

(No Model.)

W. BECKWITH.  
END GATE FOR WAGONS.

No. 432,688.

Patented July 22, 1890.

Fig. 1.

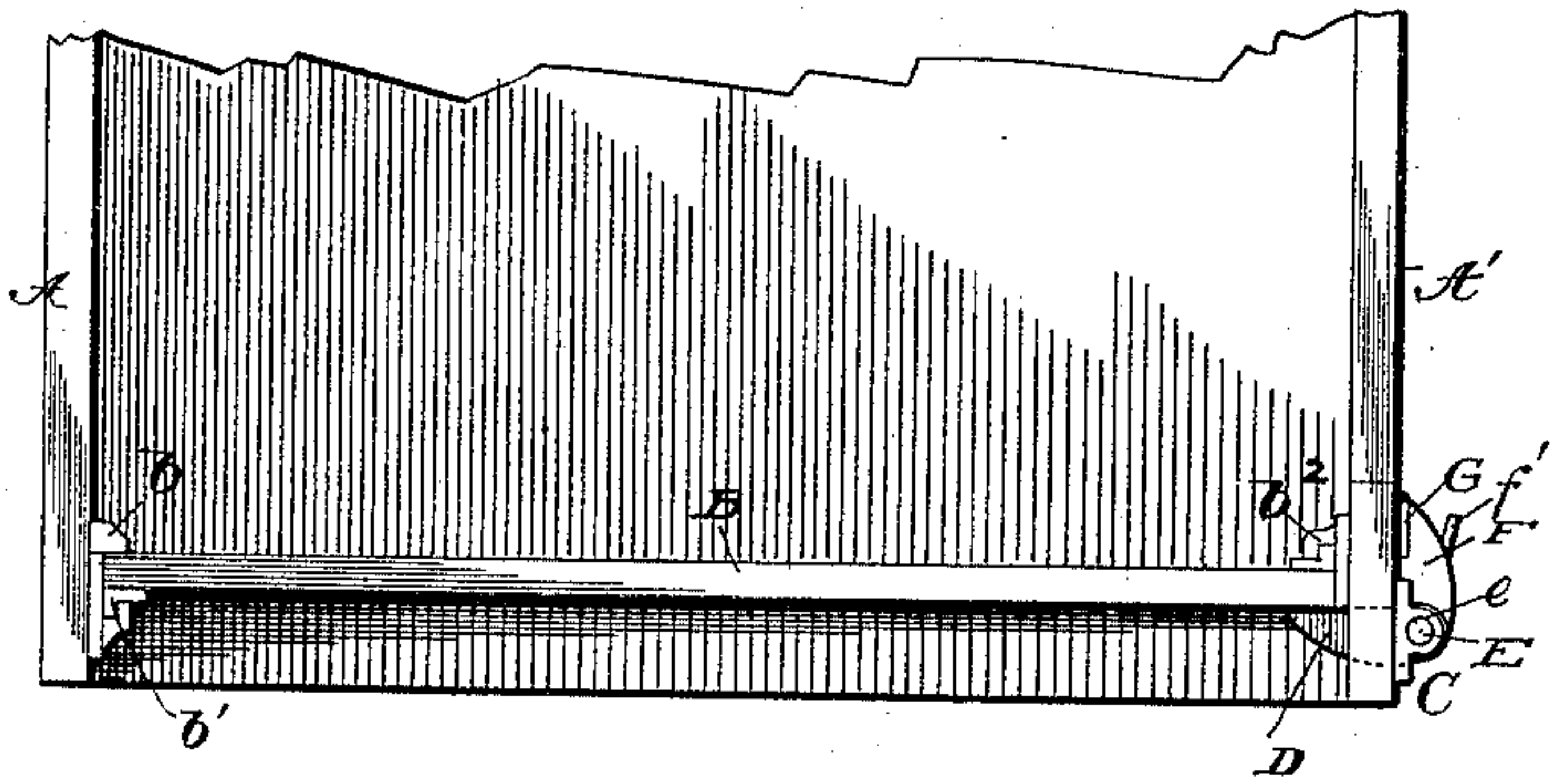


Fig. 2.

