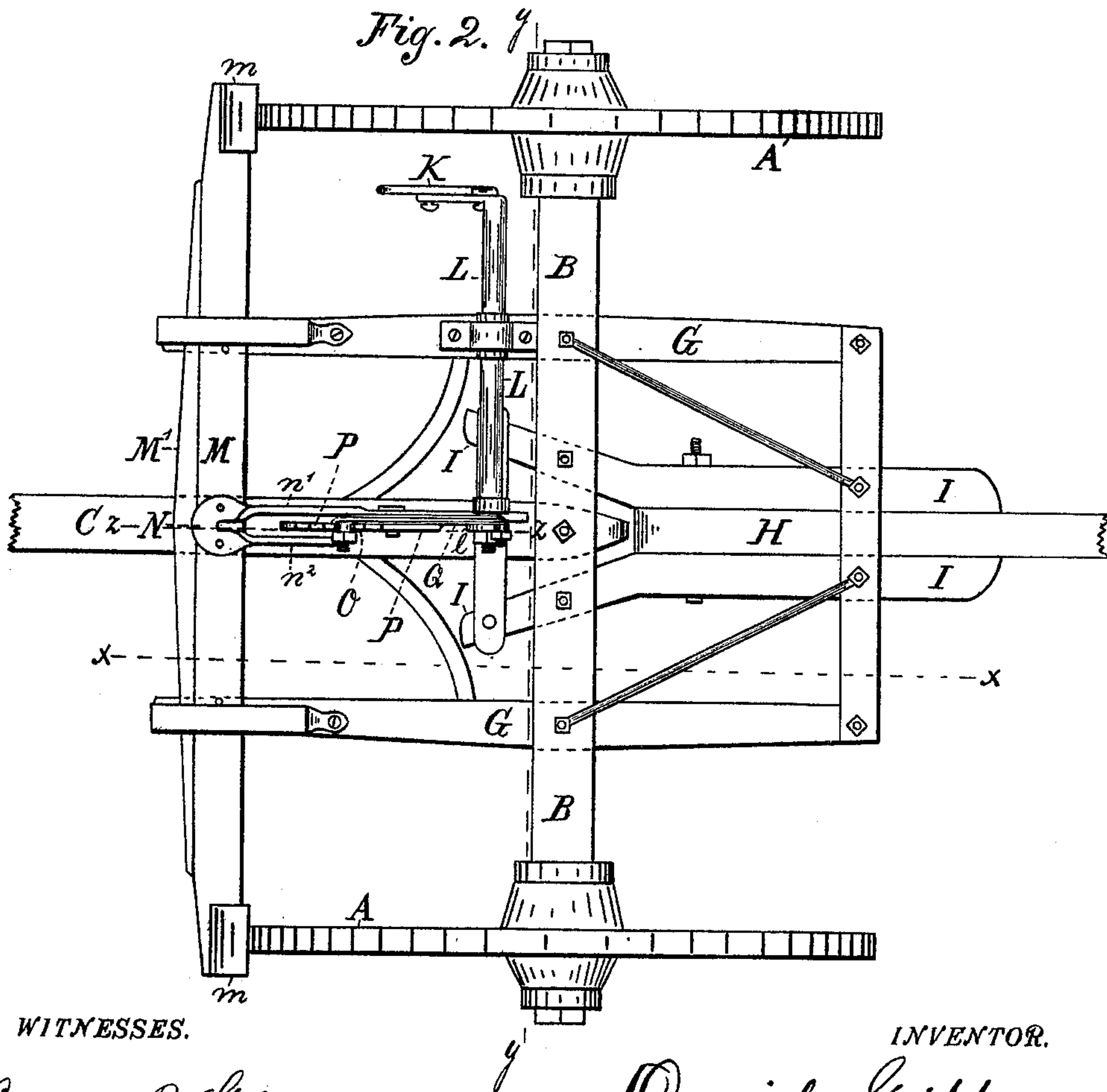
