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Patented Dec. 20, 1898.

W. M. PRICE.
LOCOMOTIVE COALING DEVICE.

(Application filed July 7, 1898.)

(No Model.)

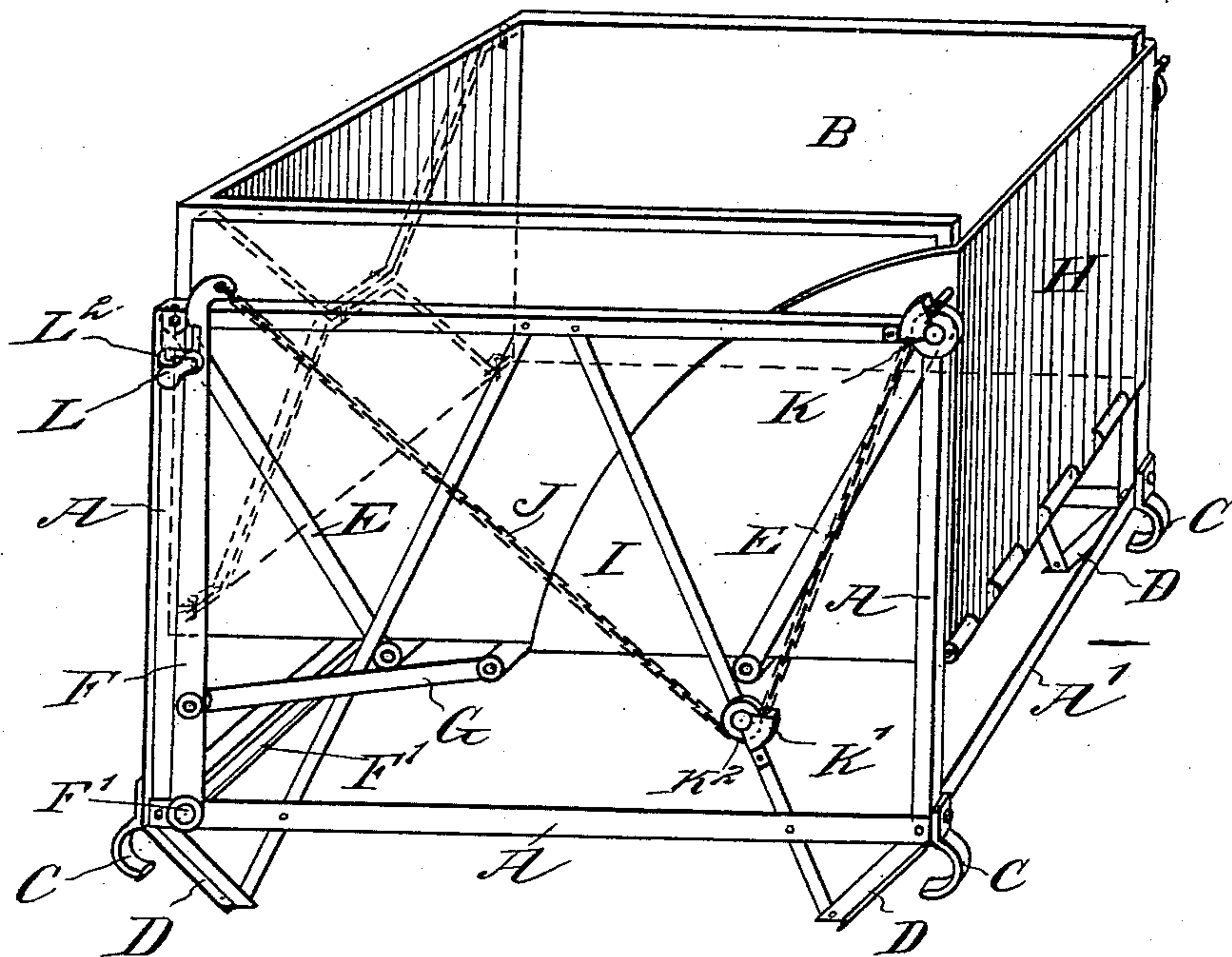


FIG. 1.

