

No. 680,620.

Patented Aug. 13, 1901.

I. ROBBINS.
ADJUSTABLE WAGON RACK.

(Application filed May 7, 1901.)

(No Model.)

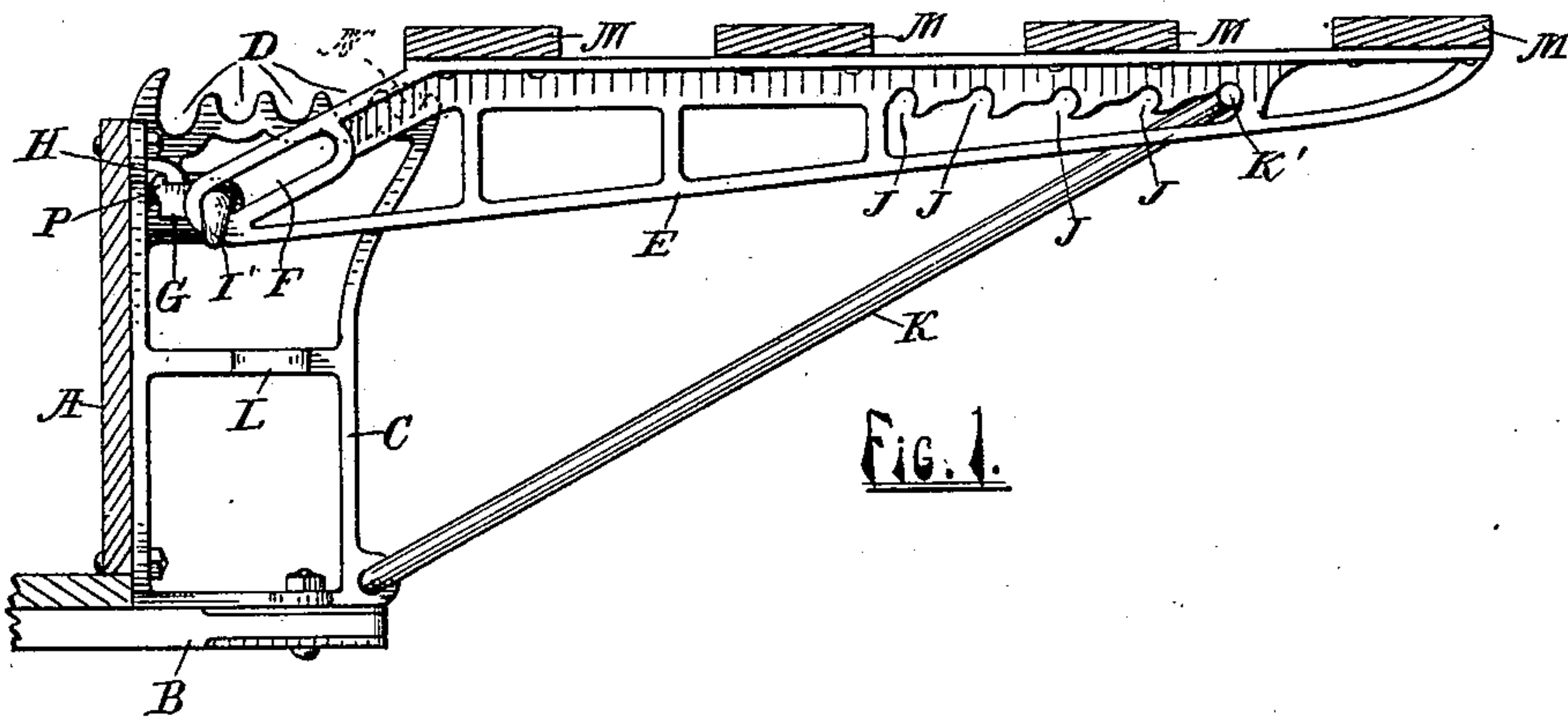


Fig. 1.