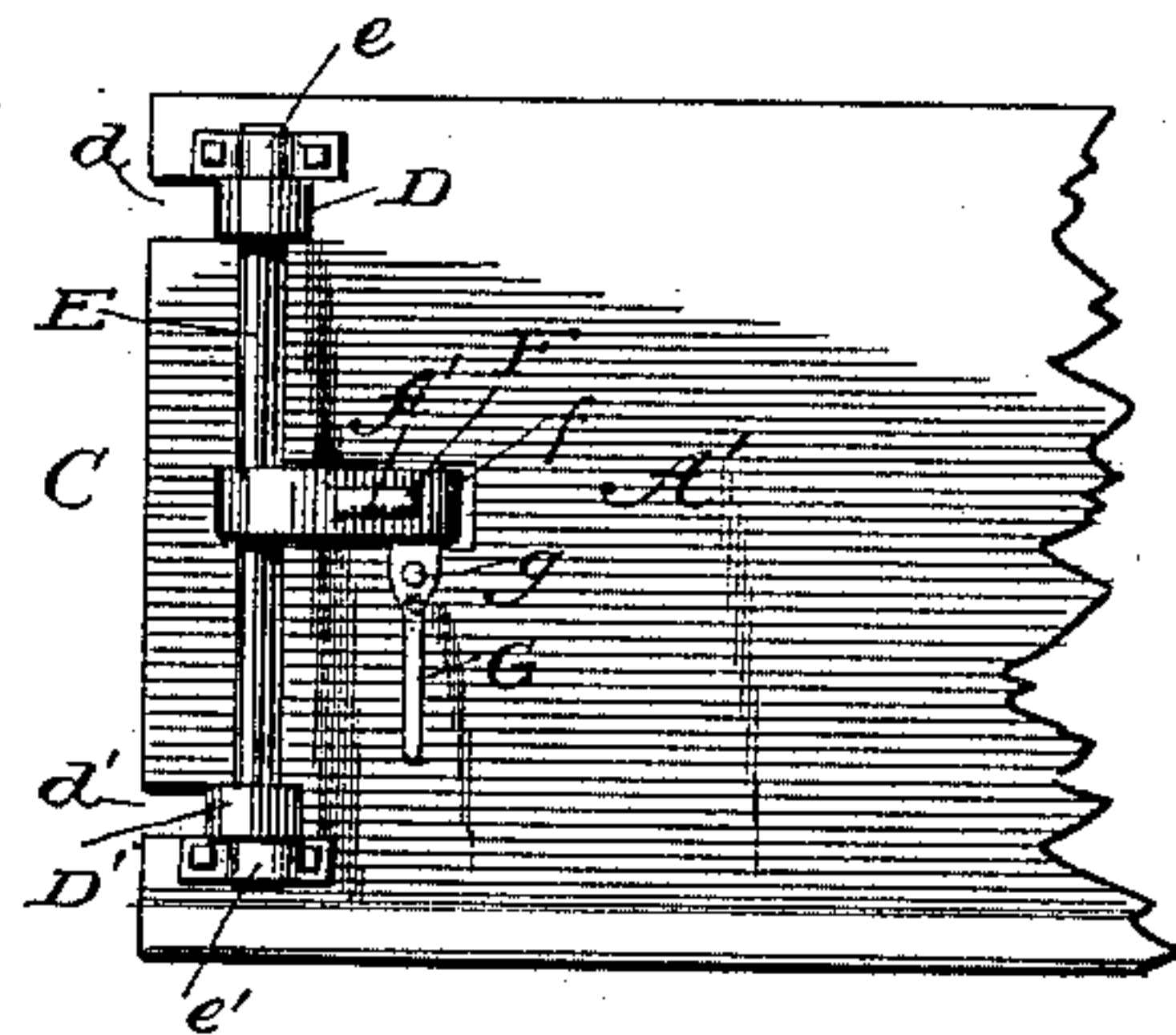


Fig. 4.  