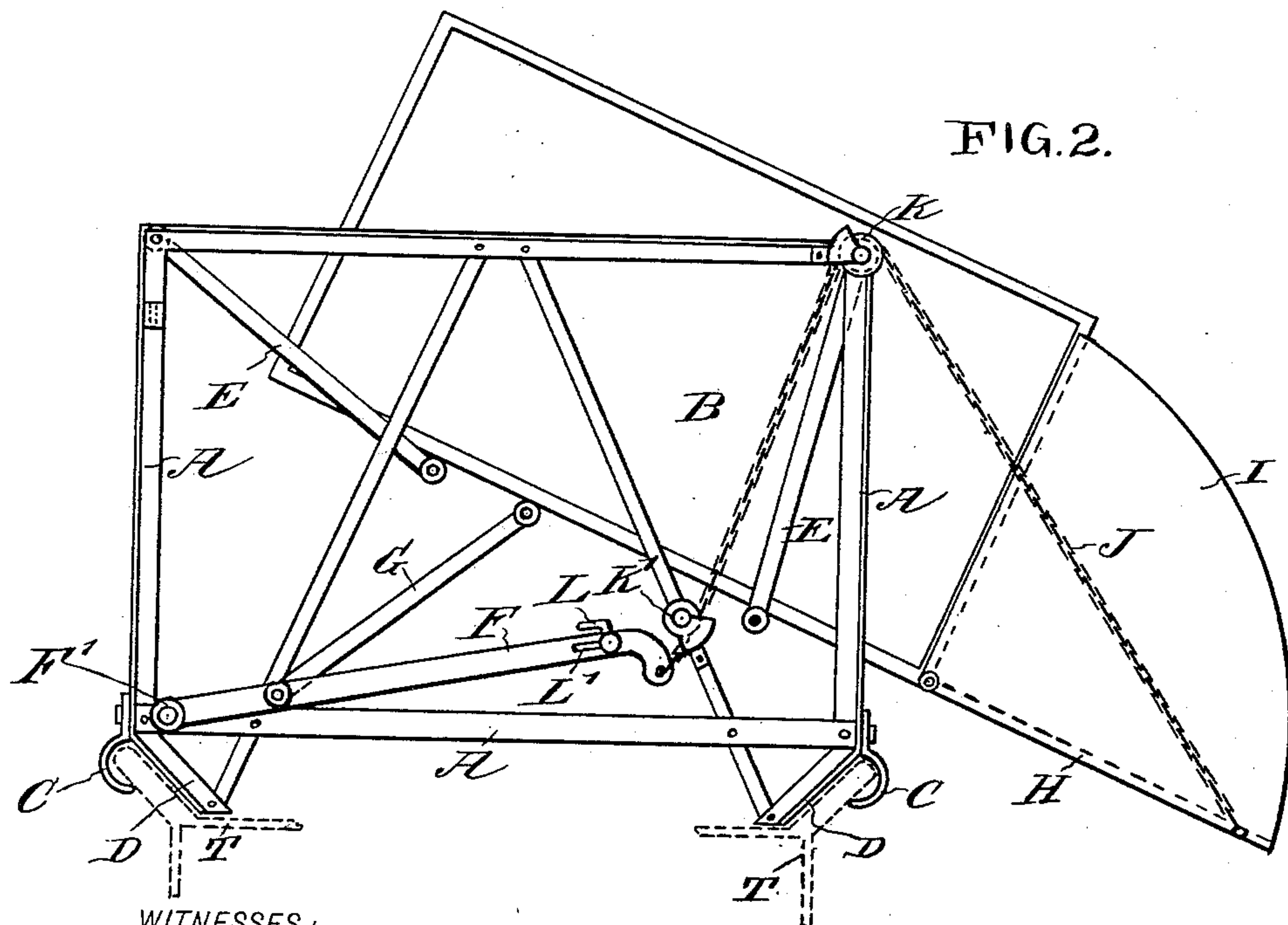


FIG. 2.

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WILLIAM M. PRICE, OF ELLSWORTH, IOWA.

LOCOMOTIVE-COALING DEVICE.

SPECIFICATION forming part of Letters Patent No. 616,355, dated December 20, 1898.

Application filed July 7, 1898. Serial No. 685,337. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. PRICE, of Ellsworth, in the county of Hamilton and State of Iowa, have invented a new and Improved Locomotive-Coaling Device, of which the following is a full, clear, and exact description.

My invention relates to an improvement in coaling devices for locomotives and is intended for coaling a locomotive while under motion, but may be used for coaling the locomotive when stationary and for other purposes, as hereinafter set forth.

The invention comprises the novel features hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a perspective view of my device in its normal or closed position, and Fig. 2 is a side view of my device in its tilted or discharging position.

The object of my device is to enable a locomotive to be coaled while under way, and thus save the time consumed in coaling locomotives and enable a higher speed to be maintained. This result is secured by means of an apparatus hereinafter described, which is mounted upon the tender of a locomotive or suitable car and is filled with coal. The locomotive upon which said apparatus is mounted or to which it is attached is to be upon a track parallel with the track carrying the locomotive to be coaled.

When the locomotive to be supplied with coal appears, the locomotive carrying the coaling device is to be gotten under way and run alongside of the other locomotive and at the same speed. When the two engines are exactly opposite and the speed is uniform, the device is to be operated to discharge its coal into the tender of the other locomotive. This may be done instantaneously, the time consumed in discharging the coal being so short that there is no possibility of interference or trouble between the two locomotives. The device by which this loading is accomplished is shown in the drawings.

The loading device comprises a framework A of any suitable material, but preferably made of angle-iron or similar shapes. This

frame is in general of a rectangular form having two sides, between which a bin B may be swung. The sides are connected at their lower portion by bars A', and the corner-standards of the frame are provided with angular extensions D, which are extended in such a direction as to fit the inclined boards T, extending along the upper outer sides of a locomotive-tender. The device is also provided with plates C, curved so as to fit over the edge of said inclined board and securely fix the device upon the tender. This means would of course be changed if the device were to be secured to a car. The construction described is that which is adapted to secure the device to a tender of ordinary construction.