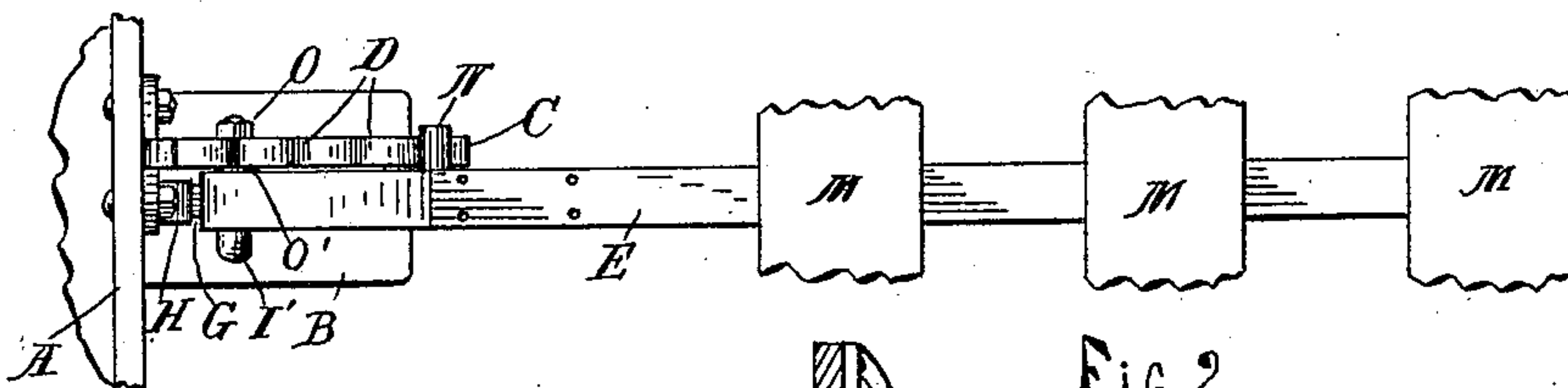


Fig. 2.

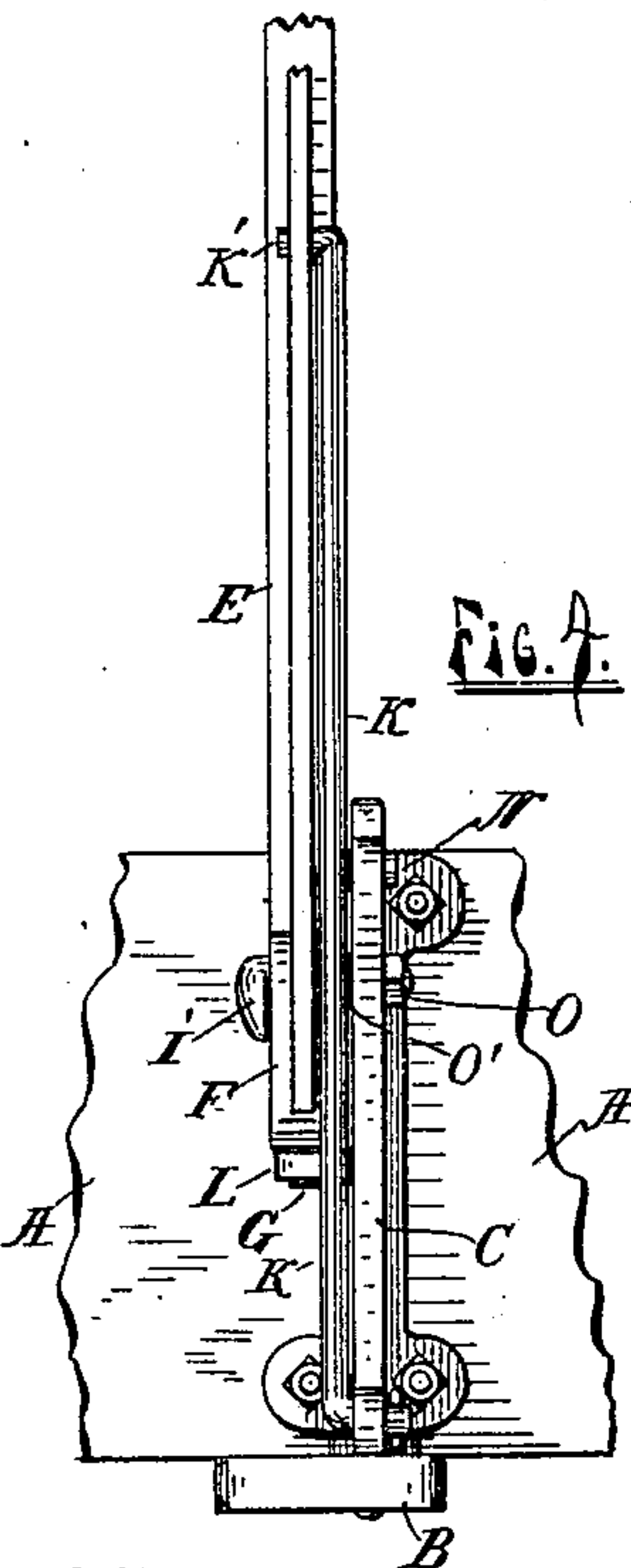


Fig. 4.