on line x-x

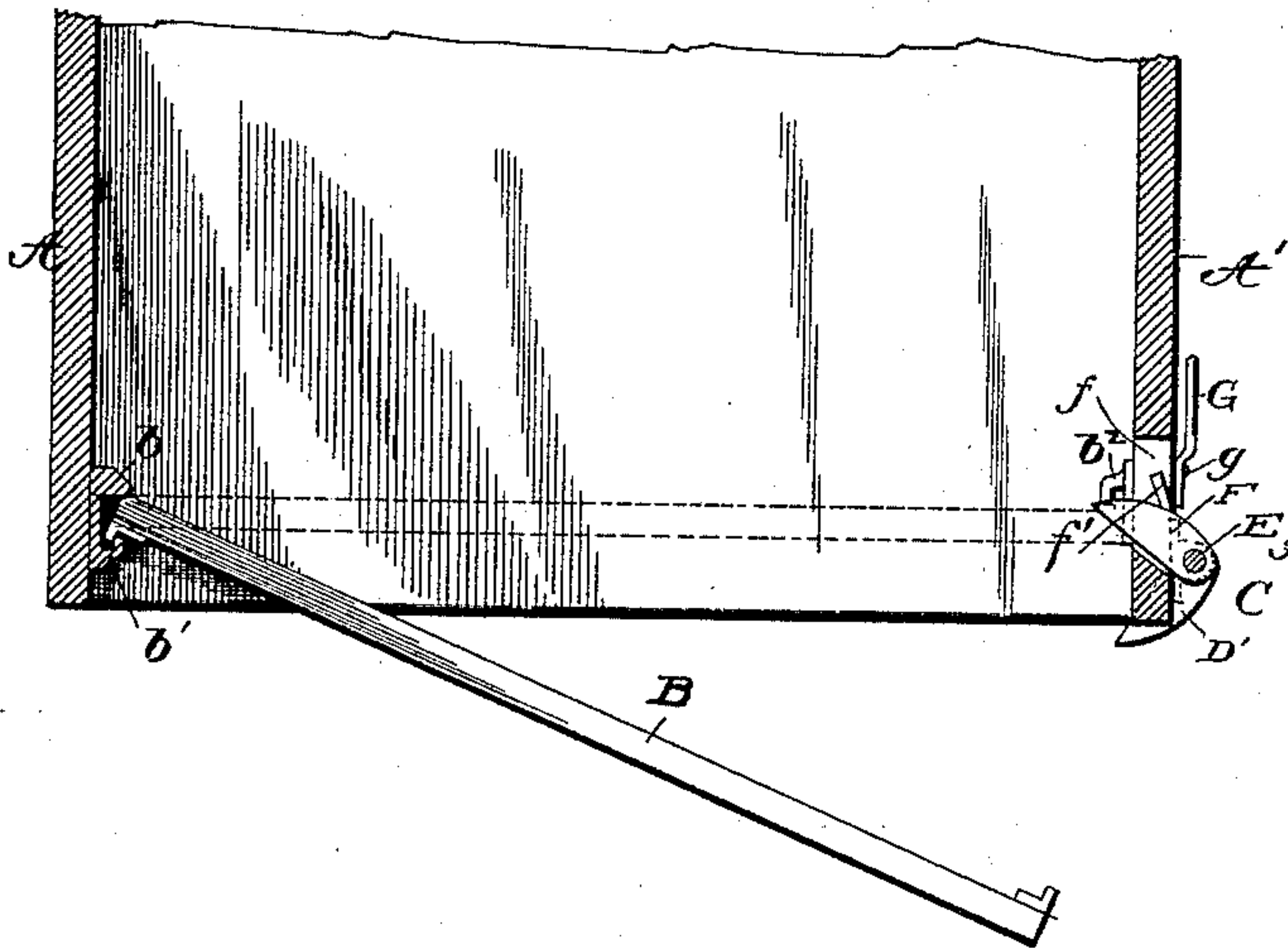


Fig. 3.

