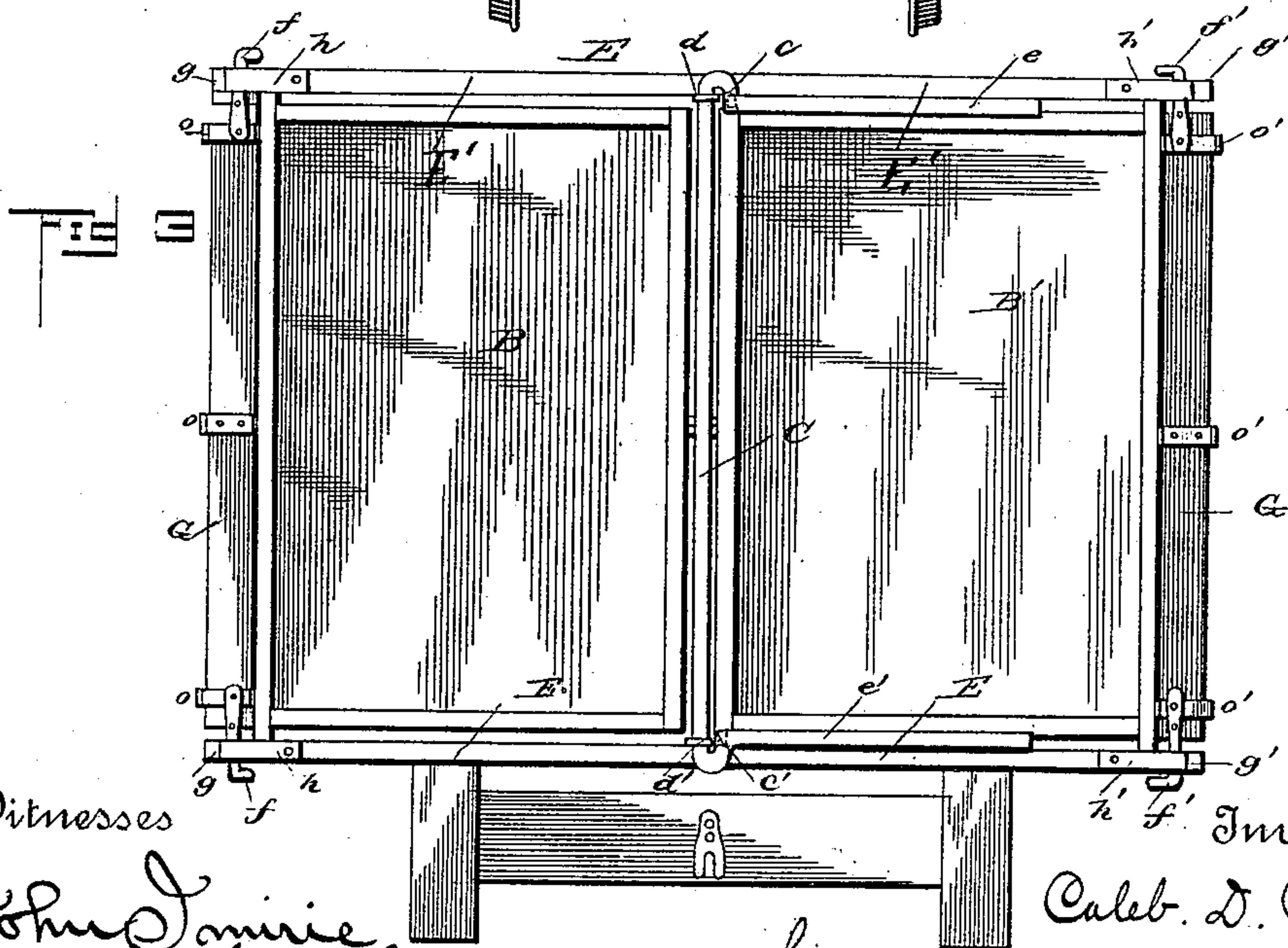