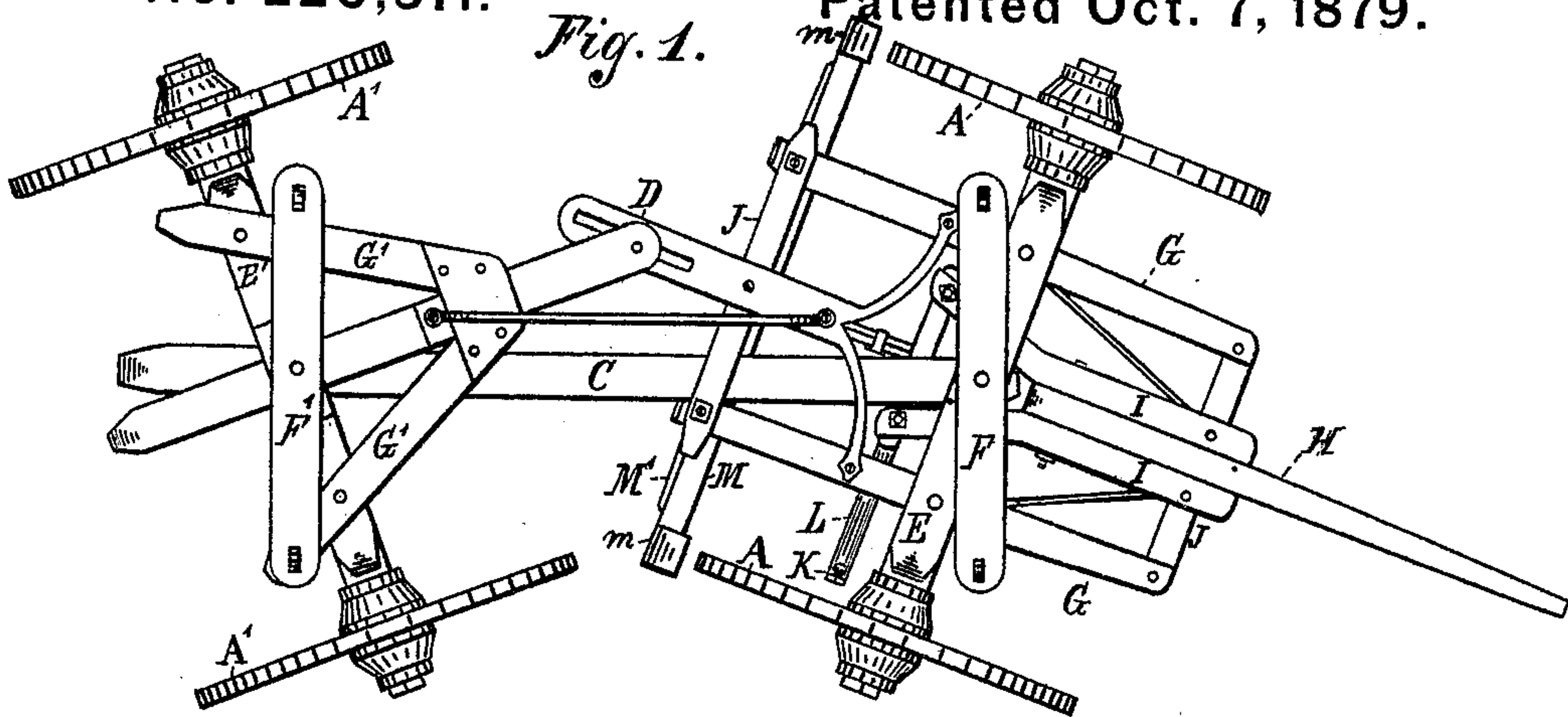