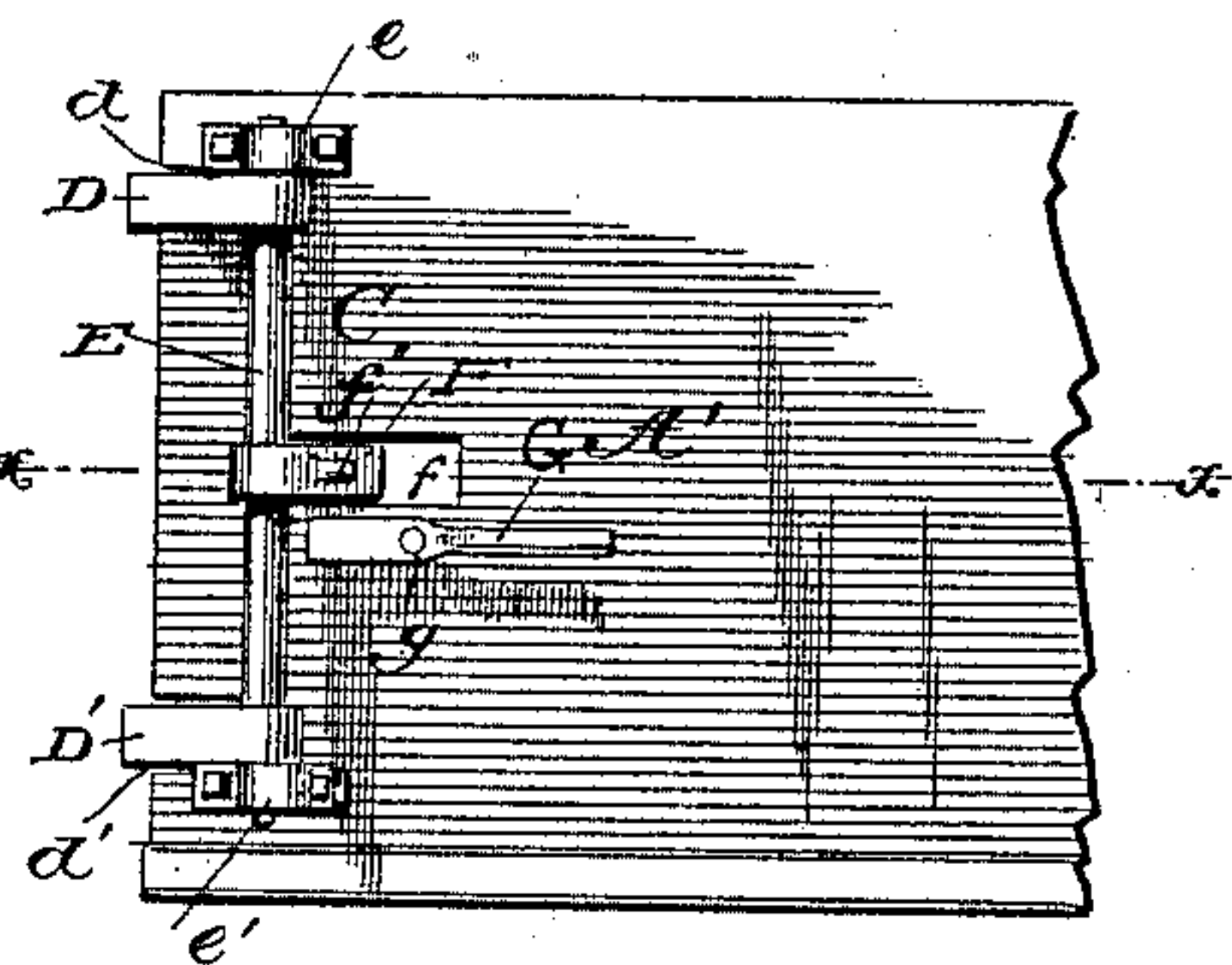
