No. 801,147. PATENTED OCT. 3, 1905.

A. C. LATIMER.

MINING CAR.

APPLICATION FILED DEC. 17, 1004.

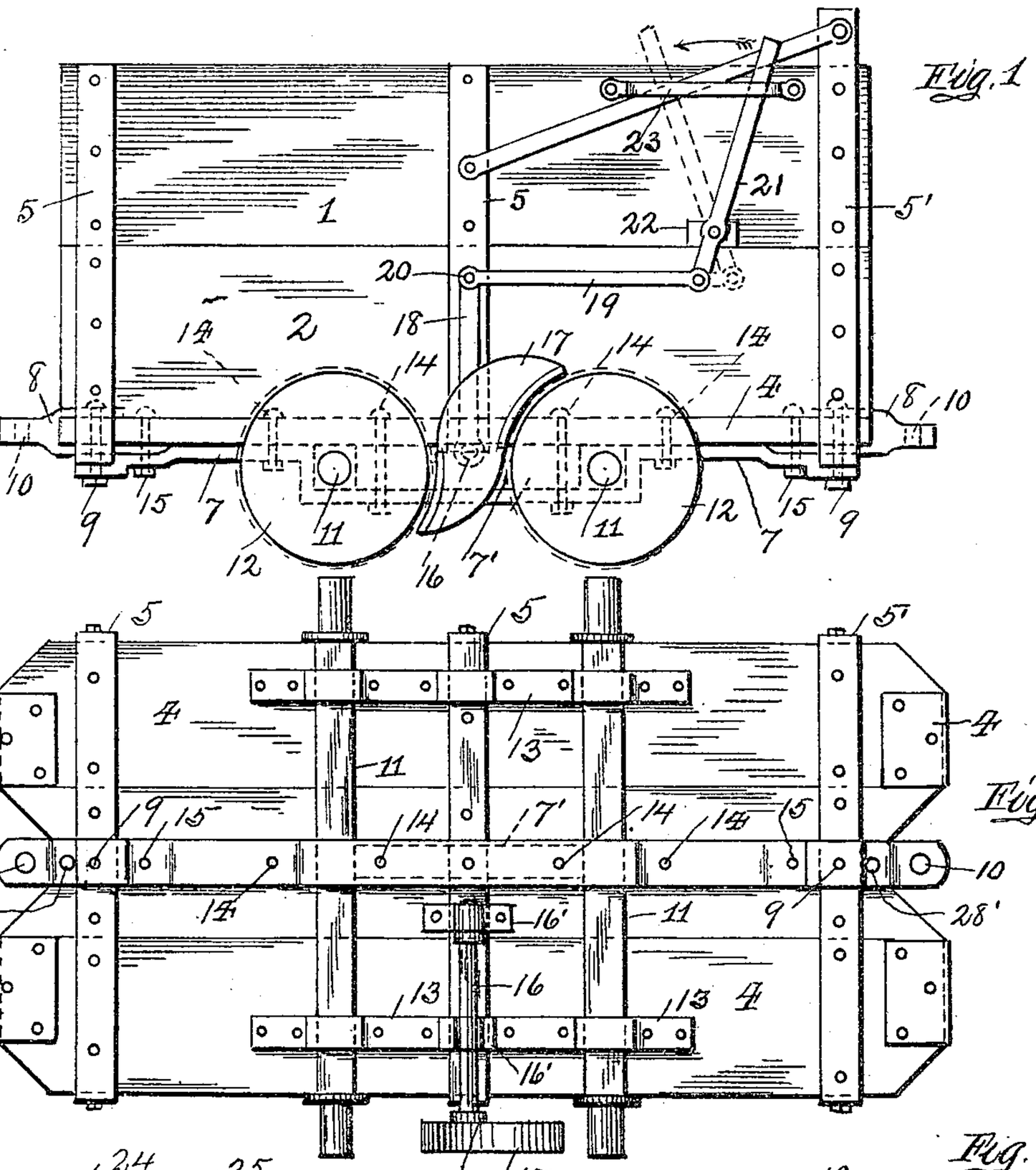

Fig. 1

Fig. 2

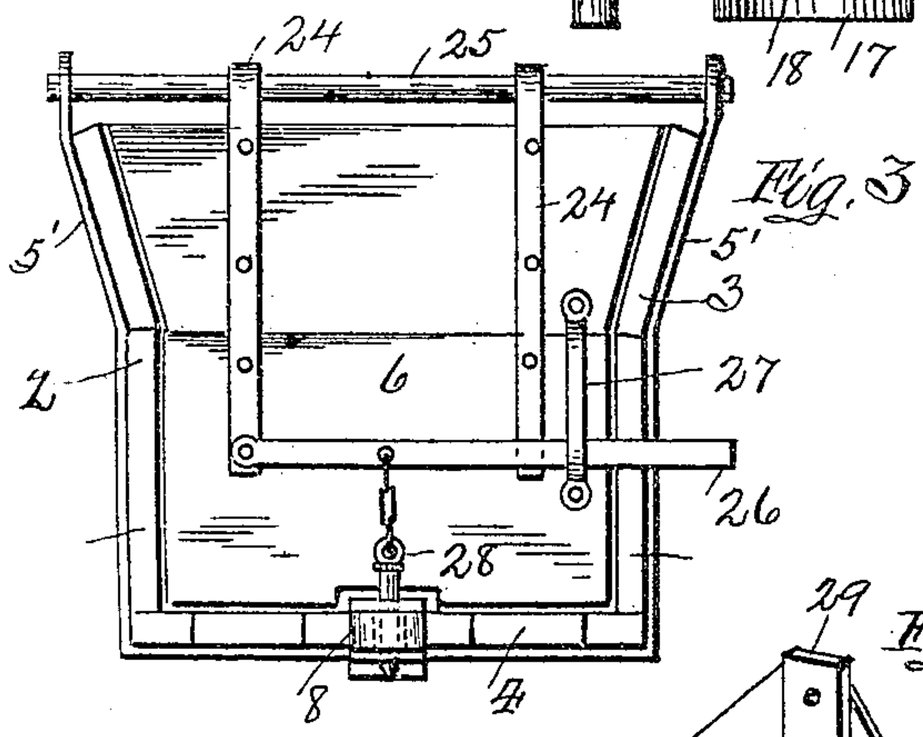

Fig. 3

