R. CHRISTIANSEN.

BREAST CAR FOR MINES.

APPLICATION FILED AUG. 17, 1918.

1,294,619.

Patented Feb. 18, 1919.

2 SHEETS—SHEET 1.

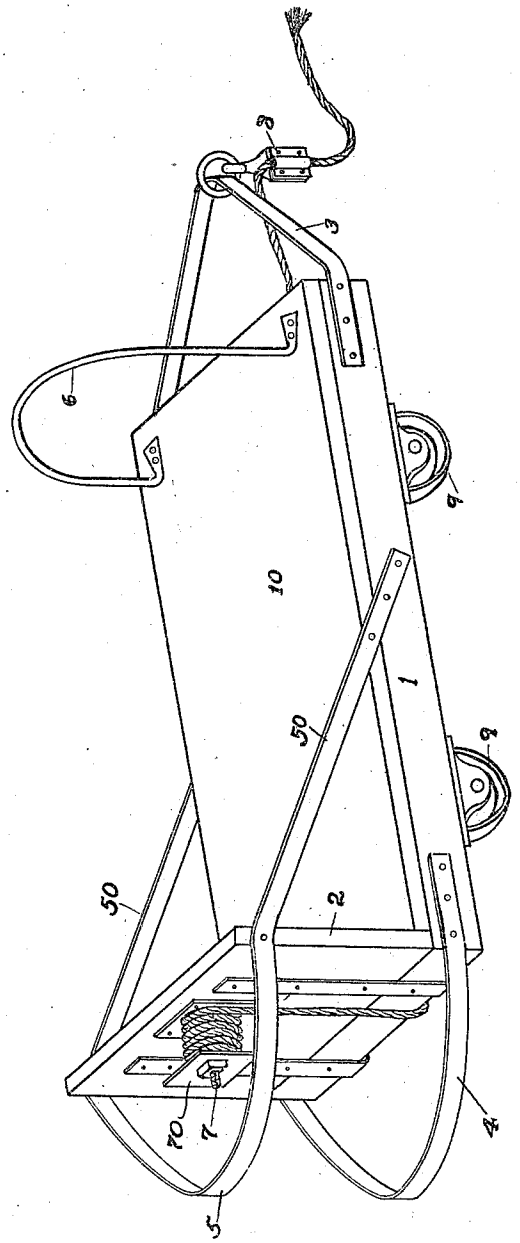


Fig. 1

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2 SHEETS—SHEET 2.

Fig. 2

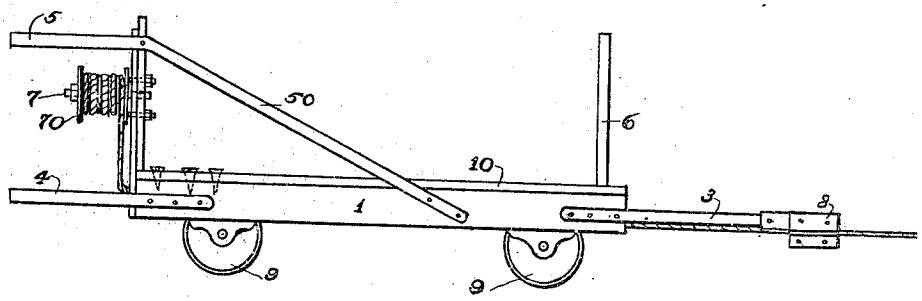
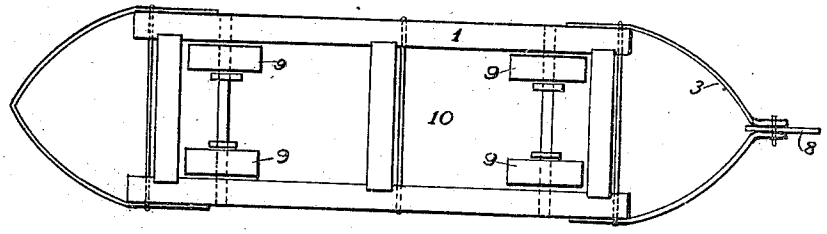


Fig. 3



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

RASMUS CHRISTIANSEN, OF BLACK DIAMOND, WASHINGTON.

BREAST-CAR FOR MINES.

1,294,619. Specification of Letters Patent. Patented Feb. 18, 1919.

Application filed August 17, 1918. Serial No. 250,394.

To all whom it may concern:

Be it known that I, RASMUS CHRISTIANSEN, a citizen of the United States, and resident of the city of Black Diamond, county of King, and State of Washington, have invented certain new and useful Improvements in Breast-Cars for Mines, of which the following is a specification.

