(No Model.) 2 Sheets—Sheet 1.

G. B. ALLIS.

WOOD AND COAL ELEVATOR.

No. 256,452. Patented Apr. 18, 1882.

Fig. 1,

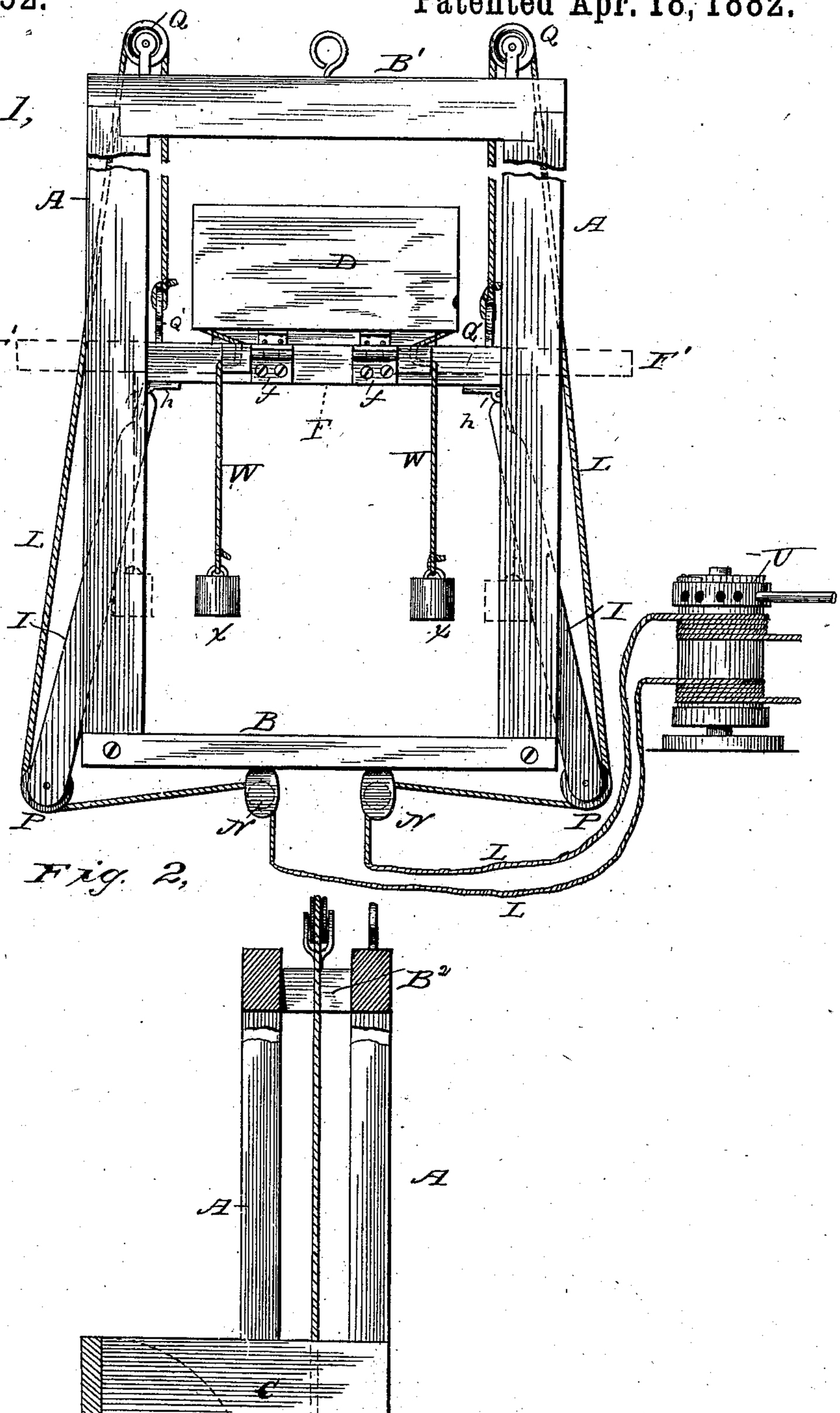

Fig. 2,

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(No Model.)

