

P. H. LAMEY.
Coal-Car Elevators.

No. 141,148.

Patented July 22, 1873.

Fig. 1.

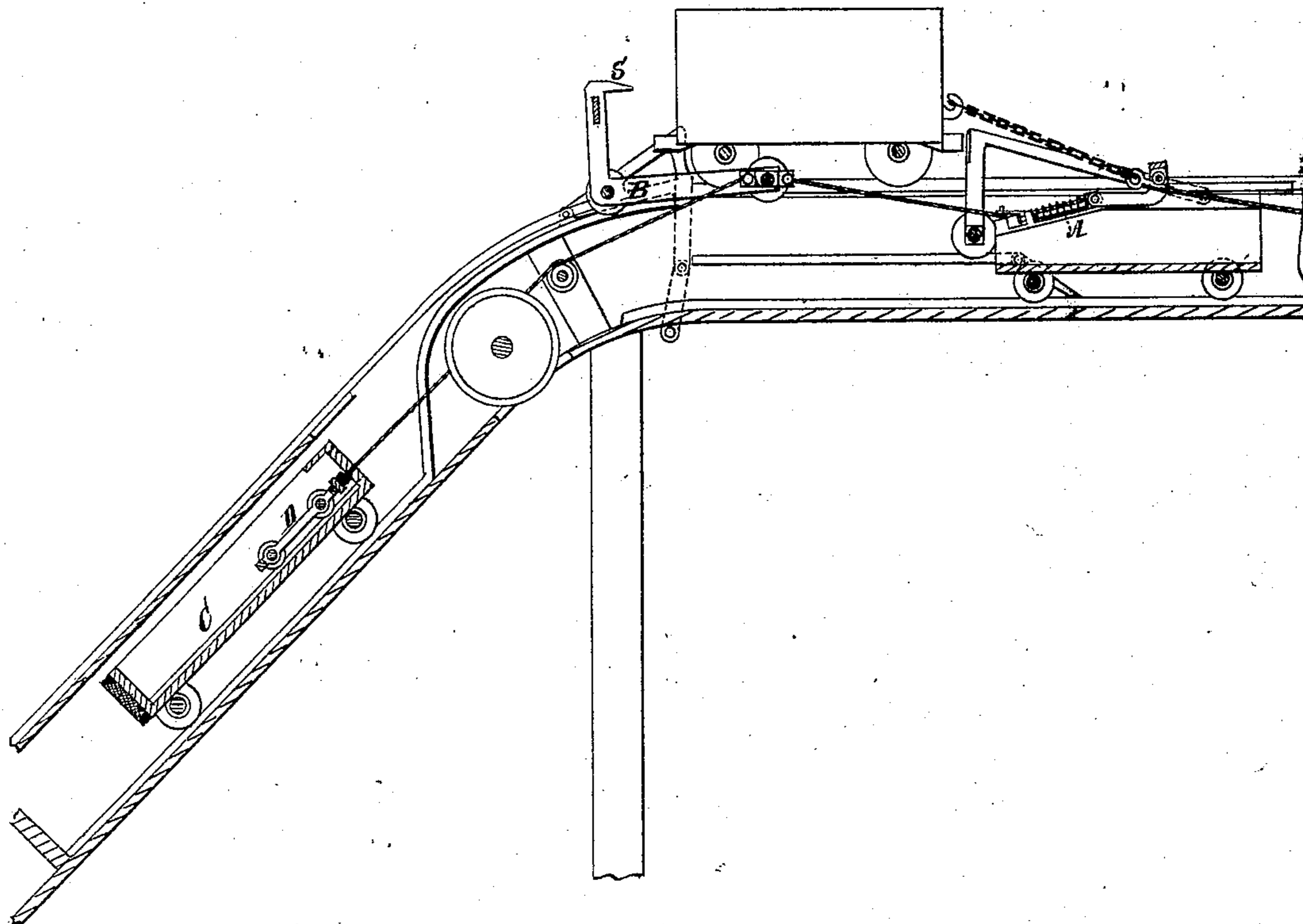
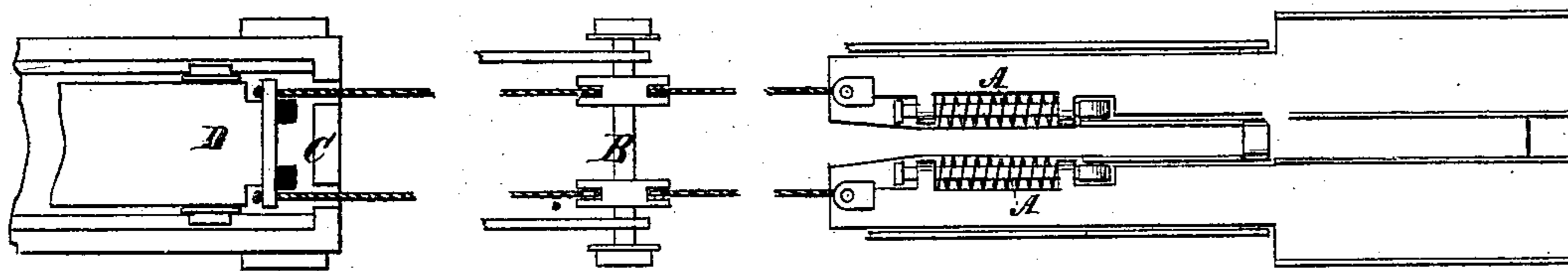


Fig. 2.