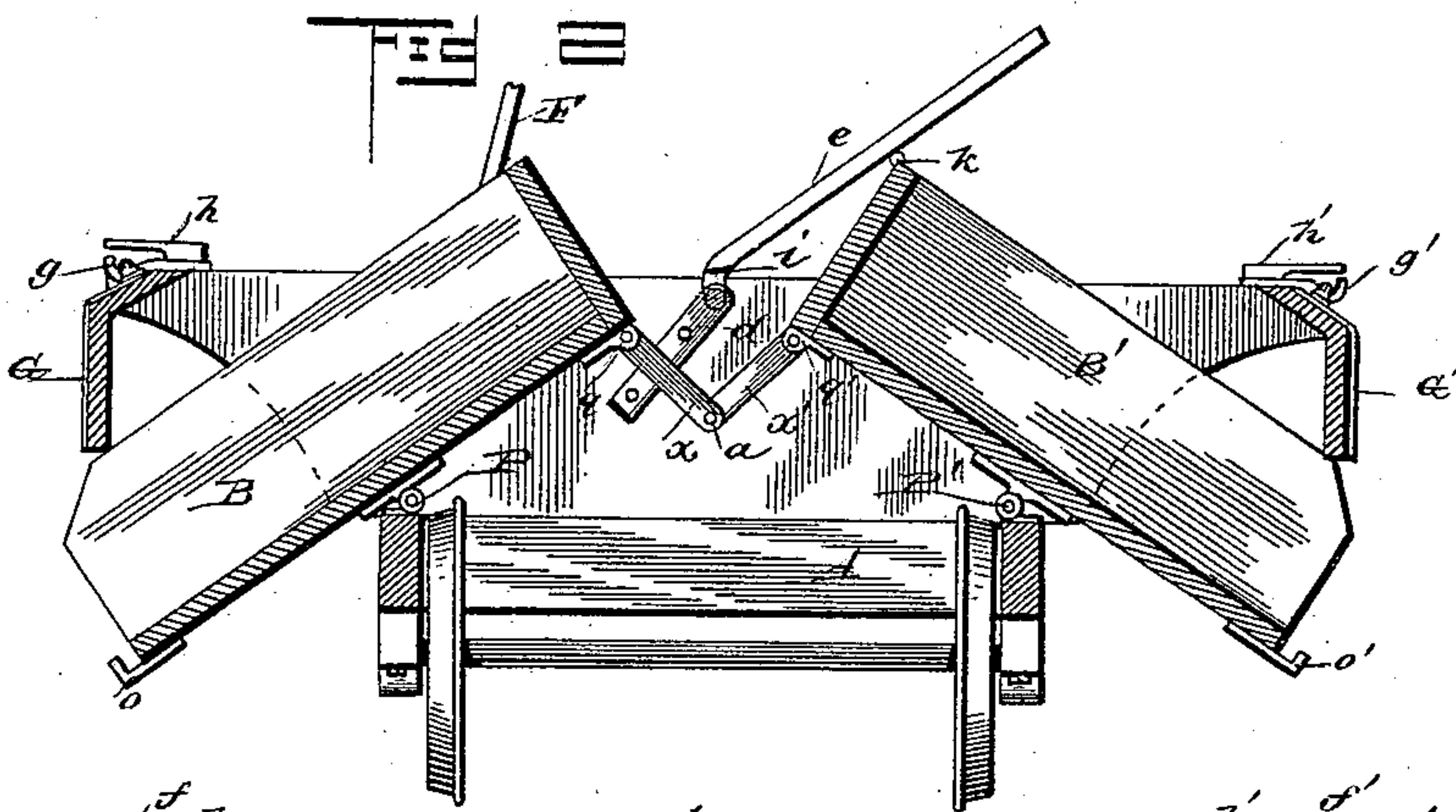
