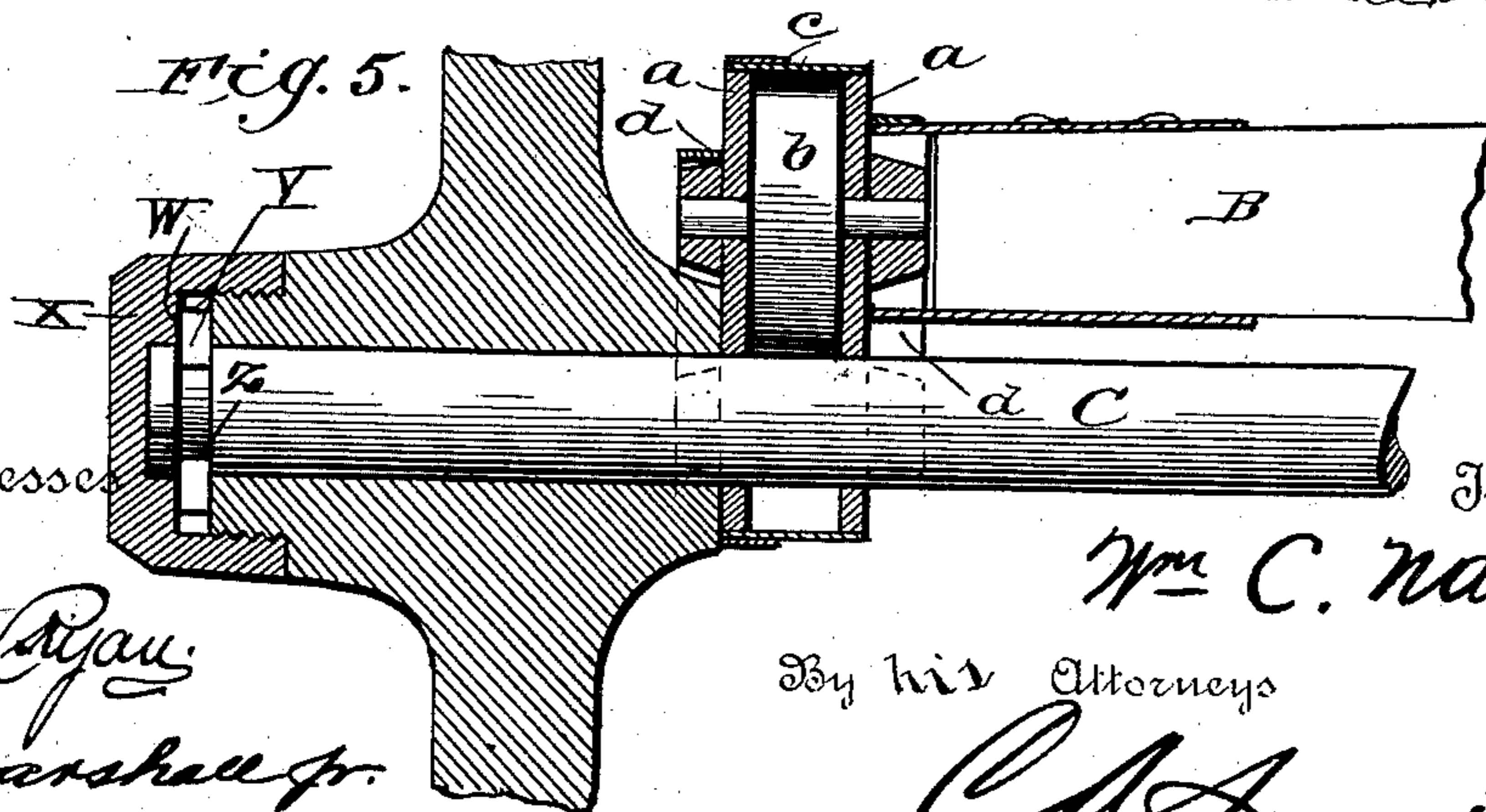