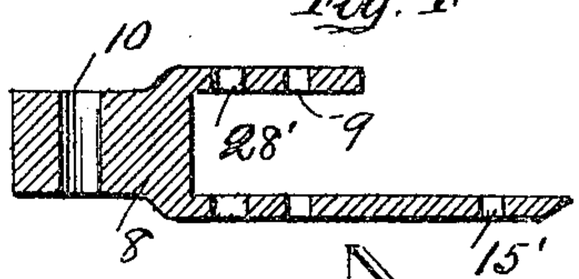

Fig. 4

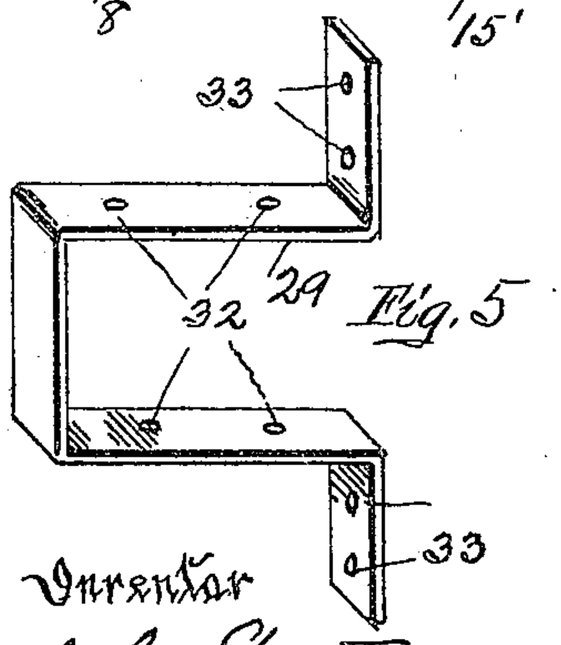

Fig. 5

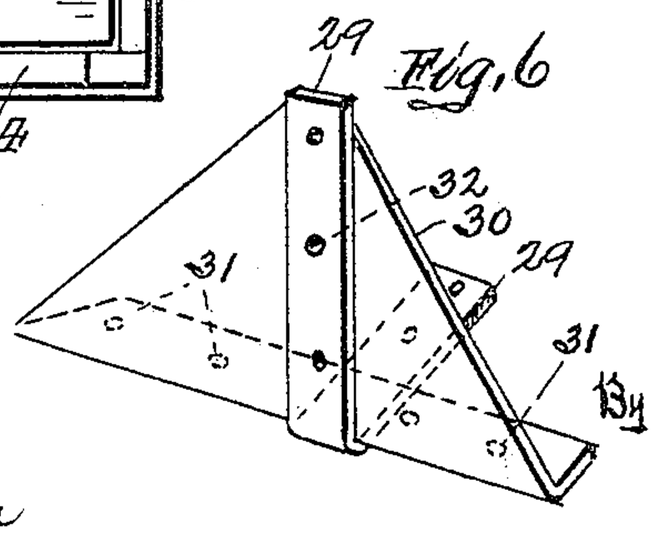

Fig. 6

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UNITED STATES PATENT OFFICE.

