E. COURT.

Wagon-Brake.

No. 35,140. Patented May 6. 1862.

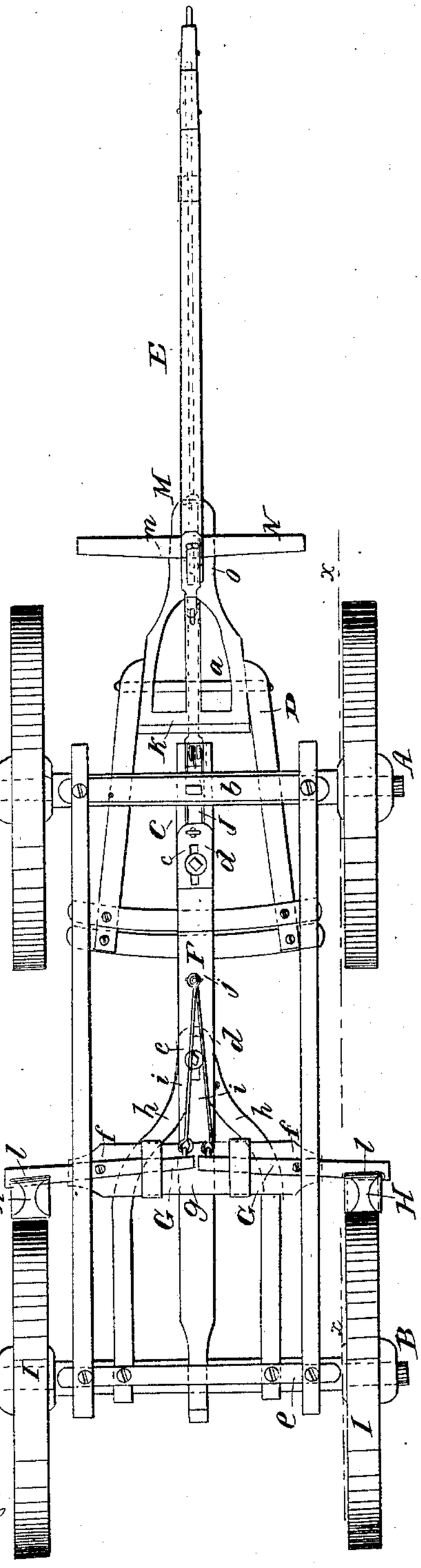

Fig. 1.

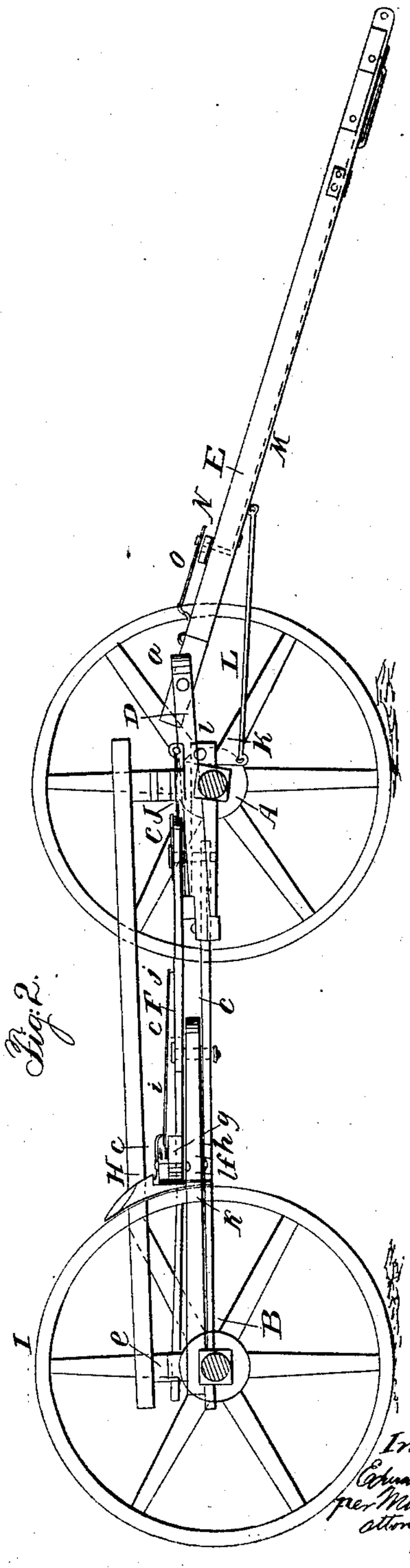

Fig. 2.

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UNITED STATES PATENT OFFICE.

EDWARD COURT, OF COEYMANS, NEW YORK.

IMPROVEMENT IN BRAKES FOR WHEEL VEHICLES.

Specification forming part of Letters Patent No. **35,140**, dated May 6, 1862.

