No. 799,382. PATENTED SEPT. 12, 1905.

R. R. HOPKINS.

MINING CAR.

APPLICATION FILED OCT. 10, 1903.

Fig. 1.

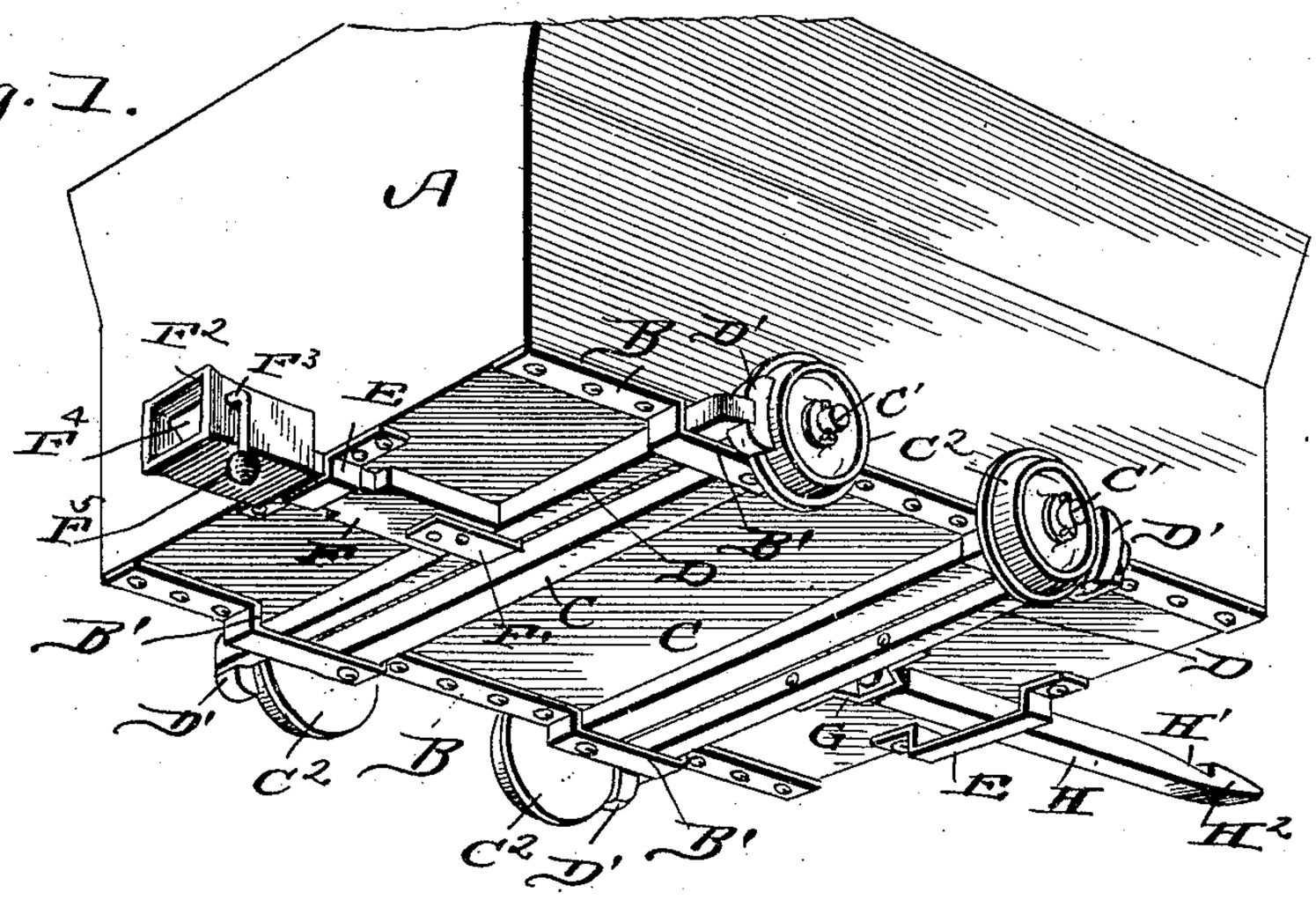


Fig. 2.

