(No Model.)

W. COOPER.

END GATE.

No. 471,377. Patented Mar. 22, 1892.

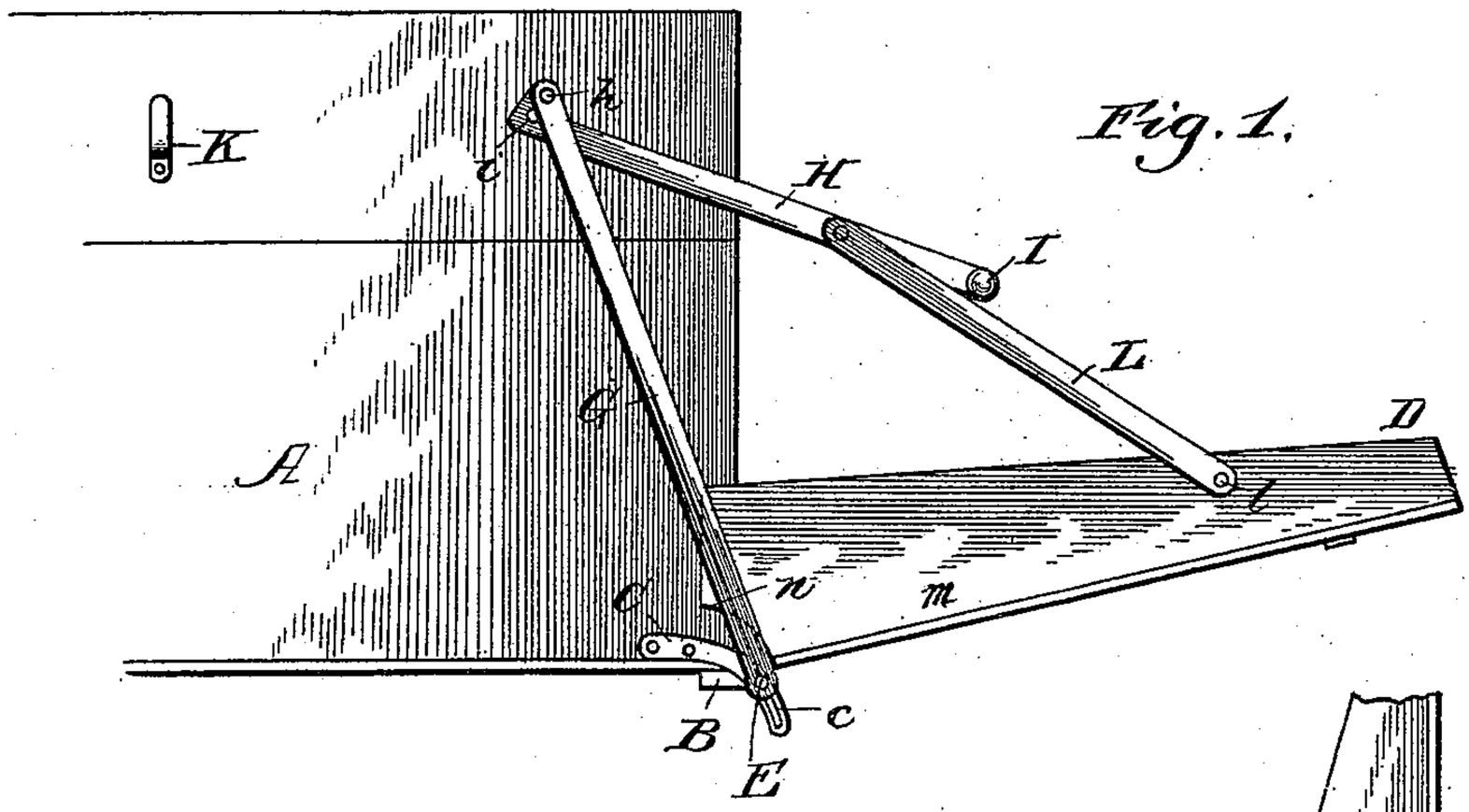

Fig. 1.

