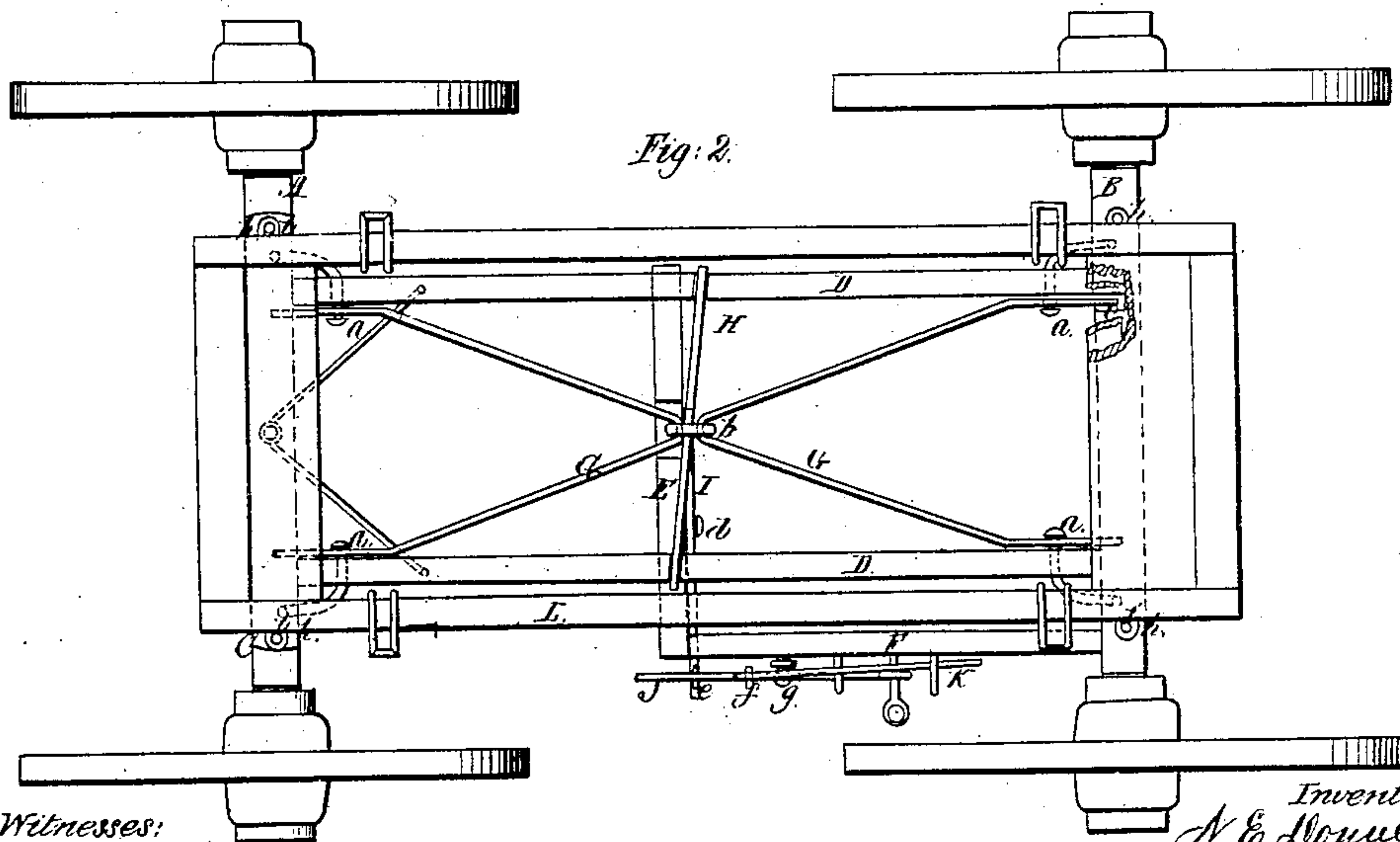
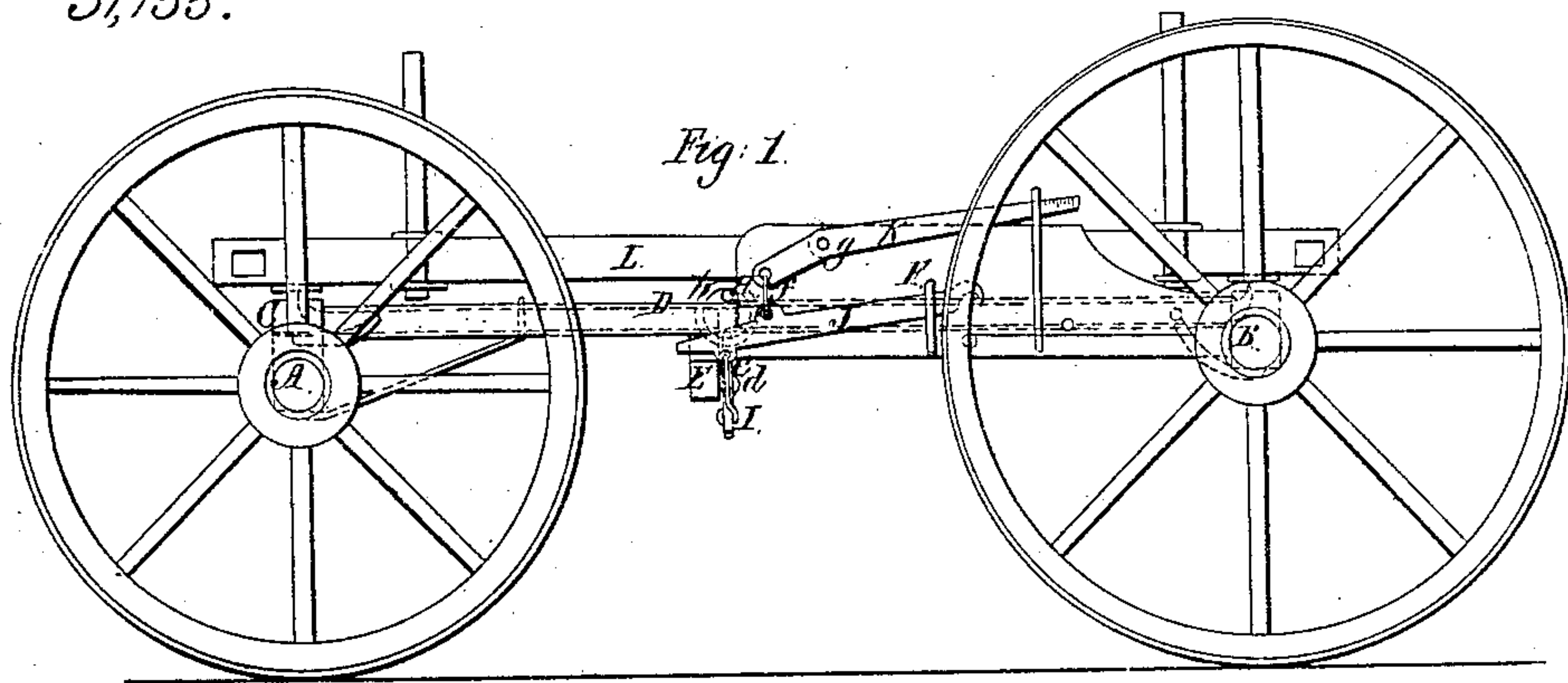