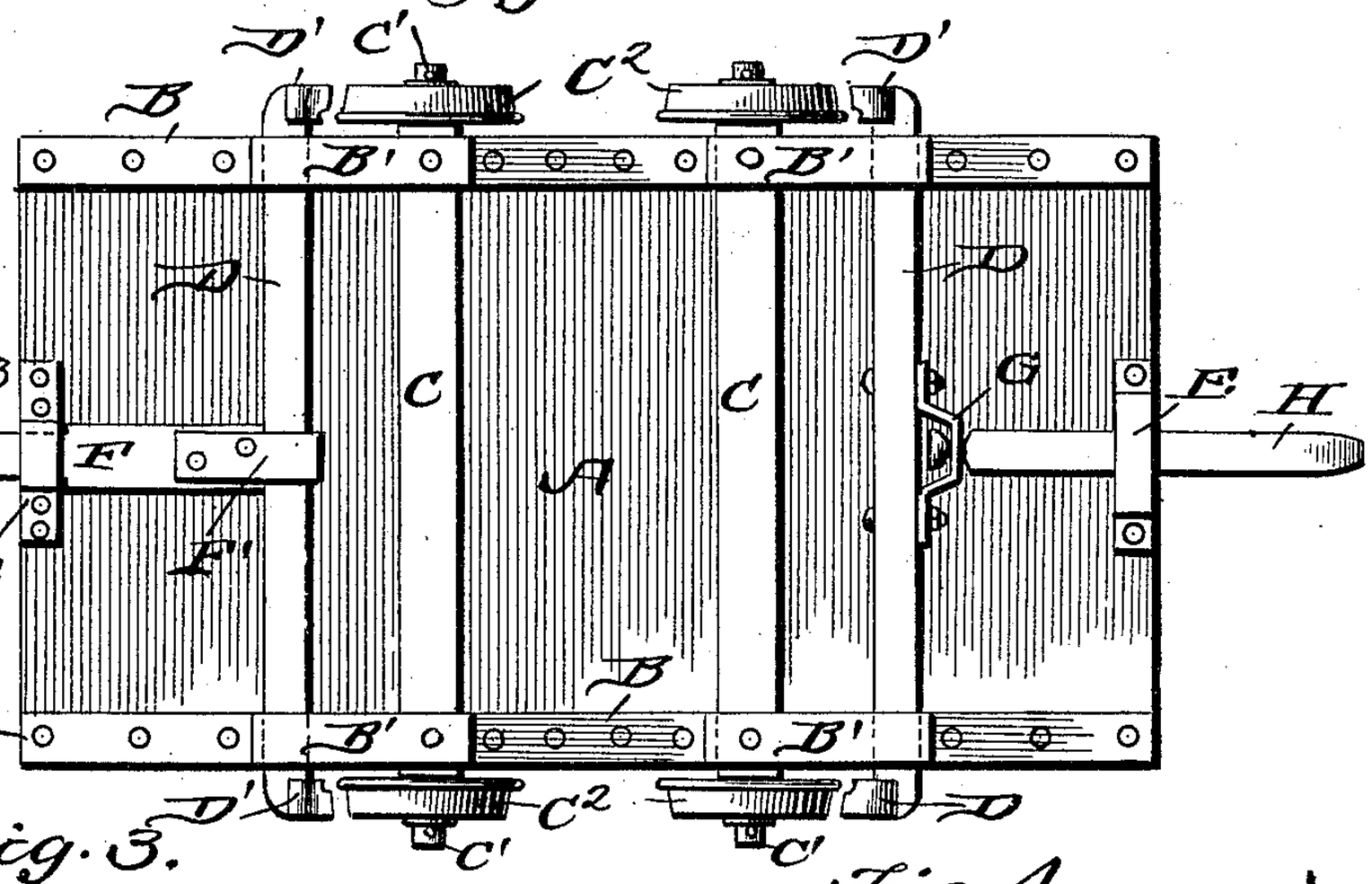
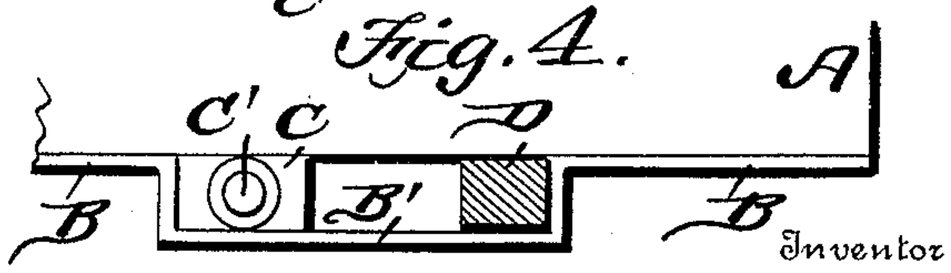


Fig. 3.

Fig. 4.