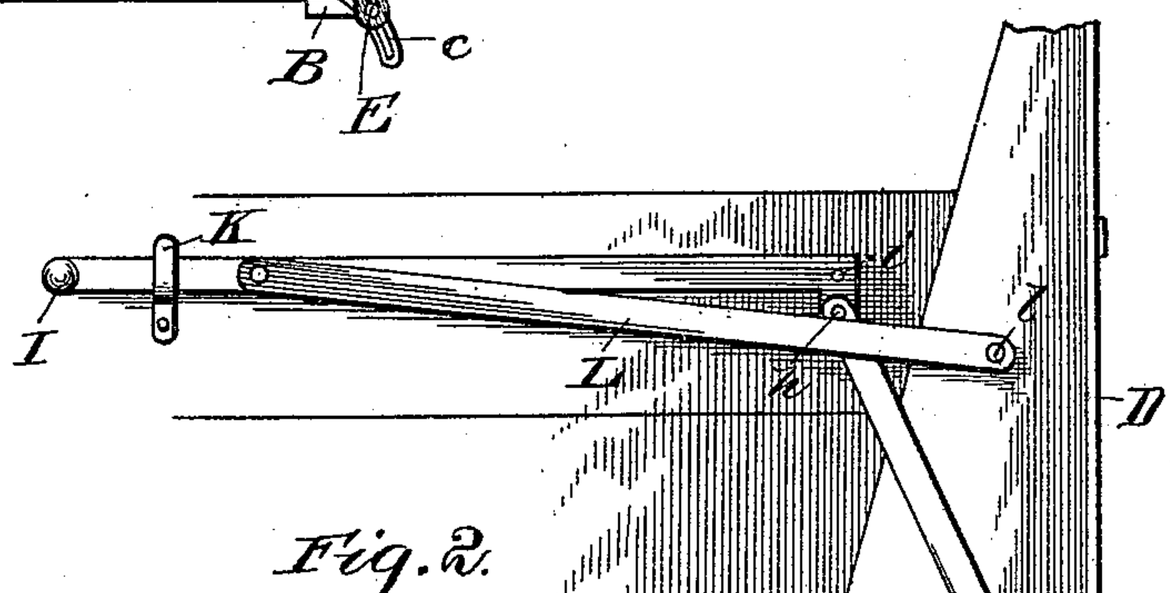

Fig. 2.

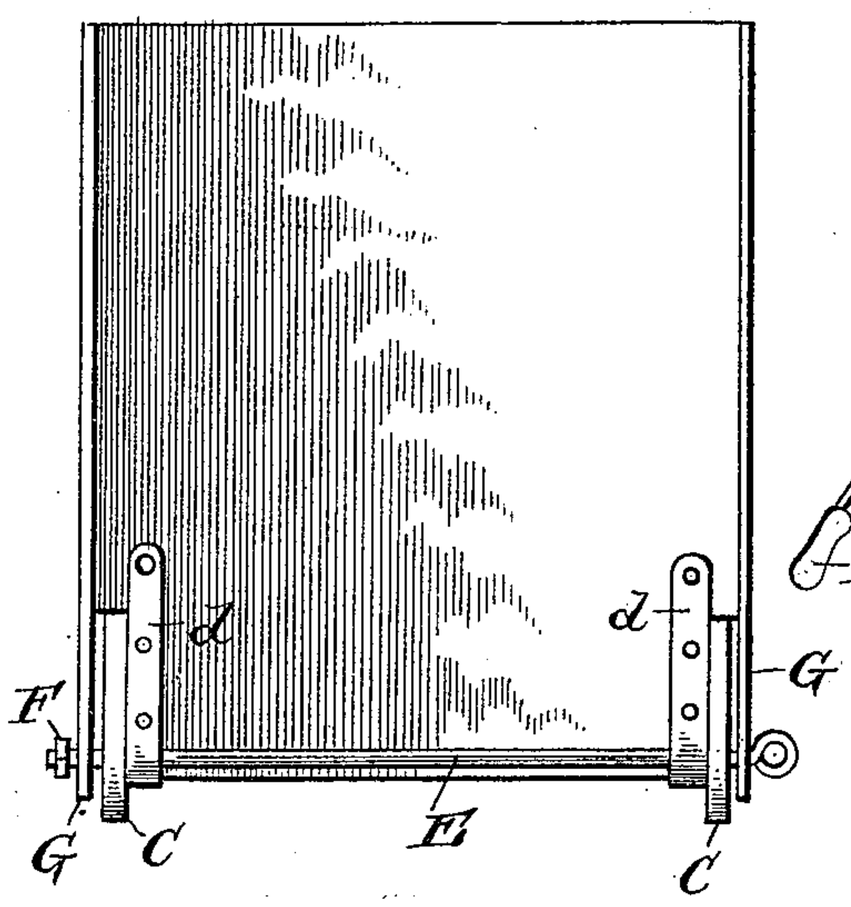

Fig. 3.

