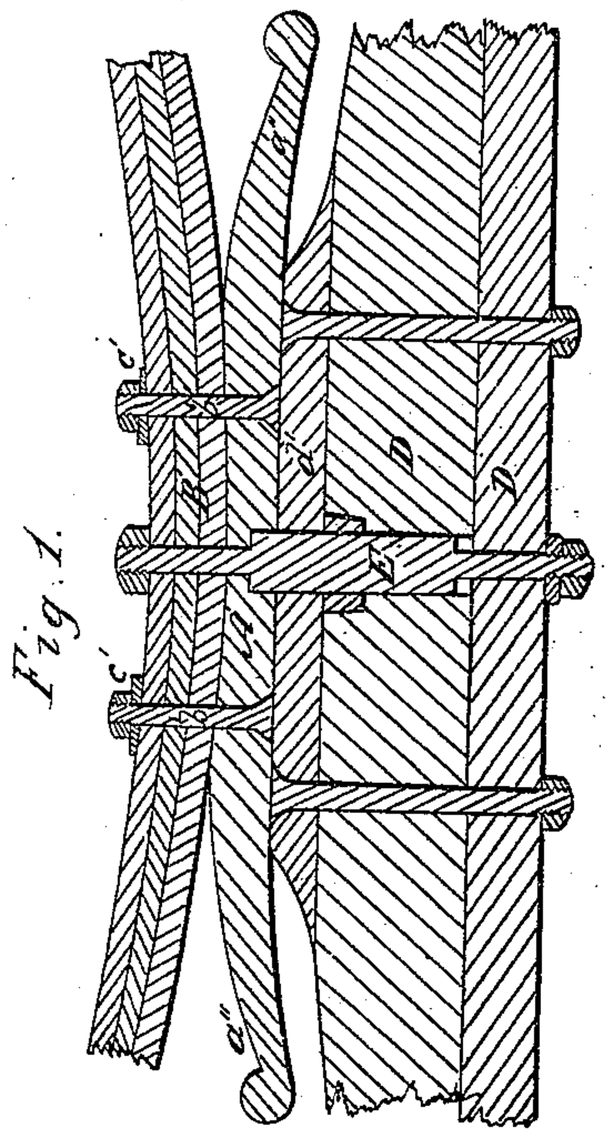

Fig. 1.

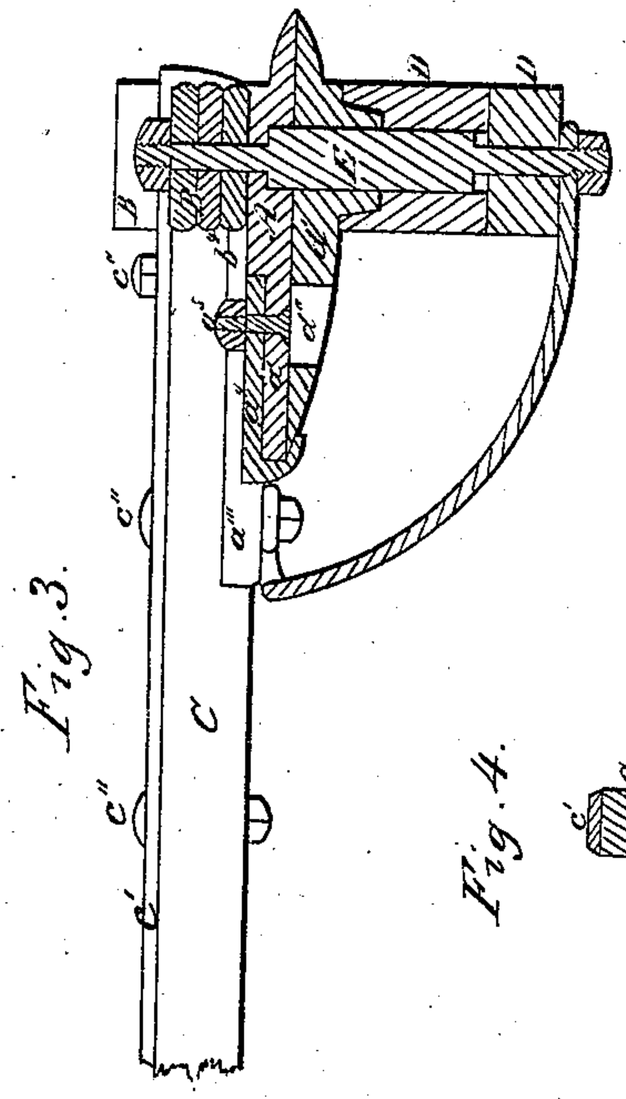

Fig. 3.