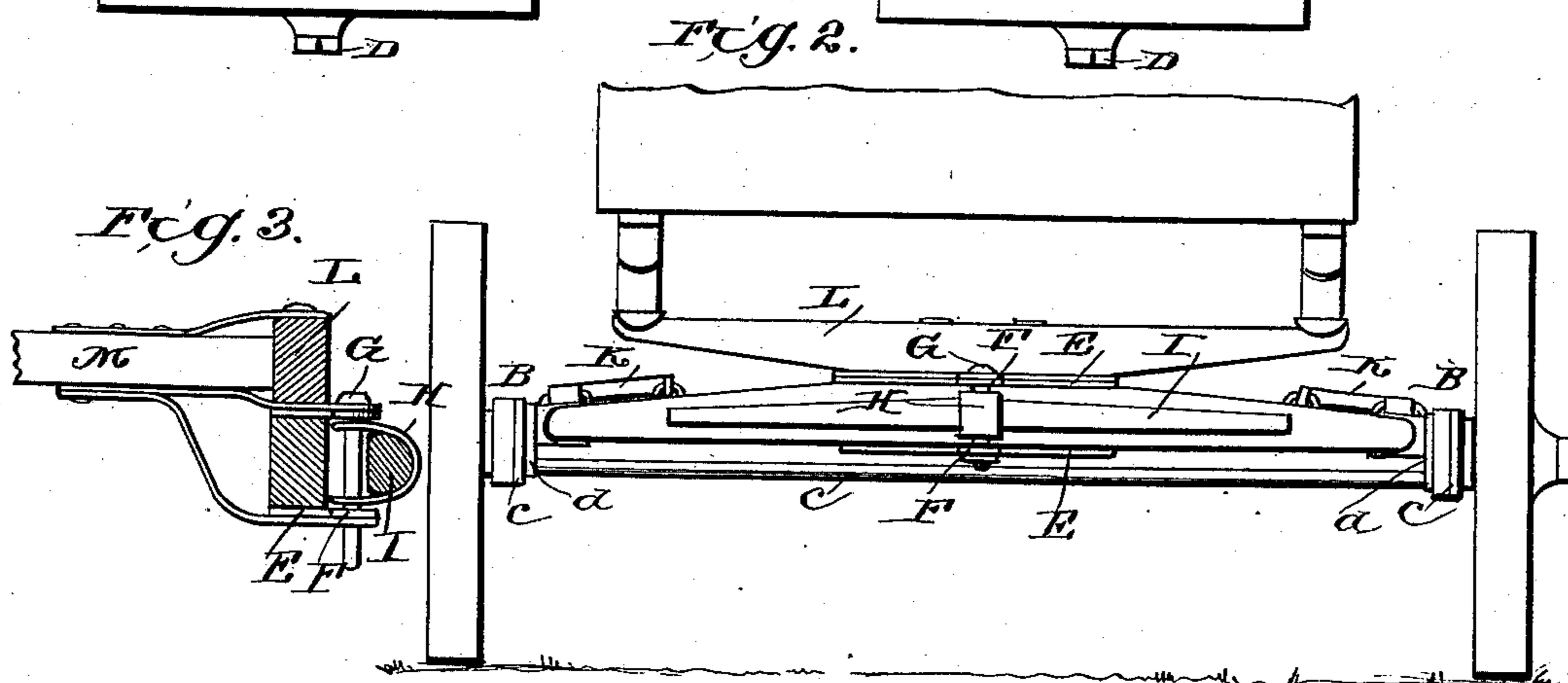
