

Jan. 2, 1923.

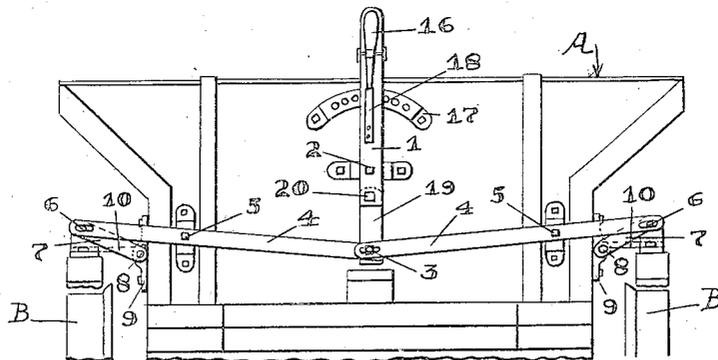
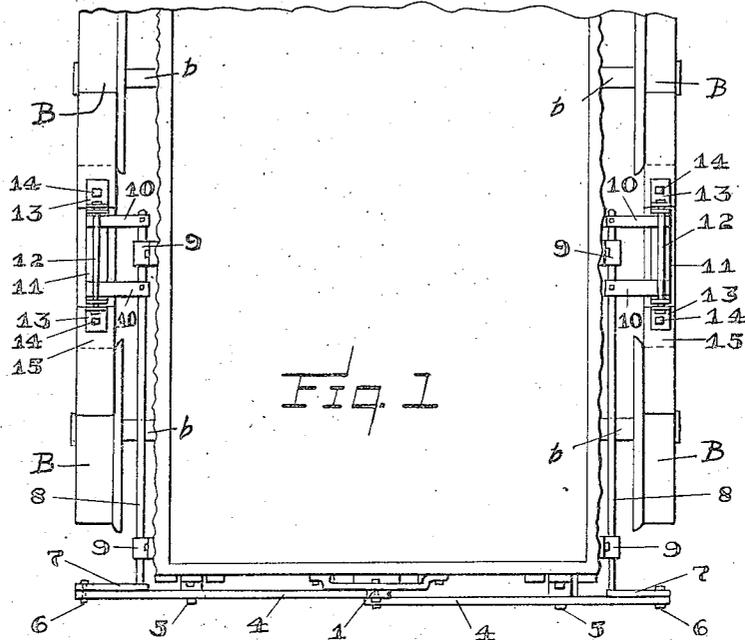
1,441,084.

C. W. HELTMAN.

BRAKE.

FILED APR. 22, 1921.

2 SHEETS—SHEET 1.



C. W. Heltnan.
INVENTOR

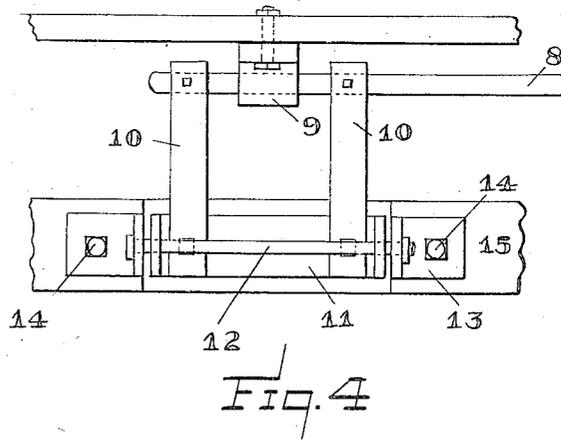
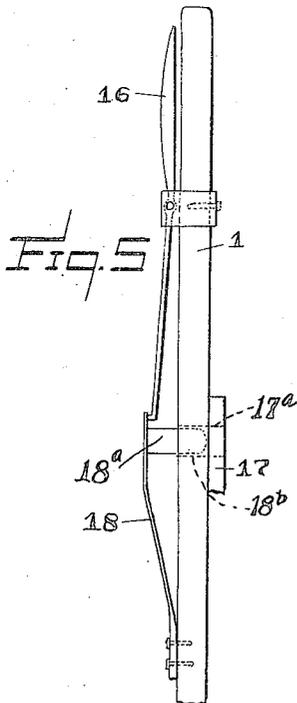
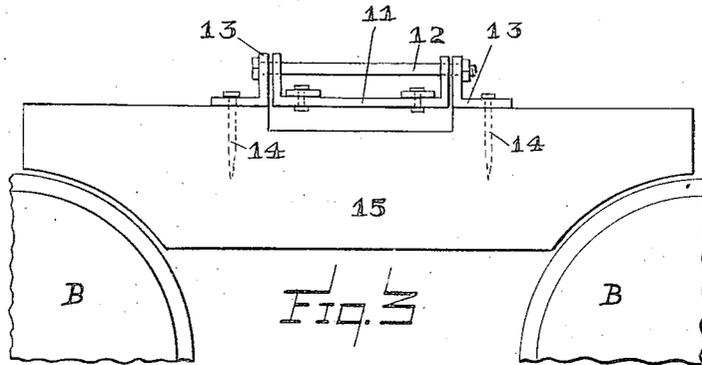
BY *Victor J. Evans*
ATTORNEY

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CURG W. HELTMAN, OF INDIANA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO WILLIAM F. WETTLING, OF INDIANA, PENNSYLVANIA, AND ONE-THIRD TO FRANK SUTTON, OF WASHINGTON, DISTRICT OF COLUMBIA.