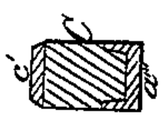

Fig. 4.

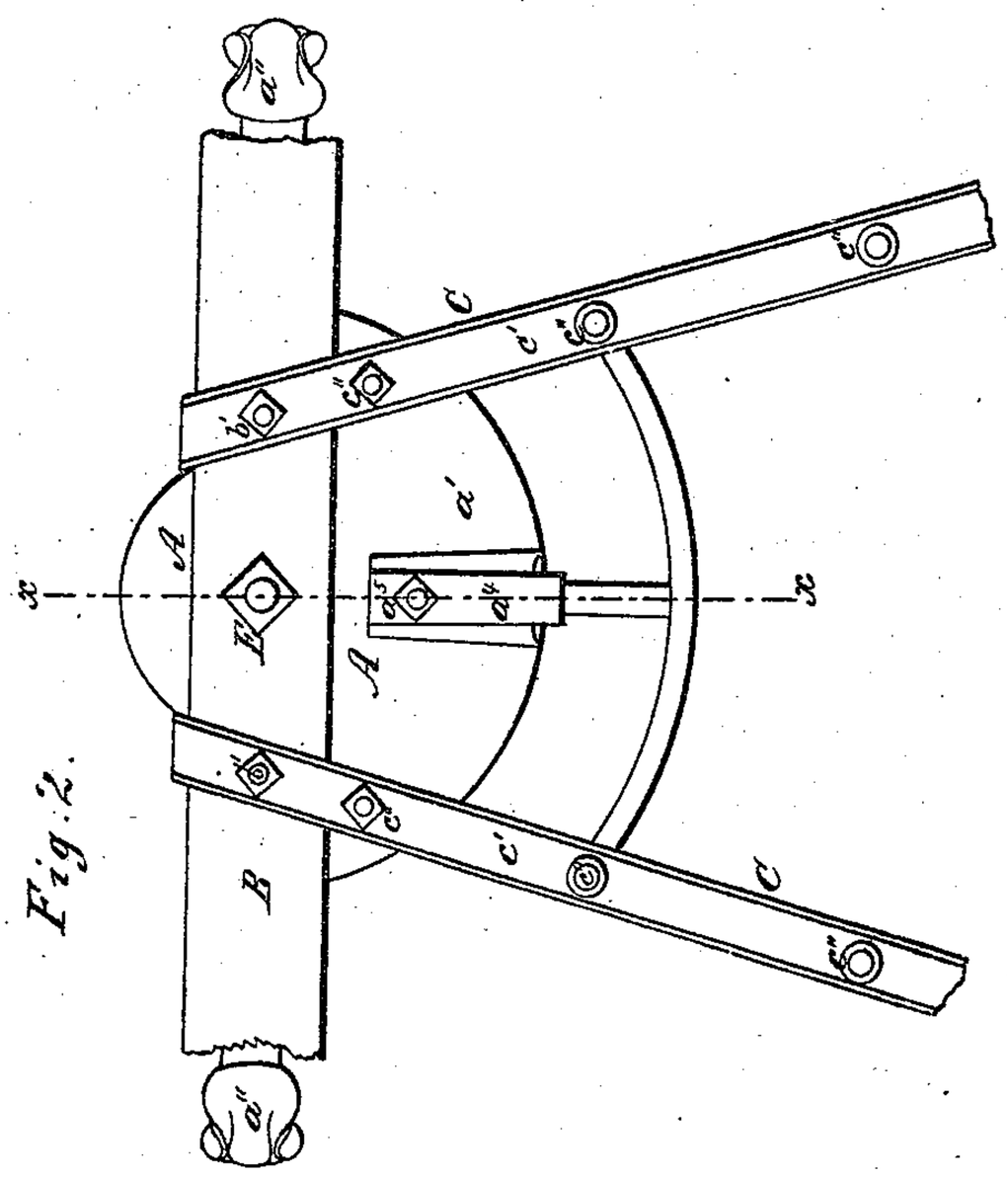

Fig. 2.

Witnesses.

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SIMON B. SMITH, OF SALEM, NEW JERSEY, ASSIGNOR TO HIMSELF AND JOSEPH K. CHEW, OF SAME PLACE.

IMPROVEMENT IN BEARINGS FOR FIFTH-WHEELS OF CARRIAGES.