2 Sheets—Sheet 2.

G. B. ALLIS.

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Fig. 3,

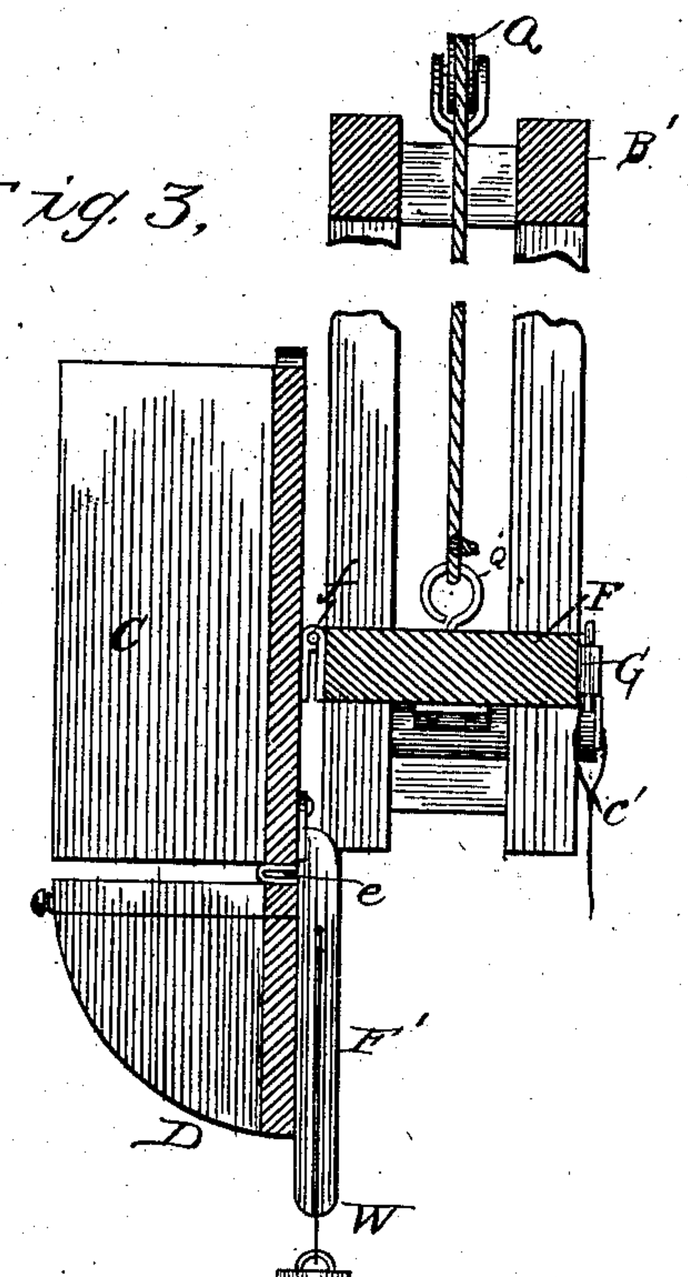


Fig. 5,

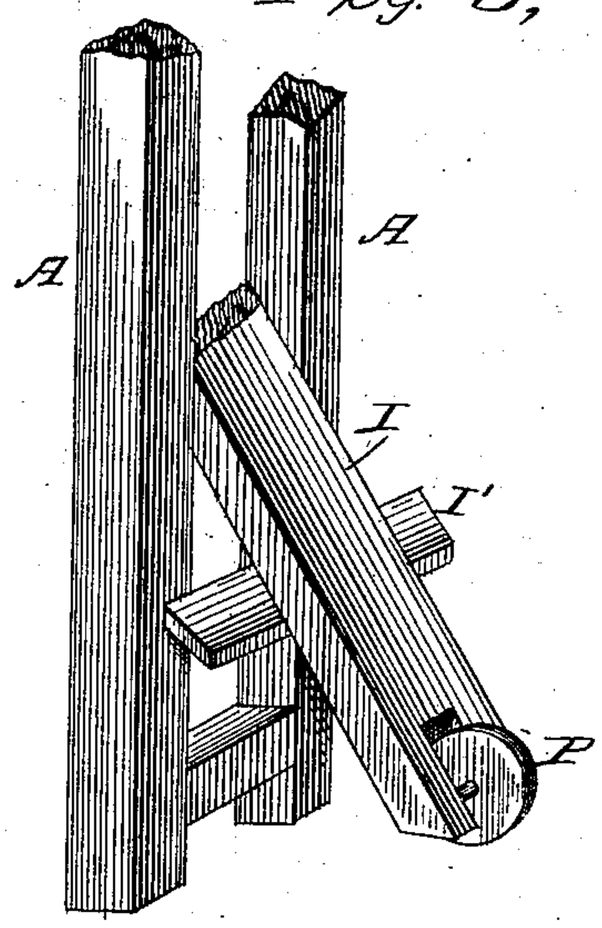


Fig. 4,

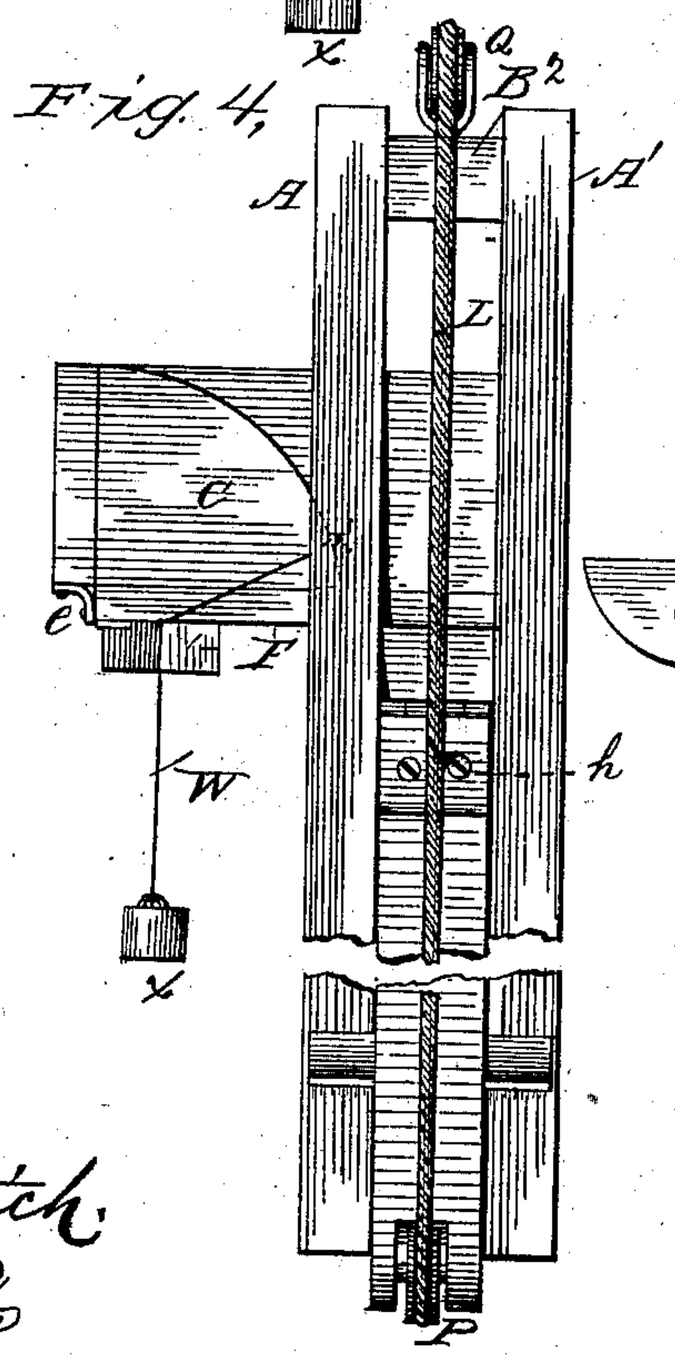