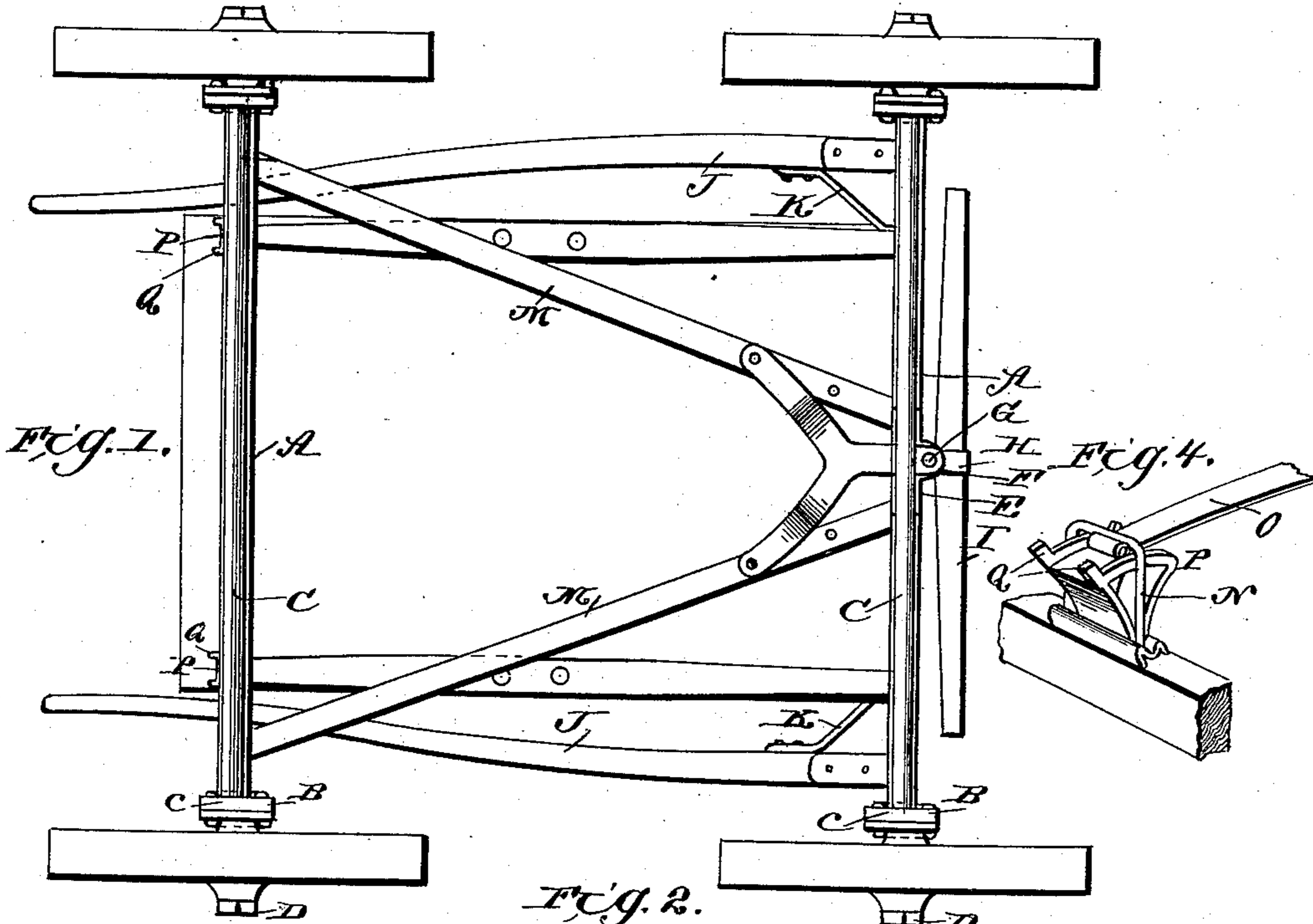


