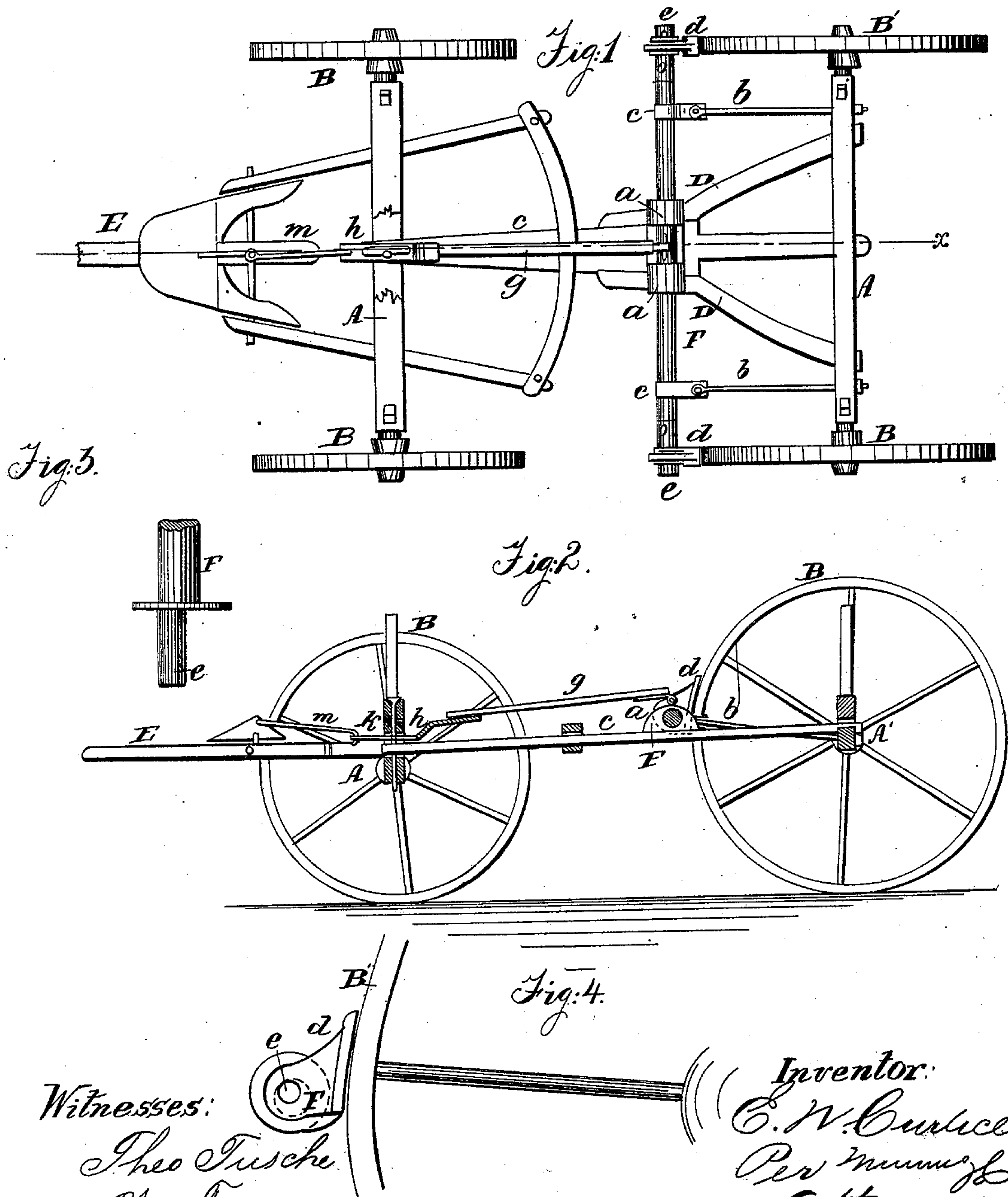


E. N. CURTICE.

Wagon-Brake.

No. 70,533.

Patented Nov. 5. 1867.



United States Patent Office.

EZRA N. CURTICE, OF SPRING WATER, NEW YORK.

Letters Patent No. 70,533, dated November 5, 1867.

IMPROVEMENT IN WAGON-BRAKE.

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, EZRA N. CURTICE, of Spring Water, in the county of Livingston, and State of New York, have invented a new and useful Improvement in Wagon-Brake; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a top view of the running-gear of a wagon, showing my improved brake applied.

Figure 2, a central longitudinal section taken in the line *x x*, fig. 1.

Figure 3, a comparatively enlarged view of one end of the brake-shaft detached.

Figure 4, an end view of the brake-shaft, with a shoe attached.

Similar letters of reference indicate corresponding parts.

This invention relates to an improvement in the construction and arrangement of a brake on a wagon, and consists in attaching a rocking brake-shaft to the hounds and reach in front of the wheels, on the ends of which are eccentric arms or projections, on which are loosely hung the brake-shoes or rubbers in such a manner that they shall bear against the wheel to operate them, and shall be free from pressure on the wheel when the brake is not required. A rod is hinged to the brake-shaft and connected with the draught-pole, so that when the pole is pushed back by the team the brake-shaft shall turn in one direction and work the brakes by pressing the rubbers upon the wheels, and when the pole is drawn forward the brake-shaft will turn in the other direction and release the rubbers or shoes, as hereinafter more particularly described.

A A' are the front and hind axles of a wagon, and B B' the front and hind wheels; C the reach, D D the hounds, and E the draught-pole. F is a rock or brake-shaft hung in boxes *a a* upon the reach and hounds, supported by braces *b b*, fastened to the hind axle A', with straps *c c* on their ends, in which the brake-shaft turns. On the ends of the brake-shaft F are arms *e e*, placed eccentrically to its centre, as shown clearly in figs. 3 and 4, on which are hung loosely the shoes *d d*. A rod, *g*, lying over the reach C, is connected with the brake-shaft F, and on its front end is fastened a plate, *h*, that passes under the bolster *k*, and is slotted for the king-bolt to pass through it, so it can move back and forth freely to rock the brake-shaft F. The plate *h* is connected by a short rod, *m*, with the rear end of the draught-pole, which is made so as to slide back and forth a short distance. Thus when the draught-pole is drawn forward it draws the rod *g* with it, and turns the brake-shaft F, so that the rubbers *d d* lift up and are free from the wheels, but when the pole is pushed back in descending a hill, it forces back also the rod *g* to turn the brake-shaft and bear the rubbers *e e* upon the wheels to check their movement.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The brake-shaft F, supported in the boxes *a a* on the wagon-reach and hounds, and the straps *c c* on the braces *b b*, attached to the axle A', arranged and operating as and for the purpose described.
2. The eccentric arms *e e*, on the ends of the brake-shaft F, in combination with the rubbers *d d*, arranged and operating as described.
3. The combination of the brake-shaft F, the rod *g*, and the draught-pole E, arranged and operating as and for the purposes described.

EZRA N. CURTICE.

Witnesses:

CHAS. SCHWAB,

G. F. SCHWAB.