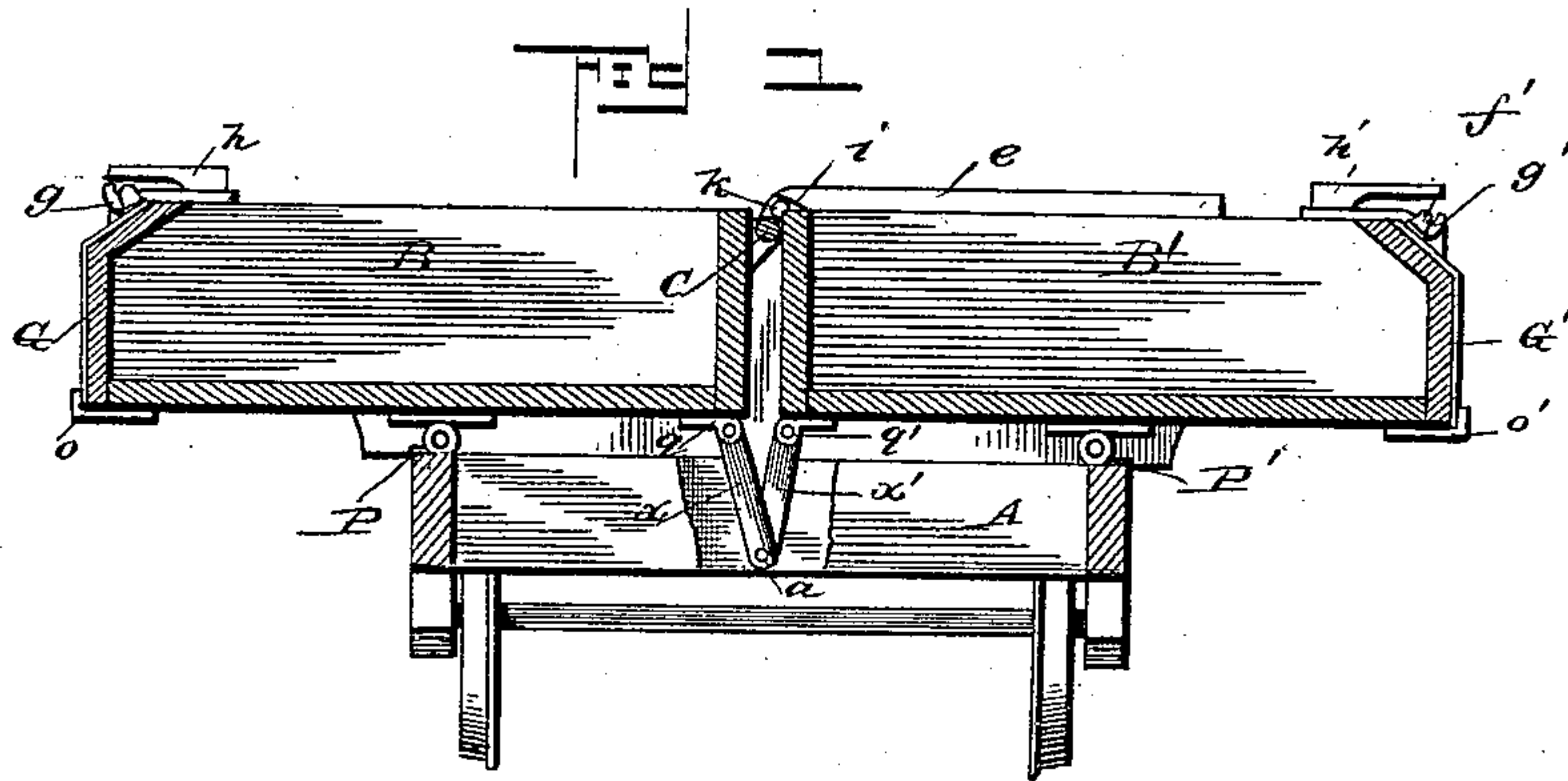


