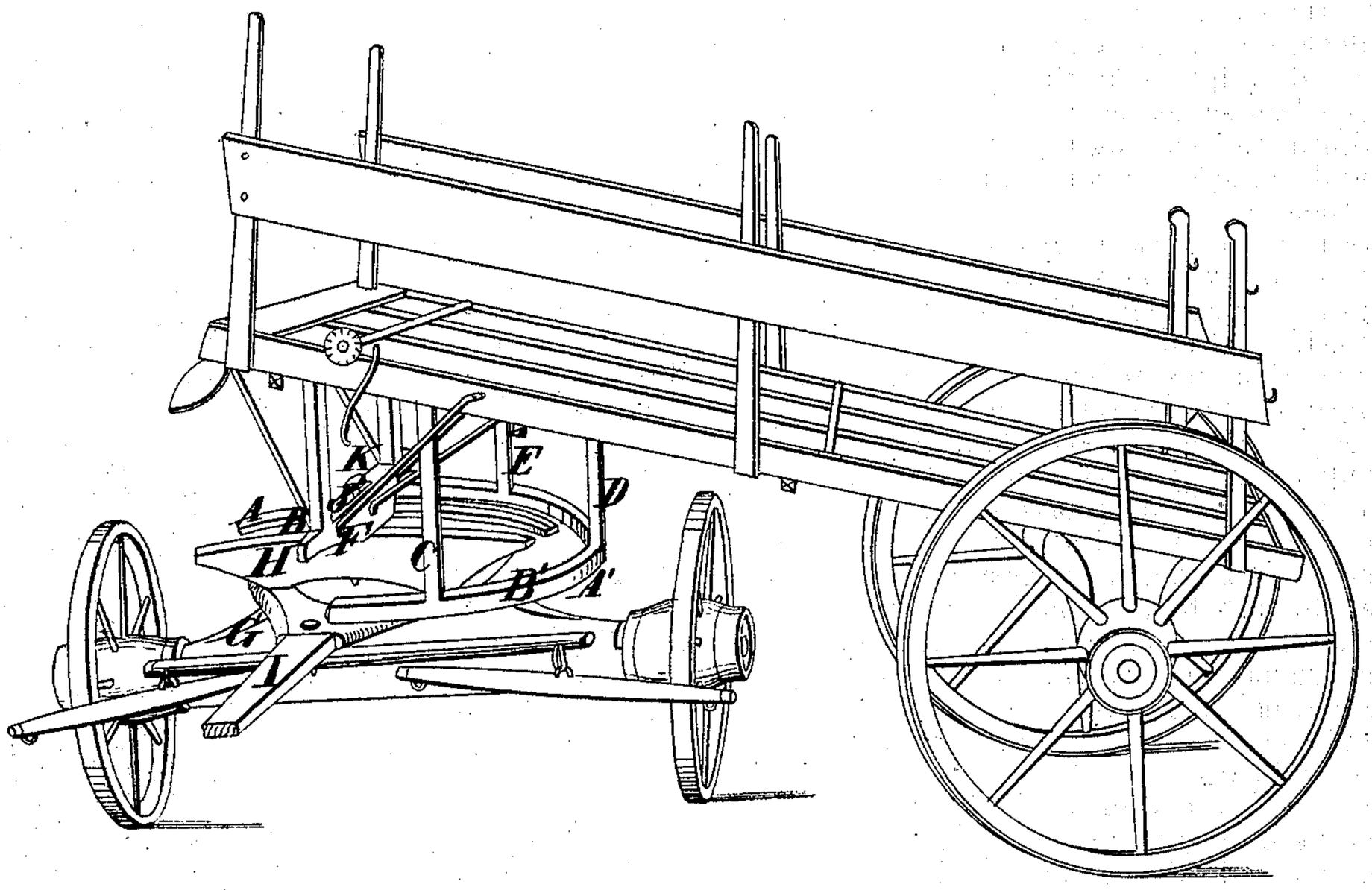
F. W. COLE.