D. GIBBENS.
Wagon-Brake.

No. 220,371.

Patented Oct. 7, 1879.



WITNESSES.

James. B. Liguus.
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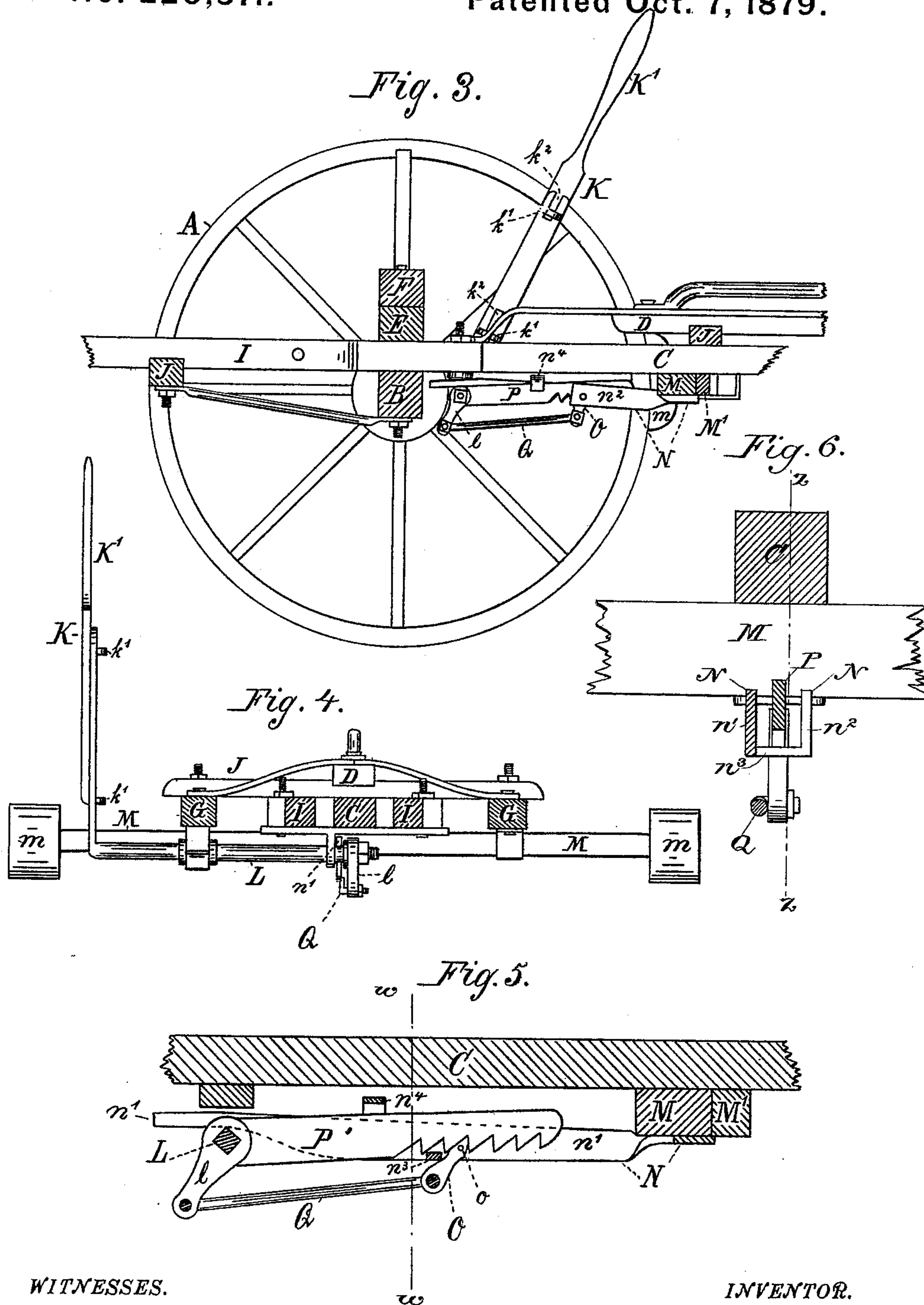
INVENTOR.

David Gibbens,
PER
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UNITED STATES PATENT OFFICE.

DAVID GIBBENS, OF GUILFORD TOWNSHIP, HENDRICKS COUNTY, ASSIGNOR
OF ONE-HALF OF HIS RIGHT TO SAMUEL J. HADLEY, OF MOORESVILLE,
INDIANA.

IMPROVEMENT IN WAGON-BRAKES.

Specification forming part of Letters Patent No. **220,371**, dated October 7, 1879; application filed
August 15, 1879.

To all whom it may concern:

Be it known that I, DAVID GIBBENS, of Guilford township, county of Hendricks, and State of Indiana, have invented certain new and useful Improvements in Locks for Circle-Track and other Wagons, of which the following is a specification, reference being had to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts.

Figure 1 is a top or plan view of a circle-track wagon, upon which is my improved lock. Fig. 2 is an under-side plan of that portion of the wagon which embraces the locking mechanism. Fig. 3 is a longitudinal vertical section of the front portion of the wagon, looking toward the brake from the dotted line *xx*. Fig. 4 is a transverse vertical section of the front portion of the wagon, looking rearwardly from the dotted line *yy*. Fig. 5 is a longitudinal vertical section of the brake mechanism only, as seen from the dotted line *zz*. Fig. 6 is a transverse vertical section of the brake mechanism, looking toward the brake-bar M from the point indicated by the dotted line *ww* in Fig. 5.