To all whom it may concern:

Be it known that I, EDWARD COURT, of Coeymans, in the county of Albany and State of New York, have invented a new and Improved Brake for Wheel Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of my invention; Fig. 2, a side sectional view of the same, taken in the line *x x*, Fig. 1.

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

This invention relates to an improved brake for wheel vehicles of that class which are commonly termed "self-acting."

The object of the invention is to obtain a brake of the class specified which will operate with certainty and be capable of being applied to all wheel vehicles, whether constructed with a view to its application or not, be less liable to get out of repair, less cumbersome than usual, and admit of being so attached to the vehicle as not in the least to interfere with the operation of the running-gear of the same.

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

A represents the front and B the back axle of a four-wheel vehicle.

C is the reach or perch which connects the front and back axles, and D are the hounds, to which the draft-pole E is attached by a horizontal bolt, *a*. The front axle, A, turns on a king-bolt, *b*, as usual.

F represents a slide which is fitted on the top of the perch or reach C, and is secured thereto by vertical bolts *c c*, which pass through the reach and through longitudinal oblong slots *d d* in the slide. These oblong slots admit of a longitudinal movement of the slide a distance equal to the length of the slots less the thickness of the bolts *c c*. The back end of the slide passes through a mortise in the back bolster, *e*, of the back axle, B, and is allowed to slide freely therein, said mortise serving as a guide for the back part of the slide, while the vertical bolts *c c* serve as guides for its front part, as will be fully understood by referring to Fig. 1.

G G represent two levers which have their fulcrum-pins *f f* passing through a cross-bar, *g*, attached to the braces *h h* of the perch or reach C. The inner ends of these levers G G are connected by rods *i i* to the slide F, as shown at *j*, and the outer ends of the levers have each a shoe, H, attached, which act or bear against the front sides of the back wheels, I I, at a point above their axle B, as shown in Fig. 2. The shoes H are attached to the levers G G in such a manner that they may rise and fall. They rise, so as to relieve the wheels I I, when the vehicle is backed, and fall by their own gravity when the latter is drawn forward. This adjustable movement of the shoes is effected by having a vertical rod, *k*, attached to them at each side, said rods being fitted in guides *l*, attached to the levers, as shown in Fig. 2.

The front end of the slide F is connected by a link, J, to the upper end of a lever, K, which has its fulcrum-pin *l* in the front part of the perch or reach C, as shown clearly in Fig. 2. The lower end of this lever is connected by a rod, L, with a rod, M, which is fitted underneath the draft-pole E in suitable guides. The back end of the rod M is turned up and passes through an oblong longitudinal slot, *m*, in the draft-pole E, and has the doubletree N attached to its upper end, the upper end of the rod M being fitted in a slotted metal draft-link, O, which is attached to the upper surface of the draft-pole E. To the front end of the rod M the pole or holdback straps P are attached.

The operation is as follows: When the vehicle is drawn along, the doubletree N is of course pulled forward, as the team is attached to it, and the rod L actuates the lever K, which forces back the slide F, so that the levers G G will throw the shoes H H off from the back wheels, I I. When, however, the vehicle is descending an eminence and the speed of the team is checked, the gravity of the vehicle will cause it to advance, and, the rod M being held by the holdback or pole straps, the lever K will be actuated in a direction reverse to its former movement, and also the slide F, and the shoes H H consequently applied to the wheels I I, the forward movement of which has a tendency to press them down on the levers G G, the slot in the draft-

pole E and the slot in the draft-link O admit of the forward movement of the vehicle. In backing the vehicle, however, the shoes H will not bear against the wheels I so as to retain their backward revolution, as they then have a tendency to raise the shoes, owing to the vertical movement of the same in the levers, as previously described.

The advantages of this invention are as follows: The slide F, in consequence of being fitted at its back end in the bolster *e* of the back axle, is firmly retained in position and rendered fully competent to resist any strain to which it may be subjected. The perfect operation of the levers G G and shoes H H therefore is fully insured. By having the rod M placed underneath the draft-pole E the former is out of the way and not liable to be injured or bent, and the lever K, in consequence of being inserted in the front end of the perch or reach, is not liable to be injured or strained, as it would be were it placed in the draft-pole, and the latter, in consequence of having no sliding movement, which is common to many self-acting brakes of this class, insures a more steady movement of the vehicle and a more perfect action of the brake.

I do not claim, broadly, a self-acting brake for a wheel vehicle formed by connecting shoe-bars to the draft-pole or to a rod connected thereto and to the team; but,

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

The slide F, fitted to the perch or reach C and in the back bolster, *e*, as shown and described, in combination with the shoe-levers G G, draft-link O, lever K, and rod L M, the latter having the doubletree N attached and placed underneath the draft-pole E, all arranged as and for the purpose set forth.

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