

(No Model.)

J. K. LOCKARD.
DUMPING CAR.

No. 434,517.

Patented Aug. 19, 1890.

Fig1.

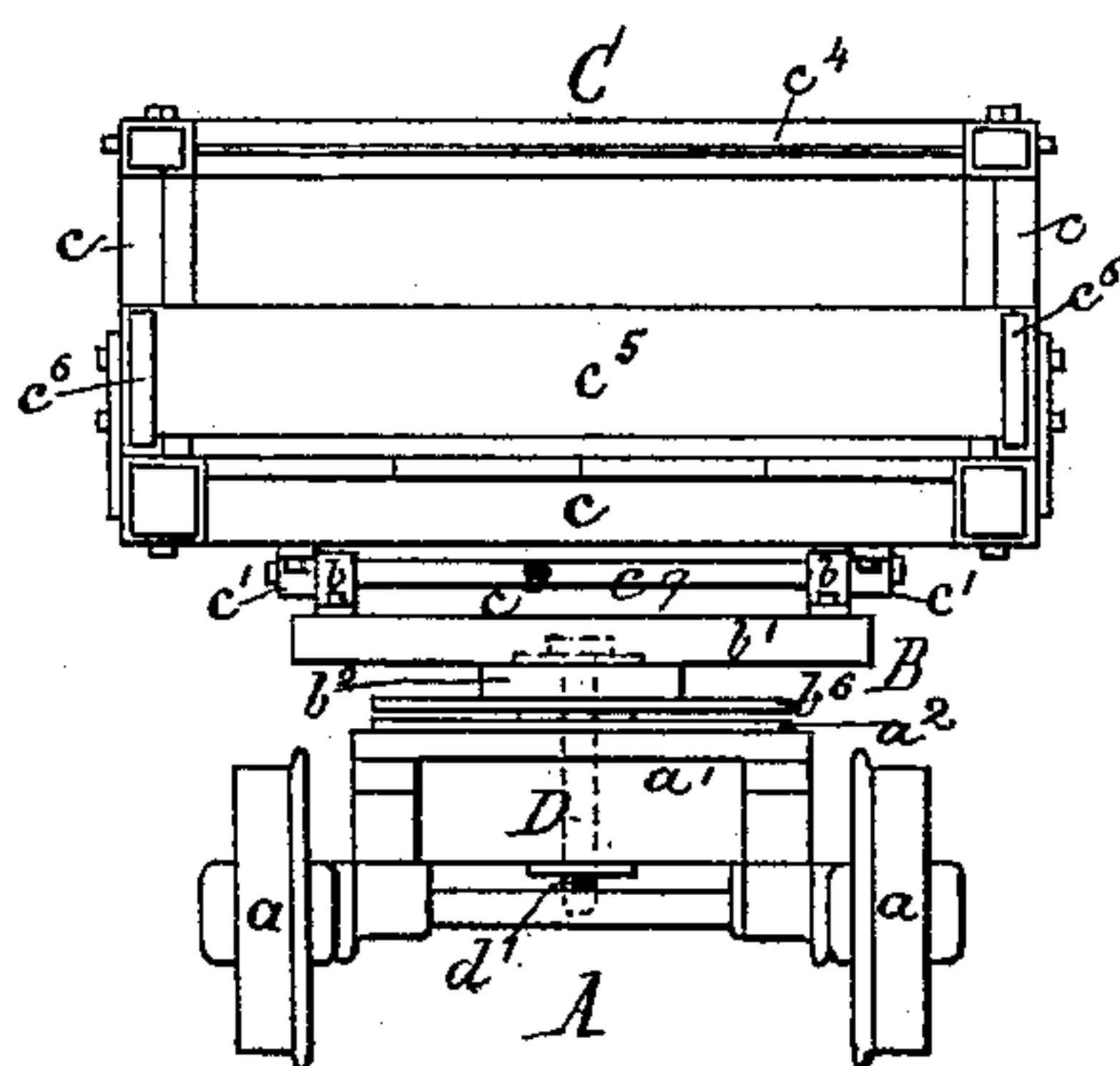


Fig2.