The object of my invention is to produce a brake which shall be applicable to that class of vehicles known as "circle-track wagons," and also to the front wheels of other vehicles, as well as in the ordinary manner to their rear wheels. This object is accomplished in the manner and by the devices hereinafter described.

In the drawings, the portions marked A A' represent the wheels of the vehicle; B, the front axle thereof; C, a plain reach, and D a supplemental jointed reach peculiar to circle-track wagons, connecting the front and rear portions of the running-gear together; E E', the sand-board; F F', the bolsters thereon; G G', the hounds; H, the tongue; I I, the tongue-hounds; J J, cross-bars connecting the hounds together; K, the brake-lever; L, the brake-shaft; M, the brake-bar, which carries the rub-locks *m m*, and is connected to the brake-shaft L by mechanism which forms the most important part of my present invention.

To the brake-bar M is firmly secured the par-

allel-barred device N, one arm of which, n^1 , runs forward and over the shaft L. The other, n^2 , preferably stops before it reaches said shaft. Between the two is pivoted the pawl or dog O.

Loosely placed upon the shaft J is the rack-bar P, which projects rearwardly between the bars $n^1 n^2$ and over the pawl O.

By means of a crank-arm, *l*, and a connecting-rod, Q, the rotation of the shaft L is made to draw the pawl O, the device N, and the brake-bar M toward itself, and thus force the rub-locks *m m* against the wheels of the vehicle.

The rack-bar N drops by its own weight, so that its notches engage with the pawl O, and as they are large enough so that their ends drop past the center of the pivot *o* to said pawl, it becomes self-locked, and remains so until disengaged by a reverse rotation of the shaft L, which throws said pawl out of said notches by a tipping or rolling motion.

The pawl O is prevented from being drawn too straight relatively to the rack-bar by the small cross-bar n^3 , which crosses the bars $n^1 n^2$ at the proper point; and the rack-bar P is prevented from being thrown up so as to come in contact with the reach C or other part of the wagon by the projection n^4 on the arm n^1 .

It will be seen that in operating this brake the parts N, O, and Q practically form three links of a draw-rod for pulling the bar M toward the wheels; that after it has been drawn up the parts N and P form the connection, while the part O simply serves as a detent.

The brake-lever K is of a peculiar construction, which enables it to be reduced in length when necessary, as when loading logs or other heavy articles over the wheels. The upper or handle portion, K', has two studs, $k^1 k^1$, having elongated heads, and the lower portion has corresponding slots $k^2 k^2$, the upper one of which is open at its upper end.

By pulling the handle up until the top stud slips out of its slot, and then turning it to one side until it is at right angles with the lower portions, it can be removed without difficulty. When the reason for its removal no longer exists, it can be replaced with equal facility.

It is necessary, in order that this brake shall

give the best results, that that portion of the shaft which carries the operating parts should have considerable rigidity, and this can be best secured by having bearings near to their point of attachment. The ends of the tongue-hounds are, therefore, extended through between the axle and the sand-board, and project far enough to form supports for the bearing in which the inner end of the shaft L rests.

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

1. The combination of the shaft L, crank-arm I, rod Q, pawl O, device N, and rack-bar P, substantially as and for the purpose specified.

2. In combination with the rack-bar N of a brake mechanism, a pawl, O, hung on a pivot so near the point of the tooth of said pawl that said tooth will enter the notches in said rack-bar to a point past the center of said pivot, so that the brake mechanism shall thereby become automatically locked, substantially as herein shown and specified.

3. In a brake mechanism, in combination with the pivoted rack-bar P, a pawl, O, pivoted

near its point, so as to become locked and unlocked automatically by simply moving a brake-lever connected to its other end to and fro, thus dispensing with all additional fastenings or locking devices to hold said pawl in place, substantially as shown and specified.

4. In combination with the pawl O, the cross-bar n^3 , to prevent said pawl from being pulled too far forward, substantially as shown and specified.

5. In combination with the rack-bar P, the overhanging hook n^4 , to operate as a stop for said bar, substantially as shown and specified.

6. The rearwardly-projecting tongue-hounds I I, in combination with the bearings for the inner end of the brake-shaft as a support for said brake-shaft, substantially as shown and specified.

In witness whereof I have hereunto set my hand and seal, at Mooresville, Indiana, this 8th day of August, A. D. 1879.

DAVID GIBBENS. [L. S.]

Witnesses:

ELAM M. McCORD,
CLINTON C. HADLEY.