*N. E. Doane.*

*Cart Scale.*

*Patented Jan. 22, 1861.*

*31,155.*



*Witnesses:*  
*Holecomb*  
*R. S. Spencer*

*Inventor:*  
*N. E. Doane*  
*per Munn & Co*  
*Attorneys*

# UNITED STATES PATENT OFFICE.

N. E. DOANE, OF HANNIBAL, MISSOURI.

## WEIGHING CART OR WAGON.

Specification of Letters Patent No. 31,155, dated January 22, 1861.

*To all whom it may concern:*

Be it known that I, N. E. DOANE, of Hannibal, in the county of Marion and State of Missouri, have invented a new and Improved Weighing Cart or Wagon; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side elevation of my invention. Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a simple weighing attachment for carts and wagons, one that may be applied at a very moderate cost and enable loads to be weighed very accurately and with great facility.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, B represent the front and back axles of a wagon, C is the bolster of the front axle A, and D, D, are two parallel bars which connect the back axle B with the bolster C of the front axle. To bars D, D at about their centers there is secured a cross bar E, and to one end of bar E, the front end of a bar F is attached, the latter being parallel with the bars D, D and having its back end connected to the back axle B as shown clearly in Fig. 2. To the parallel bars D, D there are attached by fulcrum pins *a* two V shaped lever frames G G the inner ends of which are connected by a link *b*. The outer ends of the frames G are curved upward within slots *c* in the bolster C and back axle D.

H is a rod which passes through the link *b* which connects the inner ends of the frames G, G and rests on the bars D, D when the weighing device is not in use. This rod H keeps the outer ends of the frames G within the slots *c* of the bolster and back axle and causes the bottom sides of the outer ends of the lever frames G G to rest on the bottom of the slots *c* thus raising the lever frames G, G against the bottom of the fulcrum pins *a* and throwing them out of gear to prevent the wear of the top sides of the fulcrum pins *a* while the cart or wagon is in motion.

I is a lever which is secured by a fulcrum pin *a* to the cross bar E. The inner end of lever I is connected to the link *b* of the frames G and the outer end of said lever I is connected by a link *e* to a lever J which is connected by a link *f* to a graduated beam K which is connected by a fulcrum pin *g* to the bar F. The beam K corresponds with the graduated beam of ordinary weighing scales.

L represents a rectangular frame which is provided at its sides with guides or eyes *h*, said guides or eyes being fitted on vertical rods *i* attached to the bolster C and back axle B. The frame L is allowed to rise and fall on these rods *i* which serve as guides for it and on the frame L, the end of the wagon is placed.

The operation is as follows:—When the weighing device is not in use the rod H is placed through the link *b* and rests on the bars D, D, and the frame L rests on the bolster C and back axle B. In order to use the weighing device the rod H is withdrawn and the lever frames G G are thereby allowed to work on their fulcrum *a* and the load in the body of the wagon will be counterpoised by weights on the beam K, the body or rather the frame L resting on the outer ends of the frames G, G.

Thus it will be seen that by a very simple arrangement the load of a wagon may be accurately weighed while in the body, and the purchasers of articles such as coal and the like can readily ascertain the weight themselves before the load is dumped and deception in weight by dealers thereby prevented.

I do not claim broadly the application of a weighing device to carts and wagons irrespective of the arrangement herein shown and described; but

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

The lever frames G G, rod H, parallel bars D D levers I, J, graduated beam K and frame L, combined arranged and applied to a cart or wagon, as and for the purpose herein set forth.

N. E. DOANE.

Witnesses:

ROYAL P. COBB,  
JOSEPH J. GARVER.