Specification forming part of Letters Patent No. **76,667**, dated April 14, 1868; antedated March 31, 1868.

To all whom it may concern:

Be it known that I, SIMON B. SMITH, of Salem, in the county of Salem and State of New Jersey, have invented a new and useful Improvement in the Turn-Bearing or Fifth-Wheel of a Vehicle; and I do hereby declare that the following is a full, clear, and exact description of the construction of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section of the said improvement applied to the axle and spring of a light carriage; Fig. 2, a plane view of the same as applied; Fig. 3, a transverse section on the dotted line *x y* of Fig. 2, and Fig. 4 a transverse section of one of the perch-bars as connected to the turn-bearing.

Like letters of reference indicate the same parts when in the different figures.

The object of my improvement is to afford a neat, strong, and much less costly turn-bearing or fifth-wheel for a light carriage; and my invention consists in constructing what is known as the "head-block," together with the perch bearing or bearings and the disk of the wheel, in a single piece of cast metal, substantially as hereinafter described; and, also, in combination with the said fifth-wheel, the peculiar construction and application of the king-bolt, whereby the said wheel is secured to the front axle of the vehicle, as hereinafter described.

Referring to the drawings, A is the improved turn-bearing; B, the spring; C C, the perches; D, the front or oscillatory axle of the vehicle, and E the king-bolt which connects the axle D and the turn-bearing A together.

The turn-bearing A has the spring bearing-block a' and the perch-bearings a'' a'' cast in one piece of metal, the lower part of the turn-bearing A having a disk, a', which is a flat plane at its under side and at its upper side curved or convexed gradually from its thin periphery toward its center, with the spring-bearing a'' raised an inch, more or less, (see Fig. 3,) and extending longitudinally across the upper side of a', so as to project ornamentally at each end, in a manner similar to the old wooden head-block, (see Figs. 1 and 2,) and also with the supports a''' a''' for the wooden perches C C, extending obliquely in a horizontal plane from a little above the seat of the spring B on the bearing a'', so as to form abutting shoulders a^5 for the inner side of the spring B, to the length of a foot (more or less) beyond the edge of the disk a', as shown in Fig. 3.

The upper side of each of the perch-bearings a''' is sunk or grooved, so as to receive the lower portion of the wooden perch C, and thus strengthen both. (See Fig. 4.)

On the upper side of the rear portion of the disk a' an adjustable sliding clip, a^4, (see Figs. 2 and 3,) is attached by a screw-bolt, a^5, so that the said rear part of a' can thereby be confined down upon the projecting disk-plate d', which is permanently fixed on the axle D, and at the same time allow the said axle to be oscillated freely in a horizontal plane, as heretofore.

The plate d' has a large hole, d'', through which the head of the bolt a^5 is passed in applying or removing it, and the said plate d' is also made a little concave on its upper side, and consequently allows any sand or dirt to fall through the hole d'', and thus prevent their grinding away the opposite surfaces of the two disks a' and d'.

The spring B and the usual cap-plates, c' c', of the perches C are all secured firmly down upon the bearing a'', by means of two screw-bolts, b' b', the cap-plates of the perches being also secured firmly down upon their respective bearings a''' a''', with the wooden perches C between, by means of the additional bolts c'' c''. (See Figs. 2 and 3.)

The king-bolt E has a larger diameter along its middle portion than at its ends, for the purpose of affording the necessary strength and durability at the part around which the axle E oscillates; and the said bolt is rigidly fixed through the parts A and B and secured by a screw-nut, as shown in the Figs. 1 and 3.

The weight of this my improved turn-bearing is not greater than the weight of the usual malleable-iron fifth-wheel with its supports, while the cost of construction and application of the former is not more than one-half that of the latter, and it is equally durable, and much less liable to get loose or otherwise out of order in use.

I wish it to be understood that I do not intend to confine myself in the construction of my said improved turn-bearing to the use of two perch-bars, C C, as it is obvious that the bearing A can be as readily made to receive a single perch-bar in its middle, if so required; nor do I desire to claim, broadly, a turn-bearing or fifth-wheel having its disk and perch-bearings cast together in one piece of metal, as this has been done before for heavy wagons; but

What I claim as my invention, and desire to secure by Letters Patent, is confined to the following, viz:

1. The head-block a'', the perch-bearing a''', and the disk a', when cast together in one piece of metal, substantially as and for the purpose described.

2. In combination with the combined mechanical devices of the preceding claim, the king-bolt E, when constructed and applied as described and shown, for the purpose specified.

SIMON B. SMITH.

Witnesses:
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