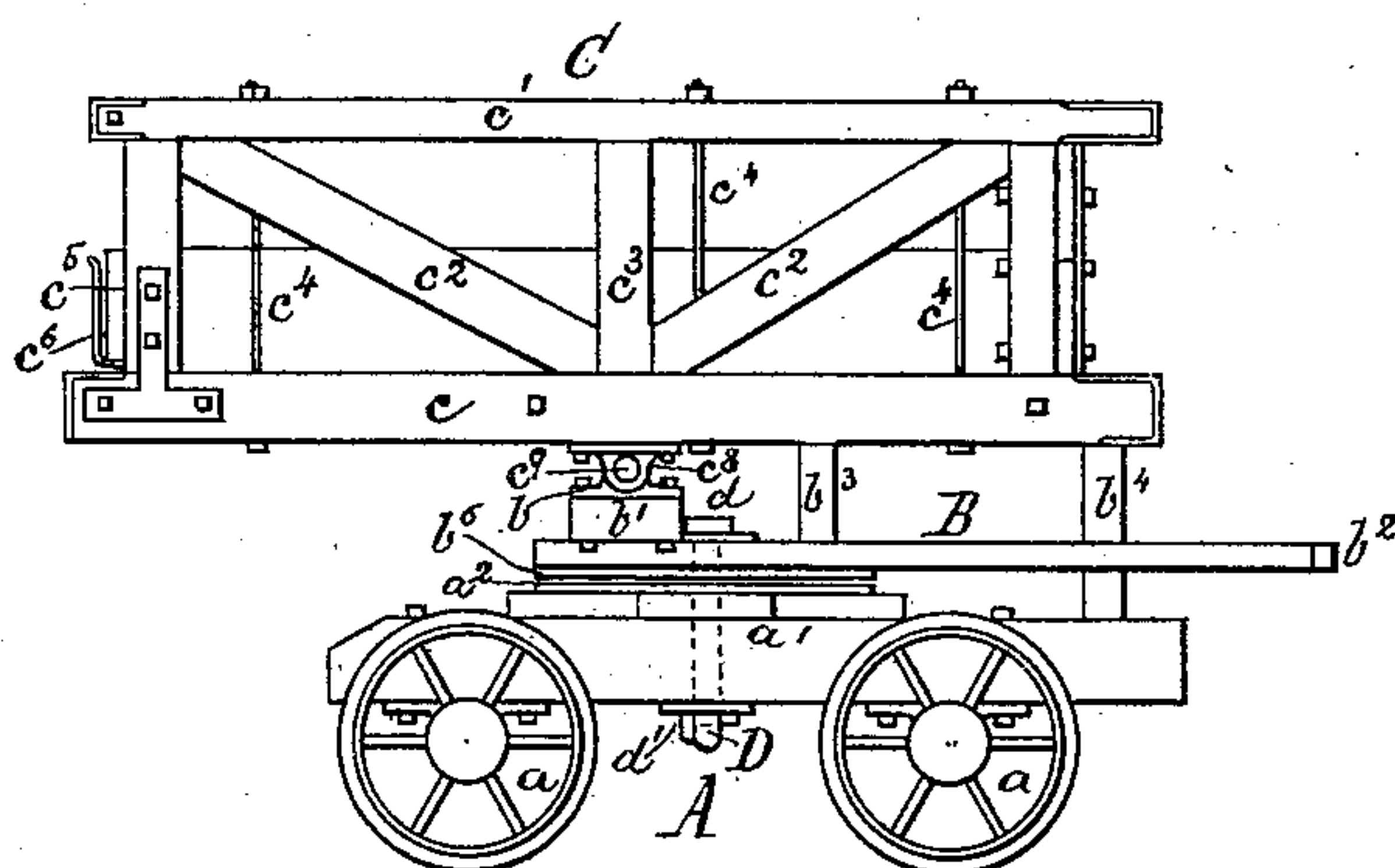


Fig3.