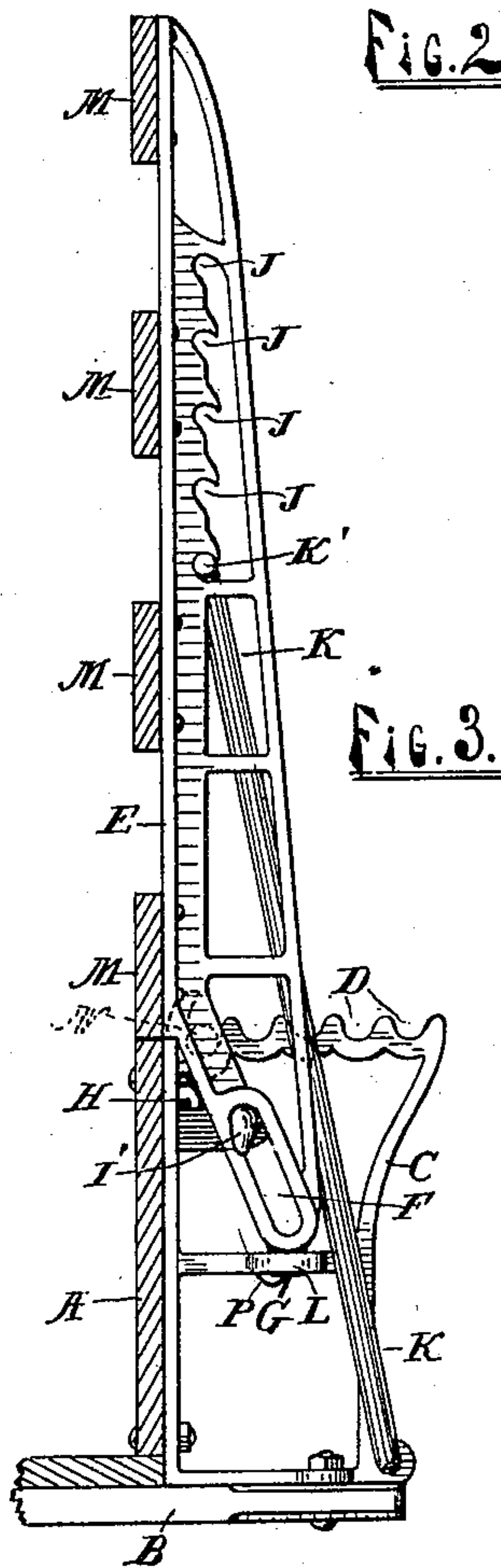


Fig. 3.

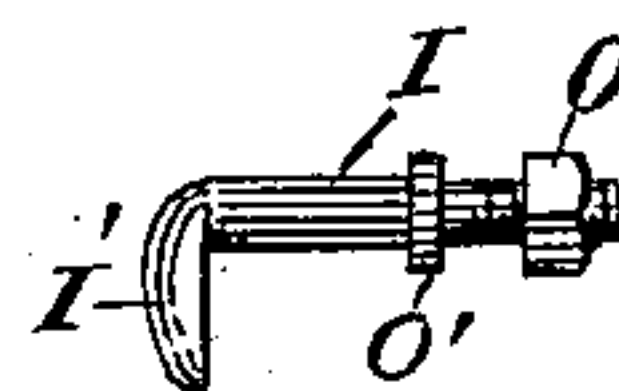


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

ISAAC ROBBINS, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO HARRISON WAGON COMPANY, OF SAME PLACE.

ADJUSTABLE WAGON-RACK.

SPECIFICATION forming part of Letters Patent No. 680,620, dated August 13, 1901.

Application filed May 7, 1901. Serial No. 59,093. (No model.)

To all whom it may concern:

Be it known that I, ISAAC ROBBINS, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Adjustable Wagon-Racks; 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 adjustable wagon-racks; and its object is to provide a wagon-box of suitable construction and side-boards for the same with means for attaching the side-boards, which may be readily adjusted at various angles from vertical to horizontal, inclusive, and that may be readily detached at pleasure.

My invention consists in combining with the box and side-boards suitable devices constructed and arranged as hereinafter described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of a device embodying my invention with the side-boards adjusted horizontal; Fig. 2, a plan view of the same; Fig. 3, a side elevation of the same with the side-boards adjusted vertical; Fig. 4, the same viewed at right angles to Fig. 3, and Fig. 5 a detail of the hook-bolt.

