To all whom it may concern:

Be it known that LLOYD SHERBONDY MORROW, a citizen of the United States, residing at Smithton, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Automatic End-Gate Fasteners for Mining-Cars, &c., of which the following is a specification, being an exact description of the invention and of the accompanying drawings.

This invention relates to improvements in dumping-cars; and it consists in the novel construction, combination, and arrangement of parts of which it is composed, all as will be hereinafter more fully explained, and particularly pointed out in the appended claims.

The annexed drawings, to which reference is made, fully illustrate my invention, in which—

Figure 1 represents a side view of my device. Fig. 2 is a plan view of the same, and Fig. 3 is an end view.

Referring by reference characters to the accompanying drawings, A designates the car, comprising the floor a, parallel sides b, c, which are inclined upward and outward, as at c, the front d, and the swinging end-gate e, and mounted upon axles f, provided with the flanged wheels g. The sides, bottom, and front of this car are bound firmly together by U-shaped irons h h', being one at each end of the car and one arranged centrally thereon. The U-shaped iron h' is provided with eyes i in the upper ends thereof, in which are jour- nelled the ends j j of a transverse rod k, having collars l, suspended from this rod is the end-gate m, which is hinged thereto by the strap-hinges n, while the lower end of said gate is free to swing outward and upward.

To this end-gate is pivoted a peculiarly-con- structed locking and unlocking device for the end-gate, which consists of a hand-lever o, which is pivoted at p to a block q, secured to the gate, and pivoted to this lever at points above and below the pivotal point of said lever, as at r, r', are a pair of short bars s, s, that in turn are pivoted at their outer ends, as at t, to the upper end of a pair of angular levers u, u, having their pivotal points at v, v, thus providing a frame composed of pivotal levers. The lower end of each of these angular levers engages slots w, w', on the outer end of each of the horizontal catch-bars x, x, that have their sliding movement in the eyes y, y of the bars z, z, that are secured to the end-gate, and these bars x, x are provided with springs α, which surround the same and are interposed between the collars b, b' on the bars and said eyes. The bars x, x are adapted to have their inner ends engage with an eye-lug x', carried upon a draft-iron B, the end-gate being cut away, as at x, to permit its swinging movement beyond the eye-lug x'.

B represents a draft-iron which extends from end to end of the car and is securely fastened to the floor thereof and is provided in each end with an eye c' to receive the coupling-pin for coupling a series of cars together. The transporting-wheels of this car are arranged about the center thereof, whereby the car may be readily and easily dumped, and a brake-shoe d is provided, having its bearing upon each wheel. Said shoe is provided with a strap-iron e, having a downward-projecting arm or rod f, that engages a perforation in the angular arm g, secured to the car, and the upper end of this strap-iron is pivoted at h to a U-shaped hand-lever i, which in turn is pivoted at g to an arm and bar k, secured to the side of the car.

As both sides of the car are provided with brake-shoes and the construction of both being alike, I have described only one side, which answers for both.

The U-shaped brake-lever extends in front 85 of the car and engages a toothed hand-lever 1, that is pivoted at its lower end to the short arm m, secured to the face of the front board.

Having thus described the construction of my dump-car, I will now explain the operation.

In unlocking the end-gate the operator grasps the hand-lever o and thrusts it to one side, thus causing it to turn on its pivot, drawing the connecting-bars s s and through the medium of the same causing the angular bars n n to turn on their pivots, thereby sliding the bars x, x in opposite directions and releasing the end thereof from the eyes i, i, after which the springs on said bars force the...
latter to come toward one another, giving the pivoted angle-arms a reverse movement and causing the hand-lever to assume its normal position, when the car can be dumped and the gate fly open, the latter swinging on the transverse rod aforesaid. In closing the gate the operator simply slams the gate, when the beveled ends 2 2 of the bars x x will engage the eye-lug and spread apart, and when the gate is in direct vertical line the ends of bars x x catch the eye and are locked thereto.

Stop-bars n' n' are secured to the lower end of the gate to prevent said gate from swinging too far inward in locking it.

The operation of the brake is very simple. The operator simply presses upon the U-shaped bar, thus forcing the brake-block downward and in engagement with the periphery of the wheels, when the same can be held in this position by said bar catching in the teeth of the pivoted lever.

It will be readily observed from the above description, when taken in connection with the annexed drawings, that by the arrangement and pivotal connections of the releasing-lever of the gate very little exertion is required in unlocking the end-gate, and the transporting-wheels being arranged about the center of the car the latter can be easily dumped, the axle nearest the end-gate serving as a fulcrum for this purpose, and a car as herein described is durable, easily and quickly operated, and at the same time cheap to manufacture.

What I claim is—

1. The combination with the car, the swinging end-gate, and the stop-bars n', n' carried by said gate, of the pivoted hand locking-lever o, the bars s, s, pivoted thereto, the pivoted angular levers u, v, having their upper ends pivoted to the bars s, s, the sliding bars x, x having slots in their outer ends to receive the free ends of said angular levers, the eye-lug x' to receive the inner ends of said bars x, x and the springs for holding said bars x, x normally in engagement with said eye-lug, substantially as shown and described.

2. In a dumping-car the combination with the swinging end-gate, of the hand locking-lever comprising the lever, arms, and angular bars, pivoted to one another, the lever and angular bars pivoted also to the gate, the sliding bars having the slots in their ends and beveled opposite ends, and the lug provided with the eye to engage said bars, and the springs adapted to force the sliding bars back to their normal position, all substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

Witnesses:

W. G. RETTSTATT,

HARRY SAGER.