(No Model.)

C. D. PAGE.
DUMPING CAR.

No. 463,869.

Patented Nov. 24, 1891.



Witnesses

John J. Irvine
W. E. Aughinbaugh

By his Attorney

Bruce L. Elliott

Inventor
Caleb D. Page

UNITED STATES PATENT OFFICE.

CALEB D. PAGE, OF TACOMA, WASHINGTON.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 463,869, dated November 24, 1891.

Application filed May 29, 1891. Serial No. 394,549. (No model.)

To all whom it may concern:

Be it known that I, CALEB D. PAGE, a citizen of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Dumping-Cars, of which the following is a specification.

This invention relates to dumping-cars provided with pivoted boxes; and it consists in the construction and novel arrangement of parts whereby the two boxes are locked in place, unlocked, and caused to discharge their contents simultaneously by manipulating one of the boxes only.

My invention has further relation to a mechanism for locking the two sections in place when they are being loaded and for readily unlocking them when it is desired that they shall discharge their contents.

My invention has still further relation to the provision of removably-pivoted side pieces and means for holding them in place.

The object of my invention is to provide a dumping-car which shall be simple in construction, easy to operate, and which may be readily loaded from the sides instead of from the top when the exigencies of the case shall so require.

I have illustrated my invention in the accompanying drawings, in which—

Figure 1 is an end view, partly in section, showing the boxes locked in an upright position. Fig. 2 is a similar view showing the boxes freed from the locking mechanism and tilted to discharge their contents; and Fig. 3 is a top plan view of the boxes and car-body, showing the draw-head and side-sill extensions at one end of the car only.

Similar letters of reference indicate similar parts throughout the drawings.

A designates the truck of the car, constructed in the well-known manner, upon which is mounted the casing E, constituting the outer part of the car proper, and which surrounds the boxes B B'. These boxes are pivotally connected at their bottoms to the truck A through the medium of the hinge-joints P P', which are preferably located to one side of the center of gravity in order to cause the preponderance of weight of the

loaded car to be toward the outer side of the car, so that when the boxes are released from the locking mechanism hereinafter described they will automatically tilt and discharge their contents, as shown in Fig. 2. The boxes B B' are inclosed on three sides only, the outer sides being open, and the sides G G' of the casing serve as a fourth side to each, respectively, when the boxes are in the upright position shown in Fig. 1.

I will now describe the locking mechanism by which the boxes are held in position for loading. Extending from end to end of the car and situated in the space between the two back sides of the boxes is a rod C, which works in journals d d', attached to the ends E E' of the casing. This rod may be of iron or steel. Attached to the ends of the rod C are catches c c', to which are secured lever-handles e e', which normally rest on the top edges of the box, which they lock, and extend at a right angle to the rod C. The rod C is situated a little below the level of the tops of the boxes B B'. The catches c c' are bent downward to form an angle with the lever-handle and curved outward to encircle the journal-bearings d d', and at the point where they form angles with the lever-handles they are provided with detents i, which normally engage stops k, attached to the upper inner corners of one of the boxes. The surface of the detents is so inclined that the catches may be readily disengaged from the stops k when the lever-handles are lifted. The rod, catches, and lever-handles above described form what I have termed in the claims a "locking-lever."

In practice I may make the rod C, catches c c', and lever-handles e e' of one piece of iron or steel, or I may make either or all of these parts separate and unite them rigidly together without departing from the spirit of my invention.

To secure the simultaneous action of the two boxes, I connect them together by a toggle-joint, which is formed by stay-rods x x', journaled at their upper ends to hangers q q', attached to the lower inner corners of the boxes and united at their lower ends by a journal-bolt a. By the provision of this connection between the two boxes it will be seen

that it is only necessary in locking, unlocking, or tilting the boxes to manipulate the locking-lever, when both boxes will be simultaneously and in a like manner operated upon.

5 I prefer for the present to use but one toggle-joint connection attached centrally underneath the backs of the boxes; but I may decide to use two or more such joints, and I may attach them to the sides or backs of the
10 boxes, the exact point of attachment being immaterial; or for greater simplicity of construction I may decide to attach one stay-rod of the pair rigidly to one of the boxes, and in so doing in no wise depart from my idea
15 of securing the simultaneous action of the boxes.