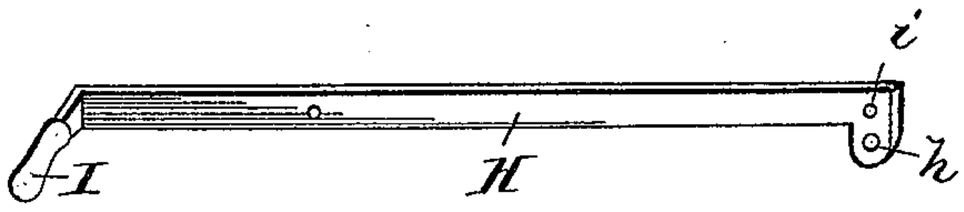

Fig. 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

WARD COOPER, OF LAPORTE CITY, IOWA.

END-GATE.

SPECIFICATION forming part of Letters Patent No. 471,377, dated March 22, 1892.

Application filed December 18, 1891. Serial No. 415,505. (No model.)

To all whom it may concern:

Be it known that I, WARD COOPER, a citizen of the United States, and a resident of Laporte City, in the county of Black Hawk and State of Iowa, have invented certain new and useful Improvements in End-Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in end-gates for wagons; and the objects of the invention are, first, to provide a simple and strong gate adapted to be tightly closed against the rear end of a wagon-body, and, secondly, to provide simple means whereby the gate can be operated by a person in the wagon.

With these ends in view my invention consists in the peculiar construction and arrangement of parts, as will be hereinafter fully pointed out and claimed.

In the accompanying drawings, Figure 1 is a side elevation of the rear portion of a wagon-body having my improved gate attached thereto, showing the gate open. Fig. 2 is a similar view showing the gate closed. Fig. 3 is a rear elevation showing the gate closed, and Fig. 4 is a detail view of the operating-lever.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates the body of a wagon, which is of the ordinary construction, and B designates a cross-bar of the frame thereof. To the sides of the wagon-body are attached in any suitable or desirable manner the angular hangers or brackets C, the free ends of which extend beyond and below the rear end of the wagon-body A. The brackets or hangers C are slotted from near their free ends to a point in line with the lower edge of the rear end of the body A, as at *c*.

D is the end-gate, and to this gate, near the sides thereof, are attached metallic straps *d*, the free ends of which are bent upon themselves to form loops or eyes, through which and the slots *c* in the brackets or hangers C is passed a headed rod or bar E. One end of this rod E is threaded and a nut F is screwed thereon to prevent endwise or longitudinal movement of the rod. To the rod E, between the head and nut thereon and the brackets C, respectively, are attached one end of the arms or hangers G, the other end of each of such arms being attached to a lug or projection *h* on an operating-lever H, which is pivotally connected near one end to the body A at *i*. The forward end of the lever H is bent outwardly from the side of the wagon-body to form a handle I.

K designates a cleat attached to the side of the body A, and on this cleat rests the forward end of the lever H when the gate D is closed.

L is a link or bar, which has one end connected to the lever H and the other end connected to the side of the end-gate, as at *l*.

The end-gate D is provided with side pieces *m*, which lie against the sides of the body A when the gate is closed, and the inner ends of said side pieces are cut away or recessed, as at *n*, so as to pass around the ends of the bar B when the gate is in a vertical position.

The end-gate is of greater width than the depth of the body A, and when closed the bottom of the gate bears closely against the bar B below the bottom of the body A, as shown in Fig. 2, and thus makes a tight joint with the end of the wagon-body.

The operation of my improvement is as follows: The gate being closed, it can be opened by a person within the wagon by grasping the handle I to raise the free end of the lever H, the parts assuming the positions shown in Fig. 1, and the rod E moving up in the slots *c* in the brackets C. If desired, the nut F can be unscrewed and the rod E withdrawn to enable the gate D to be removed.

It will be noticed that when the gate is open the handle I extends across the link or bar L, so that the lever H and the link L cannot possibly get into the same straight line. The gate can thus be closed simply by pushing thereon without using the levers.

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

1. The combination, with a wagon-body, of the slotted brackets or hangers attached to and extending below the sides thereof, a rod passing through the slotted hangers, an end-gate connected to said rod, and an operating-lever fulcrumed on the wagon-body and con-

nected with the rod passing through the slotted hangers and to the end-gate, substantially as described.

2. The combination, with a wagon-body, of the slotted brackets or hangers attached to and extending below the sides thereof, an end-gate having eyes attached to its under side and aligning with the slots in the hangers on the wagon-body, a rod passing through the slotted hangers and the eyes on the end-gate, an operating-lever pivoted to the side of the wagon-body, and connections between said lever and the end-gate and the rod passing through the eyes thereon, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WARD COOPER.

Witnesses:
F. E. WETTSTEIN,
STEPHEN GILLEY.