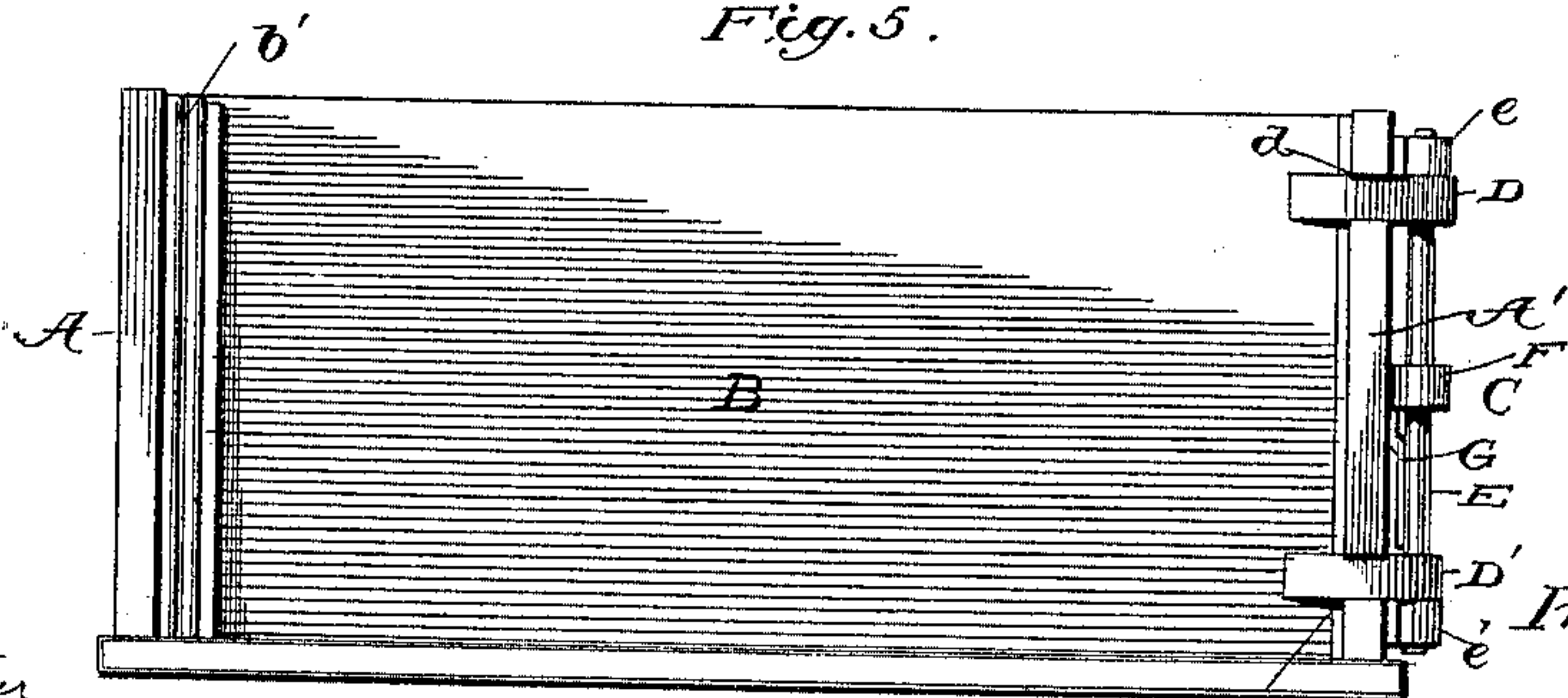