BRAKE.

Application filed April 22, 1921. Serial No. 463,666.

To all whom it may concern:

Be it known that CURG W. HELTMAN, a citizen of the United States, residing at Indiana, in the county of Indiana and State of Pennsylvania, have invented new and useful Improvements in Brakes, of which the following is a specification.

This invention relates to braking devices, and more particularly to a brake specially adapted for use on mine cars.

One of the main objects of the invention is to provide a braking means which may be readily applied to mine cars of standard construction and by which the brake blocks are held out of contact with the car wheels when the brake is not applied. A further object is to provide a braking device which may be readily operated from either side of the car. Another object is to provide simple and efficient means whereby the brake blocks may be easily applied with great pressure to the wheels. Further objects will appear from the detailed description.

In the drawings:

Figure 1 is a fragmentary top plan view of a mine car of standard type with braking means constructed in accordance with my invention applied.

Figure 2 is an end view of the car with the braking means applied.

Figure 3 is a side view of the brake block and associated parts, the wheels of the car being shown fragmentarily.

Figure 4 is a top plan view of one of the brake blocks and associated parts.

Figure 5 is a detail of the means for securing the operating lever in adjustment.

An operating lever 1 is pivoted, adjacent to its lower end, at 2, at the central portion of one end of car A. This lever has its lower end pivotally connected, at 20, to a link 19 the lower end of which is connected by pin and slot connections 3 to the inner ends of two levers 4 pivoted adjacent to their outer ends, at 5, on the end of the car. Each of the levers 4 is connected by pin and slot connections 6 to the outer end of an arm 7 secured upon a shaft 8 rockably mounted in bearings 9 secured to the side of the car. Arms 10 are secured to this shaft adjacent to the other end thereof, at their inner ends, the outer ends of these arms being secured to the bight

portion of a U-member or stirrup 11 which is rockably mounted on a rod 12 secured through the vertical arms of angle members 13 which are secured by screw bolts 14 to a brake block 15 which is thus suspended above and between wheels B secured on axles *b* of the car. The U-member 11 and rod 12 provide a pivotal mounting for the brake block 15 which insures that this block hangs plumb or vertical above and between the wheels of the car so that, upon lowering of the block, proper contact of the same with the wheels is insured.

A detent lever 16 is rockably mounted in a suitable clip secured on operating lever 1 adjacent to the upper end thereof. This detent lever engages, at its lower end, with the inner face of the upper end of a leaf spring 18 secured to lever 1, this spring being provided with a pin or detent 18^a operating through an opening 18^b through the lever and adapted for engagement in any one, selectively, of the series of openings 17^a of a rack 17 secured to the end of the car.

When lever 1 is in central position, as illustrated, the inner ends of levers 4 are held depressed thus holding blocks 15 raised out of contact with the wheels. By swinging the operating lever in either direction the inner ends of levers 4 are raised thus applying the blocks to the wheels. Due to the fact that lever 1 is pivoted adjacent to its lower end, and levers 4 are pivoted adjacent to their outer ends, slight pressure on lever 1 will result in the blocks being applied to the wheels with relatively great pressure. As the blocks will be applied when the lever is moved in either direction from its central position, this provides simple and efficient braking means which may be readily operated from either side of the car which is a very desirable result particularly in mine cars. As will be understood, it may be found desirable by experience to resort to changes in details of construction and arrangement of parts of the invention, and I intend to include all such variations, as fall within the scope of the appended claims, in this application in which the preferred form only of my invention is disclosed.

What I claim is:—

1. In combination with a car, brake

blocks suspended above the wheels of the car, an operating lever, and connections between said lever and the blocks for depressing the blocks when the lever is 5 rocked in either direction away from central position and for raising the blocks when the lever is moved toward central position.

2. In braking means, rockably mounted 10 shafts, arms secured on said shafts, brake blocks connected to the shafts so as to be raised and lowered thereby, supplemental levers pivoted intermediate their ends and having their outer ends connected to said 15 arms by pin and slot connections, an operating lever positioned midway between the outer ends of the supplemental levers, a link pivoted at its upper end to the lower end of the operating lever, and pin and 20 slot connections between the lower end of said link and the inner ends of the supplemental levers.

3. In combination with a car, brake blocks positioned above and between the 25 wheels of the car, means for supporting said blocks in vertical position, an operating lever, and connections between said lever

and the blocks for depressing the blocks when the lever is rocked in either direction away from central position and for raising 30 the blocks when the lever is moved toward central position.

4. In combination with a car, brake blocks pivotally suspended above the wheels of the car, an operating lever, and connections between said lever and the blocks for 35 depressing the blocks when the lever is rocked in either direction away from central position and for raising the blocks when the lever is moved toward central po- 40 sition.

5. In combination with a car, brake members mounted for movement into and out of contact with the wheels of the car, an operating lever, and connections between 45 said lever and the brake members for moving said members into contact with the wheels when the lever is moved in either direction away from central position, said connections acting to move the brake mem- 50 bers away from the wheels when said lever is moved toward central position.

In testimony whereof I affix my signature.
CURG W. HELTMAN.