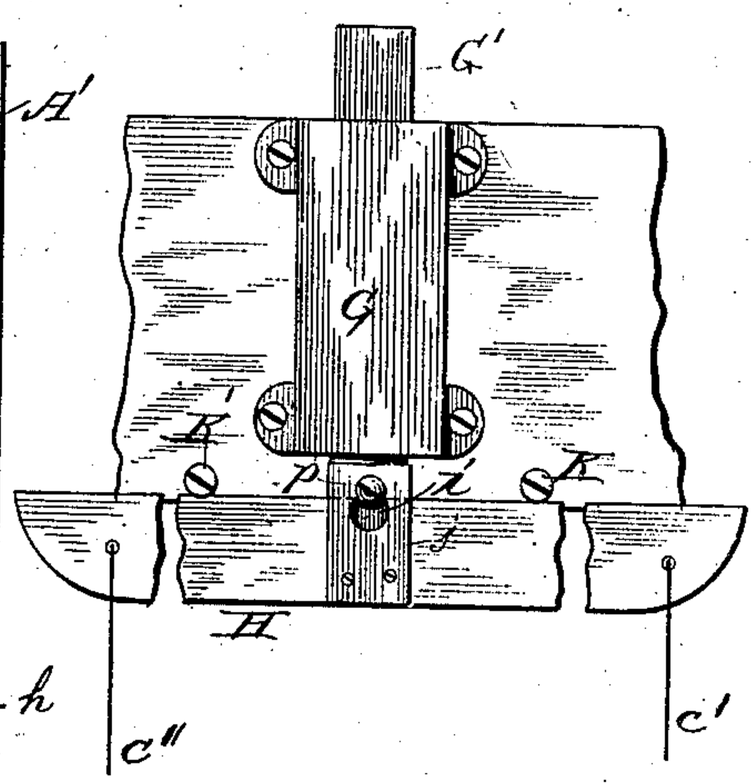


Fig. 6,



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UNITED STATES PATENT OFFICE.

GEORGE B. ALLIS, OF LITTLE ROCK, ARKANSAS.

WOOD AND COAL ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 256,452, dated April 18, 1882.