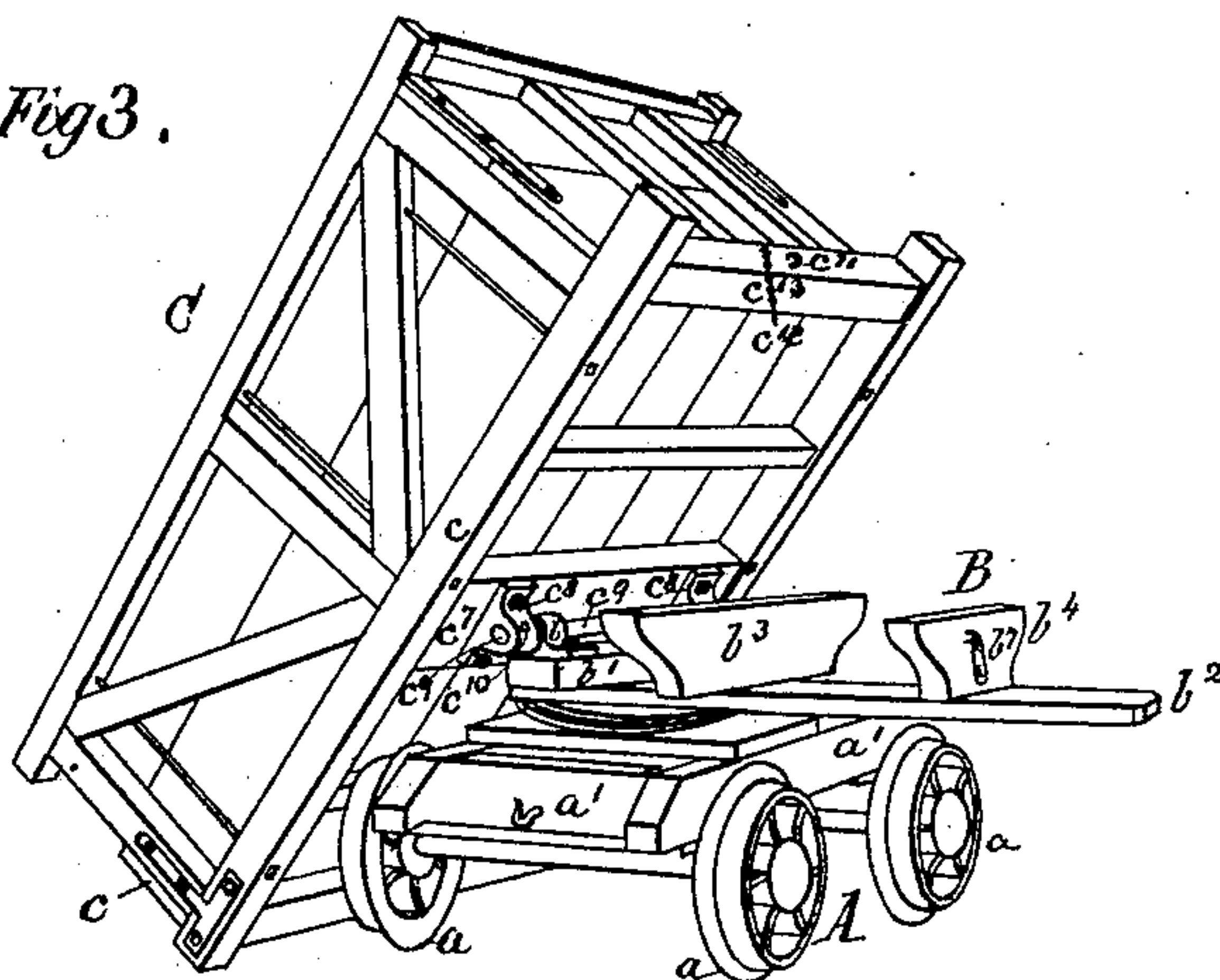