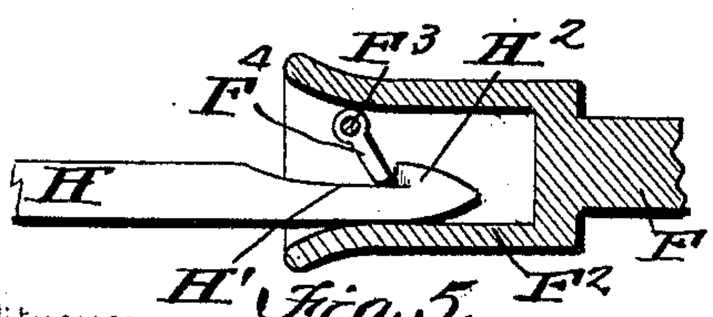


Fig. 5.

Witnesses.

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MINING-CAR.

No. 799,382. Specification of Letters Patent. Patented Sept. 12, 1905.

Application filed October 10, 1903. Serial No. 176,500.

To all whom it may concern:

Be it known that I, RICHARD R. HOPKINS, a citizen of the United States, residing at Oskaloosa, in the county of Mahaska and State of Iowa, have invented a new and useful Improvement in Mining-Cars, of which the following is a specification.

My invention relates to automatic brake and coupler attachments for mine-cars, and comprises the coupler-head, coupler-bar, the draw-bar rigging, and the brake-beam secured to the draw-bar rigging and actuated by sliding movement of the draw-bar.

The object of the invention is to automatically apply the brakes whenever two or more cars come together either in coupling, in stopping the train of cars, or on a downgrade, and the construction hereinafter shown and described will also automatically release the brakes on an upgrade.

My invention consists in the novel features of construction and combination of parts hereinafter described, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of a mining-car with my attachment secured thereto. Fig. 2 is an inverted plan view of the car-bottom, showing my attachment secured thereto. Fig. 3 is a longitudinal section through the coupler. Fig. 4 is a detail view of construction, showing a portion of the strap for holding the axle and brake-beam, the latter being shown in section. Fig. 5 is a plan view of the outer end portion of the coupler-bar.

In the drawings, A represents a mine-car of the usual type and construction. On the bottom of said car is an iron bar or strap B, running along each side edge of the bottom and having intermediate its ends two depending rectangular loop portions B′, the lower portion of the loop being parallel to the bottom of the car. Arranged in and supported by this loop is an axle-block C, having at each end the spindle C′. The axle-blocks C are arranged at the inner ends of the loop portions, and resting in and sliding in the remaining portion of the loops are the transverse brake-beams D, carrying at their ends brake-shoes D′, adapted to contact with the wheels C^2, journaled on the spindles C′.

Arranged at each end of the car and on the under side of the bottom of the car are guide-brackets E. Sliding in one of these brackets E is a draw-bar F, fastened by an angled iron F′ to one of the brake-beams D. At its outer end the draw-bar F carries the coupler-head F^2. A pin F^3 extends transversely through this coupler-head and has secured rigidly on it a plate F^4, adapted to rotate with the pin F^3. The outer portion of the pin is bent downward and carries a weight F^5, which tends to hold the outer portion of the pin and the plate F^4 in a vertical position. To the other brake-beam is secured a bracket G, to which is secured the inner end of a coupler-bar H, which bar carries a head H^2, being cut out, as at H′, on its upper face adjacent the head H^2.

The operation of the parts above described is as follows: The brake-beam would slide loosely in the loop by which it is held, but being attached to the coupler-bar or coupler-head, as the case may be, its movement in the loop is regulated by the bar or head. When a coupler-bar enters a coupler-head, it forces rearward and upward the swinging plate, which rides over the head and falls into the cut-out portion H′. The coupler-bar is of such thickness that the plate cannot assume a perpendicular position while the coupler-bar is in the head, and the parts are locked in the position shown in Fig. 3 as long as there is any outward strain upon the coupler-bar. Should two cars jam together for any reason, the brakes would be applied on both cars, in the one by the inward movement of the coupler-head and draw-bar F and in the other car by the inward movement of the coupler-bar H coacting with the coupler-head just mentioned. When two cars are run together for coupling or when a brake is set on an engine or on one car of a train, the other cars knocking and jamming together will automatically brake themselves.

It is obvious that a number of minor changes can be made in my attachment without departing from the spirit of my invention and that the particular form of coupler head and bar is immaterial.

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

The combination with a mine-car, of metal

straps arranged parallel to the sides of the car upon the car-bottom, said straps having depending loop portions, axles fixedly held in said loops, brake-beams loosely arranged in the said loop portions, wheels on said axles, a slidable coupler-head attached to one of said brake-beams, and a slidable draw-bar connected to the opposite brake-beam, as and for the purpose set forth.

RICHARD R. HOPKINS.

Witnesses:
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