Pivotally secured to the upper end of the corner-standards are the suspension-links E, which extend downward and are inclined toward the center of the frame, and at their lower ends they are pivotally connected to the lower part of the bin B. Journaled in the lower part of the main frame is a shaft F', to the opposite ends of which, outside of the frame, are pivoted the operating-levers F, connected to the bin by links G, such connection being preferably at the bottom of the bin. By means of this connection when the levers F are thrown down to the position shown in Fig. 2 the bin will be swung to one side, and by reason of the inclination of the suspension-links E the bin will be tilted.

The side of the bin B opposite the operating-levers F is hinged at its lower edge, so that it may swing downward to form a chute to guide the coal. Curved plates I are secured to the ends of the side H and adapted to pass outside the body of the bin when the side H is closed. When the side H is thrown downward, the plates I form the sides of a chute to conduct the coal laterally. Chains J are attached to the upper edge of the side H and pass over pulleys K and K', the former being secured to the upper outer corner of the frame and the latter being secured to the frame near its bottom and at a short distance from the edge. The other ends of the chains are secured to the operating-levers F at such a point that when the levers are thrown downward the point of attachment of the chains to the levers will be below and back of the pul-

ley K'—that is, nearer to the pivot-point of the levers F. When the operating-levers F are thrown into the vertical or normal position, the chains passing over the two pulleys will draw the side H up so as to close the bin. When the levers are thrown downward, besides tilting the bin B they will slack the chains J and permit the side H to drop, as clearly shown in Fig. 2. The pulleys K and K' are provided with guards K², which prevent the chains from being displaced therefrom.

One or both of the operating-levers F are provided with a slide L, working in a slot L' and having a pin adapted to engage a staple L² upon the frame when the lever is in its vertical position, and thus to hold it securely in that position. By means of this mechanism the bin may be quickly and easily swung to one side, so as to place it a little nearer the other locomotive and also to tip the bin, so as to discharge its contents, as the same motion will also drop the side H and permit the coal to be discharged. This may be done very quickly and with little liability of causing any trouble or interference with the other locomotive. By this means it is possible to coal a locomotive without stopping it, and the speed at which this is possible will depend entirely upon the length of extra track available for the purpose. It will thus be possible to run a locomotive and train a much longer distance without stopping than would otherwise be possible.

My device is also well adapted to coaling stationary locomotives or for any use where coal or similar material is to be quickly transferred. It may be mounted upon a stationary support, a truck, an ordinary coal-car, or upon any suitable support and filled in any convenient way. It may thus be used to fill wagons or cars with coal, broken rock, or any material of this nature. Being quickly and easily operated, the locomotive-tender or wagon which is to be filled need be delayed but the shortest possible time. It may be operated by a single man, and will thus save labor. It is also cheap, durable, and simple in construction and not likely to get out of order. Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A discharging-bin suspended on inwardly-inclined links, means for supporting said links, an operating-lever, and a link connecting the lever and bin, by which the bin may be swung to one side and tipped, substantially as described.

2. A discharging-bin having its discharge side pivoted to swing open, suspension-links therefor inclined downward and toward the center, an operating-lever pivoted upon a fixed support, a link connecting the lever and bin, whereby the bin may be swung toward the discharge side, and means for automatically releasing the swinging side to discharge the contents, substantially as described.

3. A discharging-bin having a discharge side pivoted to swing open, suspension-links therefor inclined downward and toward the center, an operating-lever pivoted upon a fixed support, a link connecting the lever and bin, whereby the bin may be swung toward the discharge side, a chain attached to the lever and to the swinging side, and two fixed guides for said chain, one near the upper edge of the bin and the other near the lower position of the attaching-point of the chain to the operating-lever, substantially as described.

4. A device for coaling locomotives while in motion, comprising a frame adapted to rest upon a tender or car and having means for securely holding it in place, a bin or hopper suspended from the upper part of the frame by links inclined downward and toward the center, one side of the bin or hopper being pivoted to swing open, a lever pivoted to the frame, and a link connecting said lever and bin, whereby it may be swung to one side and thereby tilted to discharge into the tender of a locomotive running alongside, substantially as described.

5. A locomotive-coaling device, comprising a frame adapted to fit and be secured on a tender or car, a bin mounted thereon so as to swing to one side and discharge, one side of said bin being pivoted to swing down, an operating-lever, and connections therefrom to the bin and the swinging side, whereby the bin may be discharged laterally, substantially as described.

6. A discharging-bin having pivoted supporting members inclined toward each other, one side of the bin being hinged to swing down, an operating-lever, connections from said lever to the bin, whereby it may be swung laterally and thereby tilted, and connections from the same lever to the swinging side of the bin, whereby said side may be swung down by the same movement which tilts the bin, substantially as described.

WILLIAM M. PRICE.

Witnesses:

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