ANDREW CHARLES LATIMER, OF MEADOW LANDS, PENNSYLVANIA.

MINING-CAR.

No. 801,147. Specification of Letters Patent. Patented Oct. 3, 1905.

Application filed December 17, 1904. Serial No. 237,214.

To all whom it may concern:

Be it known that I, ANDREW CHARLES LATIMER, a citizen of the United States, residing at Meadow Lands, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Mining-Cars; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in mining-cars, and has for its object the provision of a novel form of draw-bar which is to be used in connection with my improved mining-car, whereby a strong and durable construction will be obtained, which will withstand rough usage to which mine-cars are generally subjected.

Another object of this invention is to provide a novel form of brake, which can be readily constructed upon my improved mine-car and easily and quickly manipulated to check or retard the movement of the car at any desired time.

Another object of this invention is a novel form of hook to be used on the bottom of my improved car and used where the car is elevated to the tipple by means of an endless chain, the said hook engaging with the hooks of the chain moving the car to its destination.

Still another object of my invention is a novel form of end-gate keeper, as hereinafter described.

With the above objects in view reference will be had to the accompanying drawings, wherein like numerals of reference designate corresponding parts throughout the several views of the drawings, in which—

Figure 1 is a side elevation of my improved car, the same being constructed and arranged in accordance with my invention. Fig. 2 is an inverted plan view of the same. Fig. 3 is an end view of the car, showing my improved end-gate latch. Fig. 4 is a detailed sectional view of the draw-head. Fig. 5 is a detailed perspective view of the hook used in connection with the car when the same is hauled by an endless chain or rope, and Fig. 6 is a detailed perspective view of a bracket or brace used in connection with the hook.

To put my invention into practice, I employ a hopper 1, which consists of the sides 2 and 3 and the bottom 4. The sides and bottom are secured by iron bands 5 and 5′, and on one end of the car is hinged an end-gate 6, the detailed construction of which will be hereinafter described. A particular feature of my invention resides in the novel draw-bar as designated by the numeral 7. This draw-bar is adapted to extend the entire length of the car and is placed beneath the floor 4 of the same, the construction of which is such that it braces the bands 5 5′ of the car, also the axles of the same, which adds strength to the entire bottom of the car. This bar 7 is provided at each end with a head 8, a detailed view of which is shown at Fig. 4 of the drawings. These heads 8 bear against the edges of the bottom board of the car and are secured in position by bolts 9 and 15, the first-mentioned bolt 9 passing through the upper and lower flange of the head, the intermediate bottom board 4, the end bands 5, and the ends of the draw-bar 7 and the second bolt 15 through the bottom board 4, the lower flange of the head 8, and the draw-bar 7, thereby distributing the strain upon all of these several above-mentioned parts. These heads 8 are formed with pin-openings 10, by means of which one car may be coupled to another, and also with openings 28′ to engage with the locking-pin 28 of the end-gate 6. The bar 7 is formed at the ends with bent portions to butt against the end bands 5 5′ of the car and is also bent at the middle to pass over the square axles 11, bearing against and embracing the same, and is firmly and rigidly attached to the car-bottom by a suitable number of bolts 14. Intermediate of the axles 11 and between the draw-bar 7 and the bottom 4 of the car is a metal bar 7′, held in position by bolts 14′, which serves to complete the attachment of said draw-bar to the car and distribute the strain of the same and its attached heads evenly to the car-bottom 4, the end bands 5 5′, and from one axle 11 to the other, and the said draw-bar and its intermediate bar 7′ serving as a brace for the axles 11 against longitudinal movement.

The axles 11 of the car carry wheels 12, and these axles are secured to the bottom 4 by the brackets 13 at either side of the draw-bar and parallel thereto, the said brackets being firmly attached by means of bolts and are so formed to fit snugly about said axles and the center band 5.

Reference will now be had to Fig. 1 of the drawings, wherein the one side of my im-

proved car is illustrated. On this side will be seen a brake which I prefer to use in connection with this car. A short bracket 16′ will be noticed, forming a bearing for a roller-bar 16, Fig. 2, which extends transverse of the car and about one-half its width, to the outer end of which is attached a brake-block 17. This brake-block is in the form of a compound curve and is fitted with removable metallic shoes to engage with the wheels 12, said block being connected to a vertically-arranged lever 18, pivoted to a connecting-bar 19, the other end of which is joined to a hand-lever 21, fulcrumed at 22 to the side of the car 1 and confined within a strap 23, provided with a ratchet, by means of which the brake may be set and held at any desired position. It will be noticed that by this construction of brake I am able to apply the same to both wheels of the car, and by extending the roller-bar 16 to the other side of the car and fitting the same with another brake-block the entire set of wheels may be operated upon.