Application filed March 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. ALLIS, of Little Rock, in the county of Pulaski and State of Arkansas, have invented certain new and useful Improvements in Wood and Coal Elevators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to elevators and dumping devices for wood and coal stations on railroads, &c.; and it consists in details of construction and arrangement of the several parts that will be hereinafter more fully set forth in the specification and claims and pointed out in the accompanying drawings, in which—

Figure 1 is a front elevation of my device; Fig. 2, a vertical section of same; Fig. 3, a vertical section showing the box or receptacle opened; Fig. 4, a vertical section of the box closed; Fig. 5, a perspective view of the side guides and supports; Fig. 6, a plan view of the catch by means of which the fuel-box is held in position and locked or unlocked.

The object of the invention is to provide an easy and ready method for dumping coal and wood into the tender of a locomotive and directly measure the quantity thus thrown in. Generally when locomotives are stopped for the purpose of taking on fuel the train-hands are required to throw the wood into the tender. This requires loss of time and labor. By my device the wood can be dumped into the tender by the fireman of the locomotive in the same manner that the tender-tanks are filled with water from the supply-tank. To attain this I provide a suitable frame-work consisting of the posts or uprights A, secured by cross-beams B B′, the whole frame being elevated above the ground to enable a fuel-box, C, when raised, to be easily discharged into the tender of a locomotive. The box C is provided with a hinged end piece, D, and is supported on and hinged to a platform, F, which moves up and down between the posts A as guides. Also, pivoted to the platform F are the elevating-pieces I, which are also guided by the posts A. Pulleys N are fastened to the cross-beam B and pulleys P Q to the pieces I and top of the frame, respectively. Ropes L pass from a capstan, V, around the pulleys, and thence to eyes Q′ in the platform F. To raise or lower the platform and box it is only necessary to wind or unwind the cords L by means of the capstan. The operation of the pulleys is obvious.

Secured by hinges to the under side of the box are arms or supports F′, having weights W secured thereto by suitable cords. The object of these arms is to support the hinged end D of the box when the box is ready to be dumped and prevent the end from swinging back and breaking when the box is dumped. When not in use the arms may be turned back parallel with the frame, as shown in Fig. 1.

A locking device (shown in Fig. 6) is secured at the back of platform F. The spring-bolt G′ enters a plate bolted or fastened to the bottom of the box F.

Attached to spring-bolt G′ by means of a pin, *i*, is a lever, H, having a slotted plate, *j*, in which the pin *i* enters. This lever is actuated from either end by cords *c′ c″*, the stops K K′ acting as fulcra in the movement of the lever. The cords *c′ c″* extend down a sufficient distance to allow the fireman to take hold of them from the tender.

It is obvious, of course, that I may have the frame wide enough for two, three, or more boxes to be seated therein, any one or all of which may be dumped in succession; and they may be of desired size. They may also be used for discharging grain or coal into cars, boats, &c.

The operation of my device is as follows: The box C is lowered by unwinding the ropes L from the capstan until its platform rests on beam B, and it is then loaded. The capstan is then turned, and the ropes L, passing over the pulleys, draw up the box until it will just turn underneath the top beam, B′. The arms F′ are then drawn forward and straightened out underneath the box and the hinged end D turned down on them. During this time the box is held by the bolt G, and it may be remarked that the box extends forward sufficiently to throw the center of gravity in advance of the platform F, so that when the box is released it will fall forward. To dump the box C, catch hold of either cord *c c′* and draw down on it. This will pull back bolt G′ and allow the box

to fall forward on its hinges *f*, as shown in Fig. 3. The arms F′ will at same time fall backward, aided by the weights W, and the fuel be discharged through the end D (acting as a chute) into the tender, which has been brought just beneath.

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

1. In an elevator and dumping device, a box hinged to a platform moving in guides formed by the supporting-frame, and adapted to be automatically dumped, substantially as set forth.

2. In an elevator and dumping device, as described, a frame having a box-supporting platform moving therein, a fuel-box hinged to said platform, and means whereby the box and platform are raised and the box automatically dumped.

3. In an elevator and dumping device, a frame consisting of the posts A and cross-beams B B′ B^2, in combination with the supporting-pieces I, platform F, and fuel-box C, substantially as set forth.

4. In an elevator and dumping device, the combination of a vertical supporting-frame, A B B′, supports I, and platform F, moving in the frame, with a fuel-box, C, hinged to the platform, the platform and its supports being actuated by cords passing over pulleys secured to the supporting-frame and the platform-supports.

5. In an elevator and dumping device, the combination of a fuel-box, supported and moved as described, with the hinged arms F′ and locking mechanism, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE B. ALLIS.

Witnesses:
A. V. STAFFORD,
G. R. G. JONES.