(No Model.)

W. C. NASON.
WAGON.

No. 393,718.

Patented Nov. 27, 1888.



Witnesses

Jos. A. Ryan
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UNITED STATES PATENT OFFICE.

WILLIAM CHESTER NASON, OF NORTH WATERBOROUGH, MAINE.

WAGON.

SPECIFICATION forming part of Letters Patent No. 393,718, dated November 27, 1888.

Application filed May 31, 1888. Serial No. 275,607. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CHESTER NASON, a citizen of the United States, residing at North Waterborough, in the county of York and State of Maine, have invented new and useful Improvements in Wagons, of which the following is a specification.

My invention relates to improvements in wagons; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a bottom plan view of my improved wagon, showing the shafts folded back for housing the wagon. Fig. 2 is a front elevation of the same. Fig. 3 is a detail central vertical longitudinal section. Fig. 4 is a detail view of the yielding connection for the rear ends of the springs. Fig. 5 is a detail section of the wheel and bearing.

Referring to the drawings by letter, A A designate the front and rear axle-bars, having the depending bearings B at their ends, in which the axles C are journaled. The bearings B are composed of two triangular plates, *a*, having friction-rollers *b* journaled therein, and extending across the space between the same. The axles move against these rollers, and are thereby enabled to move easily and rapidly with a small amount of friction. The plates are braced by the bands *c* on their edges, and the straps *d*, secured to and passing around the journals of the friction rollers. The spokes of the wheel are made integral with the hub, thereby increasing the strength of the same. The wheels are mounted on the axles, between the ends of the same and the bearings B, and are prevented from slipping off the axles by the nuts D, which hold an internal shoulder on the hub in contact with an external shoulder on the axle. Instead of this construction, however, I may employ that shown in Fig. 5, in which an annular groove, Z, is formed in the end of the axle and external screw-threads formed on the end of the hub. A collar, Y, is fitted in this groove, and a cap, X, having an internal shoulder, W, is turned up on the screw-threads of the hub, the shoulder W contacting with the collar and forcing it against the end of the hub, thereby securing the wheel in position.

To the upper and lower sides of the front axle-bar I secure the plates E, having the for-

wardly-projecting ears or lugs F, through which the king-bolt G is passed. A strap, H, is pivotally mounted on the king-bolt and projects forward therefrom, and the whiffletree I is mounted in this strap H. The shafts J are hinged to the upper side of the front axle-bar, and are consequently adapted to be turned back over the axle when the wagon is being housed, as shown in Fig. 1.

The ends of the shafts are pivoted directly to the axle-bar, and they are re-enforced by the braces K, which have their front ends secured to the shafts and their rear ends hinged to the front axle-bar.

L designates a cross-head arranged above the front axle-bar and pivotally connected to the upper end of the king-bolt. M M designate the reaches, which have their rear ends secured to the rear axle-bar, the reaches then converging forward to the cross-head, to which their front ends are secured.

On the upper side of the rear axle-bar I secure the bails or staples N, through which the rear ends of the springs O pass. The ends of the springs rest upon the rollers or yielding supports P, which are mounted upon the axle-bar within the bails or staples N, and are preferably constructed with arc-shaped upper ends. The upper corners of these rockers are provided with the lugs or stops Q, which, by contacting with the cross-bar of the staple, serve to limit the movement of the rollers. The front ends of the springs are secured rigidly to the ends of the cross-head, and the wagon-body is secured on the springs.

From the foregoing description it will be seen that I have provided a very simple and efficient wagon. By hinging the shafts to the top side of the front axle they can be made straight, thus reducing their cost and increasing their convenience. The springs also, being secured rigidly to the cross-head at their front ends and being yieldingly supported at their rear ends, will be very durable, and will yield readily to the irregularities of the road-bed, as will be readily understood. The king-bolt, being arranged in the manner described, is not passed through the axle-bar, the strength of said bar is left unimpaired, and the friction caused by the use of the common circle is obviated.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent, is—

1. The combination of the front cross head, the rear axle, the bails secured on the rear
5 axle, the rockers mounted in said bails, and the springs rigidly secured at their front ends to the cross-head and having their rear ends resting on the rockers beneath the bails, as set forth.
- 10 2. The combination of the bails, the rockers mounted within the same and having arc-shaped upper ends and provided with lugs at their corners, and the springs having their ends resting on the said rockers, as set forth.
- 15 3. The combination of the axle-bars, the pairs of parallel plates secured to both ends of the same and depending vertically therefrom,

the rollers journaled in and between said plates, and the axles inserted transversely through said plates and resting on said rollers, as set forth. 20

4. The combination of the axle-bar, the plates secured thereto and projecting therefrom, the king-bolt mounted in said plates, and the strap mounted on the king-bolt and
25 carrying the whiffletree, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM CHESTER NASON.

Witnesses:

LEONARD W. LEIGHTON,
HATTIE A. CHASE.