Reference will now be had to Fig. 3 of the drawings, wherein I have illustrated an end view of the car. The construction shown in this view is for locking the end-gate 6, which is hinged to the end-gate bar 25, said bar being supported by the car-band 5′ and the hinges formed of metal straps 24, bent to embrace the woodwork and secured thereto by bolts. To the end of one of the hinges 24 is pivoted a latch-lever 26, which passes through a ratchet-bar 27, the said lever being connected to a pin 28 by a short chain, said pin adapted to engage with an opening 28′, formed in the head 8, and lock the end-gate 6 from outward movement.

Where endless chains are in use for elevating the cars to the tipple or points of destination, I have constructed a hook, which will now be described. At Fig. 5 of the drawings I have shown the hook 29, which is substantially U-shaped and is adapted to be bolted to the under side of the center band 5, the apertures 33 being formed in the flanges for that purpose. Triangular-shaped brackets 30 (see Fig. 6) are provided and arranged at either side of the hook 29 and securely riveted thereto, the said brackets being formed with flanges with bolt-openings 31 to connect the same to the bottom 4 of the car.

From the foregoing description, taken in connection with the accompanying drawings, it will be observed that I have constructed a very strong and durable car, which will be serviceable and readily manipulated.

I have illustrated the preferred manner of constructing my improved car, and it might be well to state here that I do not care to confine myself to this particular type of car upon which my improved construction may be used, as the same may be readily employed in connection with other types of cars.

It will be noted that various changes may be made in the details of construction without departing from the general scope and spirit of the invention.

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

1. A mining-car comprising a hopper supported upon suitable running-gear a draw-bar arranged beneath the floor of said hopper and extending from one end to the other, said draw-bar formed to engage with and distribute the strain to said floor, the axles of the car and the car-bands, as described.

2. A mine-car comprising a hopper mounted upon suitable running-gear, a draw-bar arranged beneath the floor of said hopper and extending from one end thereof to the other, said draw-bar being bent over the axles and provided with an intermediate brace-bar, whereby the strain on said draw-bar may be evenly distributed to both of said axles, as described.

3. In a mine-car, a draw-bar adapted to be secured beneath the floor of the car-body and means for attaching the same in position, said bar being bent to form shoulders to bear against the axles and car-bands, an intermediate bar arranged between said axles, and suitable coupling-heads connected to the extremities of said draw-bar, said couplers adapted to embrace and bear against the ends of the bottom board or floor of the car, as described.

4. In a mining-car, the combination of a substantially U-shaped hook arranged beneath the floor of the car, said hook supported on either side by triangular-shaped braces, whereby connection may be made with a moving endless chain, as and for the purpose described.

5. In a mining-car, the combination of a substantially U-shaped hook attached to the central band of the car-body by bolts, suitable flanged triangular-shaped braces riveted to and at either side of said hook, said flanges being provided with apertures for the reception of bolts as a means of connection with the floor of the car, whereby connection with said hook may be made with an endless chain, as and for the purpose described.

6. In combination with a mining-car having a central-disposed draw-bar, the coupling-heads 8, each of which are formed with double flanges adapted to embrace the bottom board or floor of the car, bolt-openings through said flanges for connection with said bottom board, the draw-bar and end car-bands, coupling-pin openings formed in said heads and openings 28′ to form a keeper for the end-gate, substantially as and for the purpose described.

7. A mining-car mounted upon suitable running-gear, comprising the car-body 1 provided with side bands 5 5′, a hinged end-gate 6 provided with a latch-lever 26 and locking-pin 28, a draw-bar arranged beneath the floor of the

car, said bar having shoulders at either end to bear against the car-bands 5 5′ and shoulders to bear against the axles 11, suitable coupling-heads 8 connected by bolts 9 and 15 to the bottom board 4, the end car-braces 5 5′ and draw-bar 7, the intermediate bar 7′ arranged between the axles 11 and attached to the draw-bar and floor by bolts 14, the brake-blocks 17 formed in compound curves to engage adjacent wheels, said blocks mounted upon a suitable shaft 16 in bearings 16′, removable wearing-shoes attached to said brake-blocks, a vertically-disposed lever attached to one of said brake-blocks, a pivoted hand-lever 21 connected by a rod 19 to said lever 18, and a ratchet-strap 23 to confine said hand-lever at any desired position, all arranged and combined for service, substantially as and for the purpose specified.

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

ANDREW CHARLES LATIMER.

Witnesses:
H. J. LEVIS,
J. V. MCCORMICK.