Like letters refer to like parts in all the figures.

A represents a portion of the side of a suitable wagon-box, and B a transverse strip extending beneath the box and projecting outward therefrom at each side. So many of these strips B are used as deemed necessary, and a device as shown is placed at each end of each strip to support the side-boards and side of the box.

C is a suitable frame, preferably of malleable iron, secured to the side A and strip B by suitable bolts or fastenings and provided with a substantially horizontal top portion near the top of the box A and provided with a series of concave recesses D. Said frame is also provided with a stop H, adapted to engage a lug G on the inner end of the arm

E. The frame is also provided with a socket L to receive the lug G when the arm is vertical.

E is an arm, to which the side-boards M are attached. This arm is provided with a pin N to engage the recesses D and support the arm and also with an inclined slot F to engage and traverse a bolt I.

G is a lug on the inner end of the arm E to engage the socket L and stop H, and P is a hook on the lug to engage the frame and prevent vertical movement of the arm when adjusted as shown in Fig. 3.

The bolt I is provided with a hook I' at its outer end to engage the outer side of the arm E and hold the same to the frame. The bolt I is secured in an opening in the frame C by a collar O' and a nut O.

A brace-rod K is bent at right angles at its respective ends and pivotally connected at one end to the frame C by inserting one end in an opening in the frame. At the other end K' said brace engages a series of recesses J in the arm E to assist in supporting the outer end of the said arm. This arm is variously adjusted by shifting the pin N in the recesses D and the brace end K' in the recesses J. When the pin and brace are in the outer recesses, the arm is horizontal, and when they are in the inner recesses the arm is vertical, and when they are in intermediate recesses the arm is variously inclined. The bolt I adjusts in and traverses the slot F and serves as a support for the arm. When the arm is horizontal, the lug G also engages the stop H and furnishes an additional support for the arm, and when the arm is vertical the lug G enters the socket L, and thus furnishes a supplementary support, the inner recesses D being made lower for the purpose of lowering the arm to permit such engagement. To detach the side-boards and arms, the nuts O are loosened and the hooks I' turned so as to pass through the slots F.

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

1. A frame having a series of recesses, a socket in the frame, an arm, a pin on the arm to engage the recesses, a lug on the arm to engage the socket, and a hook on the lug to

engage the frame and prevent vertical movement of the arm, substantially as described.

2. A frame having a series of recesses, an arm having a slot, a pin on the arm to engage the recesses, and a bolt rotatively adjustable in the frame and having a hook adapted to pass through the slot and engage the side of the frame, substantially as described.

3. A frame having a series of recesses, a bolt in the frame, a stop on the frame, an arm, a pin on the arm to engage the recesses, a slot in the arm to engage the bolt, and a lug on the arm to engage the stop, substantially as described.

4. A frame having recesses, a bolt in the frame, a socket in the frame, an arm, a pin in the arm to engage the recesses, a slot in the arm to receive and traverse the bolt, and a lug on the arm to engage the socket, substantially as described.

5. A frame having a series of recesses, a bolt in the frame, a stop on the frame, a socket in the frame, an arm, a pin on the arm to engage the recesses, a slot in the arm to receive and traverse the bolt, and a lug on the arm to engage the stop and socket, substantially as described.

6. A frame having a series of recesses, a bolt in the frame, an arm having a series of recesses and also having a slot to receive and traverse the bolt, a pin on the arm to engage the recesses in the frame, and a pivoted brace

to engage the recesses in the arm, substantially as described.

7. A frame having a series of recesses, a stop on the frame, a bolt in the frame, an arm having a series of recesses, a pin on the arm to engage the recesses in the frame, a slot in the arm to receive the bolt, a lug on the arm to engage the stop, and a brace pivoted to the frame and engaging the recesses in the arm, substantially as described.

8. A frame having a series of recesses and a socket, a bolt in the frame, an arm having a series of recesses, a pin on the arm to engage the recesses in the frame, a slot in the arm to receive the bolt, a lug on the arm to engage the socket, and a brace pivoted to the frame and engaging the recesses in the arm, substantially as described.

9. The combination of a frame having recesses a stop and a socket; a bolt in the frame, an arm having a series of recesses a pin a slot and a lug; and a brace pivoted to the frame at one end, and engaging the recesses in the arm at the other end, substantially as described.

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

ISAAC ROBBINS.

Witnesses:

W. G. CLARK,
LUTHER V. MOULTON.