To facilitate dumping in case the boxes should not be properly loaded, I employ the lever F, Fig. 2, which is inserted in keepers
20 (not shown) attached to the end of one of the boxes near its inner side, where it can thus be easily operated to tilt the boxes by the same person who unlocks them. I prefer to make this lever of metal with a broad thin
25 blade square at the end suitable for use in loosening such of their contents as may adhere to the sides of the boxes. The boxes being open on their outer sides are closed when in an upright position by the sides G G' of
30 the casing E. These sides conform in shape to the configuration of the ends of the boxes, and in the present case are of the angular shape shown. They have attached to their upper edges journals *f f'*, by which they are
35 supported in bearings *g g'*, attached to the ends of the car. The journals *f f'* are bent at their outer ends, as shown in Fig. 3, to prevent them from slipping out of place if, from undue strain or other cause, the ends of the
40 car should bulge out. As a further means for securing these journals in place, I provide the turn-buttons *h h'*, which serve as keepers to prevent the journals being lifted from their bearings. To secure the bottom of the side
45 in place when the boxes are being loaded, I attach to the bottom of each box, so as to project slightly beyond it, angular keepers *o o'*, the toes of which project upward and prevent the sides from swinging outward.

50 The operation is as follows: The parts being in the position shown in Fig. 1, the operator, standing at one end of the car, lifts the locking-lever, which releases the detents *i* from contact with the stops *k*. The lever-handle is then dropped and rests on the stops *k*,
55 which slides along the under surface of both handles as the boxes tilt on the hinge-joints P P'. Should the load not be properly placed in the boxes, so that they overbalance readily, they may be tilted by the lever F. The sides G G', so soon as the boxes have tilted far enough to release them from engagement with the keepers *o o'*, swing outward and allow the contents of the boxes to discharge
60 readily. When the boxes are returned to their upright position, the stops *k* slide along the

under sides of the lever-handles until the detent *i* is reached, when the lever-handles automatically drop and the boxes are locked in place.

It may be desired to fill the boxes from the sides, as by shoveling, rolling on stones, stumps, or the like, and when this is the case it is necessary to remove the sides. This can be easily done by turning the turn-buttons *h*
70 *h'* to one side, when the sides can be lifted out of their bearings and taken off.

Although I have described my invention as particularly applicable to grading-cars, I wish it understood that I do not limit myself
80 to such application, as my invention may with slight modification as to the mode of attachment to the trucks be applied with equally satisfactory results to standard-gage car, ballast-car, coal-car, or ordinary wagon-trucks.
85

What I claim as new, and desire to secure by Letters Patent, is—

1. In a dump-car, a truck, boxes pivoted thereon, toggle-joints connecting the boxes, and a locking-lever engaging stops on one of
90 the boxes, whereby the releasing of one box releases both, substantially as described.

2. In a dump-car, a truck, boxes pivoted thereon, pivoted joints connecting the boxes, a locking-lever provided with detents, and
95 stops carried by one of the boxes and engaging the detents to lock both boxes in a horizontal position, substantially as described.

3. In a dump-car, a truck, boxes pivoted thereon, having open sides, and removable
100 sides carried by a fixed portion of the car and adapted to close the said open sides when the boxes are in their locked position, substantially as described.

4. In a dump-car, a truck, boxes pivoted
105 thereon, having open sides, and sides pivoted to a fixed portion of the car and adapted to close the said open sides when the boxes are in their locked position, substantially as described.
110

5. In a dump-car, a truck, boxes pivoted thereon, having open sides, sides pivoted to a fixed portion of the car, and keepers for retaining the said pivoted sides in operative
115 position with relation to the boxes, substantially as described.

6. A dump-car having pivoted boxes provided with open outer sides, sides journaled to a fixed portion of the car, means for keeping the journals of the sides in operative po-
120 sition, and keepers carried by the boxes for retaining the sides in a fixed relation to the said boxes, substantially as described.

7. In a dump-car having pivoted boxes, a toggle-joint connecting the boxes and inde-
125 pendent of the rest of the car structure, whereby both boxes are caused to dump simultaneously, substantially as described.

8. In a dump-car having pivoted boxes adapted to discharge their contents on oppo-
130 site sides of the car, a joint connecting the boxes, but independent of the rest of the car

structure, formed by stay-rods attached to the boxes at their upper ends and having their lower ends pivotally united by a journal-bolt, substantially as described.

operating on one box, whereby locking one box will lock both, substantially as described.

CALEB D. PAGE.

5 9. In a dump-car having pivoted boxes, the combination therewith of a pivotal connection between the boxes and a locking medium

Witnesses:

WM. A. EASTERDAY,
H. F. KEYSER.