Improvement in Wagons.

No. 120,495. Patented Oct. 31, 1871.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK W. COLE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WAGONS.

Specification forming part of Letters Patent No. 120,495, dated October 31, 1871.

To all whom it may concern:

Be it known that I, FREDERICK W. COLE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Wagons; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a perspective representation of a wagon with my improvement. Fig. 2 is a similar view, with the front wheels turned partly around.

My invention has reference to wagons, and particularly to that class in which the front end of the bed is more elevated than the rear end, as in lumber and express-wagons. The object of my improvements, which have reference only to the front running-gear, is to simplify the construction and make a stronger and better vehicle; also, to obviate the shaking motion of the tongue and produce such a construction as will tend to prevent the wagon from upsetting in turning and backing. My invention consists in the peculiar construction and arrangement hereinafter described.

In wagons of the kind to which my invention pertains the front running-gear is generally provided with a fifth-wheel, which is composed of a pair of flat circular metal plates. The lower plate is suitably secured to the front axle and the upper plate to a number of bolsters, generally three, which are attached to the bed-sash by mortise and tenon. The king-bolt is passed through the forward bolster and also through the axle. This construction I have found very defective, as, on account of the short bearing or distance between the king-bolt and most rearward part of the fifth-wheel, the tongue is not kept rigidly in place, but rises and falls and sways to and fro in a manner dangerous and hurtful to the horses. When in a wagon of this kind the horses are turned to back into a desired point there is great danger of upsetting, as that side of the bed of the wagon most distant from the horses is left without support, and the bed is consequently very liable to tilt in that direction; or it may incline toward the horses on account of the distance—usually about five inches—between the front bolster and tongue-rest and upset.

To remedy these defects I construct my fifth-wheels in the following novel form: I make two semicircular iron plates, A A′, of much larger diameter than that usually employed. The upper plate is straight, but the lower one is curved upward so as to meet its fellow in the center, the ends being about two inches apart. To each of these plates or sliders I attach a strong wooden frame, B B′, the lower frame being securely bolted to the axle while the upper one is connected to the bed by three standards, C D E, tenoned into the sash, one at each side and one in the center. This upper frame B′ may be continued further than shown in the drawing. I prefer extending it a sufficient length to permit of its being firmly bolted to the front bolster F, though it is not necessary that this should be done. This front bolster, it will be observed, is considerably above the horizontal line of the upper slider, and is also in advance of the axle G, where it rests upon a sill, H. By means of this forward position of the front bolster I obtain a greater leverage and longer bearing, and the upper and lower slides are kept well together at the center, which keeps the tongue I in a steady position, and it is not liable to sway up and down or to and fro. I also make the passage-way J of the king-bolt K of a slotted shape instead of a round hole, which gives play to the bolt K in turning or going over inequalities of surface, where one wheel will be higher than the other. In turning, also, to back in, where one wheel passes under the bed of the wagon, as shown in Fig. 2, it will be observed that the side of the wagon most remote from the horses is afforded a substantial support, the sliders coinciding for a considerable distance and extending far out from the king-bolt or center. If the bed inclines toward the horses the upper slider is met by the tongue, which is supported in front by the breast-chains, and thus all danger of upsetting in that direction avoided. The central standard gives steadiness to the upper slider and keeps it to its place.

A very valuable feature of my invention resides in the fact that wagons constructed in the

defective manner first suggested may be easily and cheaply altered to conform to my improved method of construction.

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

1. The semicircular sliders, comprising plate and frame and central standard D, where the same are so constructed and arranged as to extend rearward and serve as a support for the wagon-body, substantially as specified.

2. The combination and arrangement of the bolster F, king-bolt K, sill H, sliders A A′ B B′, and standards C D E, as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FREDERICK W. COLE.

Witnesses:

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