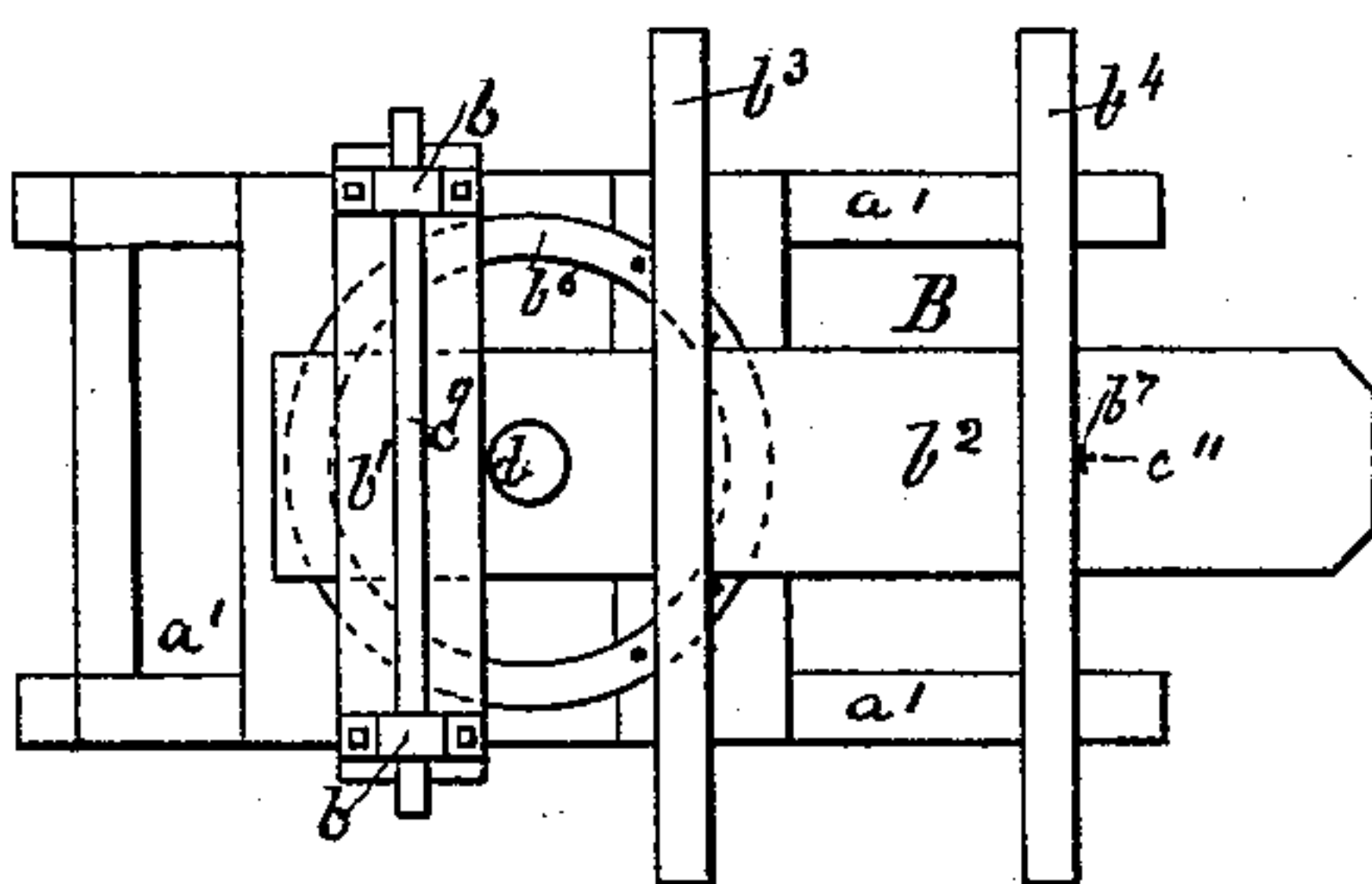