Fig. 5.



Witnesses:

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# UNITED STATES PATENT OFFICE.

WARREN BECKWITH, OF LAKE GENEVA, WISCONSIN.

## END-GATE FOR WAGONS.

SPECIFICATION forming part of Letters Patent No. 432,688, dated July 22, 1890.

Application filed March 26, 1890. Serial No. 345,379. (No model.)

*To all whom it may concern:*

Be it known that I, WARREN BECKWITH, of Lake Geneva, in the county of Walworth and State of Wisconsin, have invented certain Improvements in End-Gates for Wagons, of which the following is a specification.

My present invention relates to that class of end-gates for wagons represented in Letters Patent of the United States No. 354,088, granted to me on the 14th day of December, 1886, in which provision is made for either lifting the gate upward from the wagon between guides to permit the wagon to be unloaded, or for drawing it outward from the wagon horizontally when the pressure of the load prevents the gate from being readily lifted.

The invention consists in combining with an end-gate a gate-locking device mounted on a vertical axis on the side of the wagon and adapted to engage the gate, the said locking device being provided with an arm adapted to be engaged by a lever or its equivalent on the side of the wagon, and to hold the locking device in an operative position against the end-gate or to be disengaged by the lever to permit the locking device to turn on its axis out of engagement with the gate and permit the removal of the latter.

The invention also consists in the details of construction and combination of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a top plan view of the rear portion of a wagon embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a similar view with the locking device in an operative position to permit the withdrawal of the end-gate horizontally. Fig. 4 is a horizontal section on the line  $x x$  of the preceding figure. Fig. 5 is an end elevation of the wagon.

Referring to the drawings,  $A A'$  represent the two sides of a wagon;  $B$ , an end-gate having one end mounted between vertical guides  $b b'$  on the side  $A$ , and its opposite end seated against a vertical guide  $b^2$  on the side  $A'$ , as in my former patent above referred to.

$C$  represents a locking device for the end-gate arranged to be held against the latter or permitted to swing outward from the same. This construction and arrangement permit

the end-gate to be drawn upward between the guides or withdrawn horizontally, as desired. With the exception of the swinging locking device the foregoing parts may be similar to the corresponding parts in my former patent.

The locking device in the present case consists of dogs  $D D'$ , mounted rigidly on a vertical rock-shaft  $E$ , which is journaled at its ends in bearings  $e e'$ , fixed to the outside of the side-board  $A'$ , near its rear end. Adjacent to the dogs  $D D'$  the side-board  $A'$  is provided with horizontal slots or openings  $d d'$ , through which the dogs extend when the shaft is rocked. The shaft is further provided with an arm  $F$ , mounted, as shown, between the two dogs and arranged to extend through a slot  $f$  in the side-board. To the side-board  $A'$ , adjacent to the arm  $F$ , I pivot at  $g$  a lever  $G$ , the end of which is so arranged that it may be caused to engage the inner side of the arm, as shown in Fig. 2, or be disengaged therefrom, as desired. The arm  $F$  and the dogs extend substantially at right angles to each other, so that when the latter are in the position shown in Fig. 1 (against the end-gate) the arm will extend along the outside of the side-board and may be engaged by the lever, and the parts thus held securely in position. When the various parts are in the position indicated in Fig. 1, with the end-gate between the guides and the dogs locked in position against the end-gate, the latter may be withdrawn vertically from the wagon in the customary manner. When, however, the pressure of the load against the end-gate is such as to interfere with the lifting of the latter, it is only necessary to turn the lever  $G$  to the position shown in Fig. 3, when the arm will be released and the dogs  $D D'$  permitted to swing outward and the arm inward, thus allowing the withdrawal of the end-gate horizontally from the wagon. In replacing the gate one end is inserted between the guides  $b b'$  and the other end against the guide  $b^2$ . The arm  $F$  is then drawn by means of a handle  $f'$  outward through the slot  $f$ , which movement will rock the shaft and cause the dogs to move against the end-board. The lever  $G$  is then turned to engage the arm, thus locking the latter and holding the end-gate securely in place.



It is to be distinctly understood that my invention is not restricted to the combination of the locking device with an end-gate mounted between guides, which permit it to move vertically, as this locking device could be employed with equally good results in connection with an end-gate hinged at one end to swing outward.

Having thus described my invention, what I claim is—

1. The combination of the side-boards A A', the end-gate extending between the same, the vertical rock-shaft, the dogs fixed thereon and adapted to engage the end-gate, the arm F, also fixed to the rock-shaft, and the lever to engage the arm.

2. The combination, in a wagon, of the side-board A', provided with the slots or openings,

the rock-shaft mounted in bearings on the side-board, the dogs D D', and the arm F, fixed in position to extend, respectively, in the slots, and the locking device for the arm.

3. The combination, with the side-board A', of the vertical rock-shaft mounted in bearings thereon; the dogs D D', to engage the end-gate, the arm F, extending at substantially right angles to the dogs, and the locking device to hold the dogs in operative position against the gate.

In testimony whereof I hereunto set my hand, this 13th day of March, 1890, in the presence of two attesting witnesses.

WARREN BECKWITH.

Witnesses:

J. A. HERRIK,  
W. N. HOWE.