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IMPROVEMENT IN COAL-CAR ELEVATORS.

Specification forming part of Letters Patent No. **141,148**, dated July 22, 1873; application filed July 7, 1873.

To all whom it may concern:

Be it known that I, PHILIP H. LAMEY, of Wiconisco, in the county of Dauphin and State of Pennsylvania, have invented a new and useful Improvement in Coal-Car Elevators; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a longitudinal vertical section, and Fig. 2 is a top view.

The invention relates to car-elevators generally, but more particularly to such as are employed to transfer coal from the bottom of the mine up a slope and to the landing from which it is to be discharged. It consists in several improvements upon the patent granted to me February 4, 1873, to which special reference is hereby made. One improvement consists in placing two spiral springs—one on each side of catch—on top of longitudinal channel to give yielding resistance to the sudden jar caused by the rope-stud coming in contact with the pivoted catch. It also consists in a truck, provided with hooks, placed on a track a little below the level of car-track, coupled to pusher-truck by two wire ropes, and located at a proper distance from the pusher. These hooks travel over the knuckle of the slope a certain distance, then drop and allow the car to pass over, rising again at the return of coal-car from bottom of slope and following close behind it to the discharge-end of landing. It also consists in a weight-truck, running into a pit, over the knuckle, and down the slope a certain distance. Inside and on the bottom of this truck is placed another small truck, to which the ropes are attached, and which is coupled to the hook-truck. This small truck travels on a track placed on the bottom of main weight-truck and is allowed to travel the entire length of main track, the main truck being provided with bumpers at upper end, open-slotted on each side to admit ropes that are coupled to bumpers on small truck. As the coal-car is drawn up and over the knuckle of slope and the pusher-truck drawn toward the discharge-end of landing the small truck will start at bottom of main weight-truck, and as the bumpers of small

truck come in contact with the bumpers of main weight-truck the latter is drawn along to upper end of pit. This main weight-truck is heavy, and is used only in starting the coal-cars and drawing them up grade and a little over the knuckle of the slope. The main weight-truck will then stop, while the hook-truck and small weight-truck will continue on. The hooks will drop down over a plane and on a level with weight-truck track and stop, while the small weight-truck stops at bottom of main weight-track.

In the drawing, A represents the spiral springs fastened to catch on top of pusher-truck. B represents the hook-truck coupled to pusher-car at a proper distance from pusher. C represents main weight-truck; D, the small weight-truck, which travels from bottom to upper end of main truck and draws the latter along to upper end of pit, and down again as the coal-car is let down. First, in place of fastening the pivoted catch on pusher-truck permanently, I fasten it to two spiral springs to yield to the sudden jar. Second, I place a hook-truck in front of pusher to receive and stop coal-car with a little yield, furnished by slack in coupling-ropes, in place of arresting coal-car suddenly on permanent stops. Third, I have the hooks traveling off, ahead of coal-car, as the pusher approaches, and continuing to travel at a proper distance ahead of coal-car till the spread-chains are hooked and the full weight of coal-car is in the chains. The car being thus hooked in proper order, the hooks will then drop if by neglect or accident the top men have failed to hook the coal-car. The car, in place of being held back by spread-chains that allow the hooks to drop, will, as soon as it is pushed over the knuckle, so as to get on a down grade, run against the hooks, the bumpers of coal-car coming under the hooks and preventing the hooks from dropping. In this way will be held the coal-car, which would otherwise run down the slope, and not only smash up the car, but break and tear up the timber and track all along the slope, killing men, if any were on the slope or at the bottom. The car, being thus caught, is held by the hooks, the engineer working the windlass-power to reverse the engine; and by the same hooks the

coal-car is drawn up again on the top of landing for the topmen to hook the spread-chains, which may have been left unhooked by accident. Thus, neither the topmen nor the engineer can, by accident or otherwise, send a car down the slope without being properly hooked. Fourth, I construct the pit over and down the slope, so as to drop and raise the hooks without the aid or attention of any one. Fifth, the weight-truck is placed in a pit below the grade of slope-track, and runs on the same pitch as the slope-track, but deep enough to allow said track to be covered over the top to keep any dirt from falling off the coal-cars into the pit. Sixth, the weight-truck, the main truck, and the small truck form one weight, the heavy one doing the heavy pulling, while the small and light one do the light pulling. When the rope-stud first strikes the pivoted catch on pusher-truck, the swiftly-moving coal-car will have only to start the light truck and hooks. The motion of the two latter trucks will greatly assist in starting the heavy truck, while, at the same time, the speed of

coal-car is far less, by reason of being so near the stopping-point.

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

1. The combination, with pusher-truck catch, of two springs that yield to a sudden jar, in the manner and for the purpose described.

2. The combination, with pusher, of a front hook-truck, connected thereto by coupling-ropes that admit of slack at the times and for the purpose set forth.

3. The combination, with coal-car, of the drop-hooks, traveling in advance thereof until the spread-chains are hooked and then falling, in the manner specified.

4. A track for weight-truck below and of the same pitch with the inclined car-track, arranged in a pit and covered to protect it against dirt from the coal-cars, in the manner described.

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