Fig4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN K. LOCKARD, OF BLOOMSBURG, PENNSYLVANIA.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 434,517, dated August 19, 1890.

Application filed June 6, 1890. Serial No. 354,443. (No model.)

To all whom it may concern:

Be it known that I, JOHN K. LOCKARD, a citizen of the United States, residing at Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented certain new and useful Improvements in Dumping-Cars; 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 that class of dumping-cars in which a horizontally and vertically revoluble dumping-box is employed; and it consists in certain novel constructions, combinations, and arrangements of parts, which will be hereinafter fully described and specifically claimed, whereby the construction and operation of such cars are greatly simplified, and a car of great utility, combining lightness and strength, is produced.

In the accompanying drawings, Figure 1 is a rear elevation of my dumping-car, and Fig. 2 is a side elevation of the same. Fig. 3 is a perspective view illustrating the dumping operation of the car, and Fig. 4 is a top view of the truck-frame and an intermediate structure for supporting the dumping-box and turning it horizontally.

The letter A in the drawings represents a truck; *a*, wheels; B, a horizontally-swinging frame with hand-lever, and C a vertically-swinging dumping-box.

The dumping-box C consists of an outer frame *c*, to which the usual inner boards for the side and front walls are fastened in the usual manner. In order to avoid the necessity of employing heavy timber for the lower portion of the frame, I provide a continuous top portion *c'*, steadied by diagonal and central braces *c²* *c³*, respectively, and clamped together by screw-bolts *c⁴*. The front of said dumping-box is closed by means of a removable board *c⁵*, held in position by means of backing-braces *c⁶*. The bottom portion of the box-frame *c* is provided with a central transverse beam *c⁷*, firmly united to the frame and stout enough to support the box and its load.

This central beam is provided with two metal bearings *c⁸*, to which a shaft *c⁹* is fitted in a

position parallel to the beam. The shaft *c⁹* is also fitted to two bearings *b*, which are fastened to a beam *b'*, as will be seen. In order to prevent the shaft *c⁹* from being longitudinally displaced in its bearings, it may be fastened to one of them by means of a pin *c¹⁰*, or by any other suitable means. The beam *b'* is fastened to the hand-lever frame B, which is, by means of vertical center-pin D, attached to the truck-frame *a'* of the truck A. The center pin D is held in its position by a head formation *d* and a transverse key or pin *d'* in its lower end portion. Two flat annular metal bearings *b⁶* *a²* are interposed between the hand-lever B and frame *a'*. They are arranged concentric with the pin D, and the one *b⁶* is fastened to the bottom or under surface of the hand-lever B, while the other *a²* is fastened to the top surface of the frame *a'*, and thus they sustain the weight and wear of the upper structure and the load. The beam *b'* is arranged opposite the handle portion of the hand-lever and on the opposite side of the pin D, whereby the fulcrum of the box is placed away from the pin and can be revolved around it. The pin D being placed in the center of the frame *a'*, the box C occupies an eccentric position to it, as plainly seen in Fig. 2, and by means of this construction it is held away from the wheels when dumped sidewise or to the rear, and while being so dumped it assumes a much steeper and more effective angle than is usually obtained by other constructions. When in its normal horizontal position, the box C is held steady upon the transverse bolsters *b³* *b⁴*, fastened to the handle portion of the hand-lever frame B, as shown, and to these bolsters it is held by means of a slotted hasp *b⁷*, hung to the bolster *b⁴*, and a staple *c¹¹*, fastened to the frame *c* of the box C. The hasp is further secured to the staple by a locking-pin *c¹²*, which is attached by a chain *c¹³* to the said frame. I prefer this mode of fastening to that of bolts, or to other contrivances which are liable to bend, clog, or bind, and thus prevent a speedy operation in locking and unlocking.

Any other suitable fastening device may be adopted in lieu of the hasp *b⁷*, staple *c¹¹*,

and pin c^{12} , attached to chain c^{13} , without departing from my invention.

By providing an extra center beam b' for the attachment of the dumping-fulcrum the box-frame c remains intact and is not weakened, as in constructions where such fulcrums are directly fastened to the box-frame, and by employing a shaft and bearings, as described, the fulcrum is prevented from getting out of line and becoming loose, as is the case in constructions where hinges are employed.

My dumping-cars are especially adapted for service on rough roads, which they endure on account of their light and firm construction.

The dumping operation of my car is greatly facilitated by the adoption of the hand-lever frame B, by which a lower and greater leverage is obtained than that of the box C, and by which the hands of the operator are guarded against danger of injury by violent contact of the contiguous boxes of a train, thus insuring confidence and speedy operation. It will be seen that the upper circle-plate bearing b^6 has a lever-arm b^2 , which has the transverse hinging bar or beam attached

to it, and that the bearings for the dumping-shaft c^9 are placed beneath the frame-pieces of the box C and beam b' , and the parts upon which the box C dumps and rests can be constructed very substantially, and the box itself is not required to sustain the strain which comes upon the bearings and dumping-shaft.

What I claim as my invention is—

In a dumping-car, in combination, the wheeled truck-frame having annular bearing a^2 , revoluble lever-frame B, consisting of transverse bars b' b^3 b^4 , circle-bearing plate b^6 , and shaft-bearings b , and the dumping-box C, having bottom beam c^7 and shaft-bearings c^8 , which are out of line with the center of the truck-frame, vertical center pin D, and horizontal shaft c^9 , the latter fitted in the bearings b c^8 , and thus placed out of line with the said center pin D, substantially as described.

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

JOHN K. LOCKARD.

Witnesses:

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S. F. PEACOCK.