My invention relates to cars and consists of a car which is designed for a special use, namely, for hauling material such as mine props and posts from a drift up an inclined vein to the breast.

The object of my invention is to provide a car which may be used to hoist these props and any other material which it may be desired to take, from a drift or passageway in a mine, where the vein is inclined, up the pitch of the vein to the breast and thus avoid the necessity for pulling these timbers up by hand.

The feature of my invention which I consider new, will be set forth in the following description and will then be particularly defined by the claims.

In the accompanying drawings, I have illustrated my invention in its preferred form of construction.

Figure 1 shows the car in perspective.

Fig. 2 shows the car in side elevation.

Fig. 3 is a bottom plan view of the car.

In certain mines, as in many coal mines, where the vein being mined lies at an angle, the practice is to run drifts or passageways from a main slope which is on the pitch of the vein, laterally in each direction and then to remove the coal by working up the pitch or slope of the vein. In such mines, it is necessary to provide a great many props to hold the roof of the mine. To haul these props by hand from the drift, up the incline to the working breast, is laborious work and takes much time. By the use of a car such as herein shown and described, a sheave may be secured at the breast and power be employed for hauling a car up the incline to the breast.

One trouble in doing this sort of work is the cost of laying anything in the nature of a track and the interference of the posts between the breast and the drift with the progress of the car. The car which I have designed for doing this work is herein illustrated and, as illustrated, is constructed as follows:

The body of the car consists of a frame construction 1, having thereon a floor 10 and an end wall 2. The end wall is provided at one end only of the car. This end of the car is the one which would be lowermost while in use. At the opposite end of the car from the end wall 2, I provide a deflecting fender 3, the same consisting, as shown, of a flat bar secured to the side of the frame 1, and extending forward at an angle, thus forming roughly a V-shaped outline. At the opposite end of the car, I provide a fender 4, which is very similar in construction. Both of these fenders 3 and 4, are secured to the main frame work upon which the floor is mounted and at such a level as to be below the upper surface of the floor.

I provide a third fender 5, located at about the upper edge of the end wall 2. This fender, however, has its ends extending downward at an incline, thus forming stays or braces 50, which connect the upper part of the end of the wall 2 with the side edges of the floor or frame structure. These, in addition to their function as braces, form guards to retain the timbers on the car. At the opposite end of the car, or that end which faces up the slope, I provide a yoke or guard bar 6, herein shown as a round bar bent roughly in the form of a semi-circle and having its ends secured to the floor of the car.

On the outer face of the end wall 2, I provide means for storing a certain amount of the rope by which this car is hauled up the slope. As herein shown, the rope is wound about a central bolt 7, and between a plate 70, which is beneath the head of the bolt, and the outer face of the end wall. The rope thus coiled about the bolt 7 may be clamped by screwing down the nut of the bolt 7. I do not, however, depend upon this to hold the strain which is placed upon the rope when hauling the car. From this point, the rope extends downward and under the framework to the opposite end and is there secured by means of a clamp 8, which is connected with the front fender 3, by which the car is drawn.

The wheels 9 of this car are not provided with any flanges. They are designed to run directly upon the floor of the vein and to be capable of lateral movement as may be necessary to deflect the car from a post or other obstruction. In operation, if one of the fenders strikes a post, the car will be deflected laterally so as to pass by this post. It is unnecessary to lay any track or to pay any par-

ticular attention to whether the car strikes the post or not, as long as there is room for the car to pass between the posts at opposite sides thereof.

It is thus possible to haul the posts up the pitch to the breast and thus substitute power haulage for hand work. In consequence, the labor of doing this work and the expense is thus materially reduced. The car is specially designed for use on slopes of this sort. It is, however, evident that it might be used in other locations. Its particular merit is its ability to deflect itself from obstructions encountered and thus operate without any track under unusual conditions.

What I claim as my invention is:

1. A car having deflecting fenders at each end, one of said fenders at one end being well above the car floor and having its ends extending at a downward incline to a connection with the floor framing at some distance from that end of the car.

2. A car having a floor and an upwardly extending wall at one end, and a deflecting fender extending from the upper part of said end wall outwardly therefrom and with downwardly inclined extensions connected with the sides of the floor to form stay braces and load retaining guards.

3. A car having a floor and one end wall, deflecting fenders extending outward from this end wall, stay braces extending from the upper part of the end walls to the edges of the car floor toward the center of its length, and a deflecting fender at the other end of the car lying beneath the level of the car floor.

4. A car having a floor and one end wall, deflecting fenders at each end, stay braces connecting the ends of the end wall with the sides of the floor and also acting as a load retaining means, and an arched bar having its ends secured to the other end of the car to serve as a load retaining means.

5. A car having a floor and one end wall, deflecting fenders extending from this end of the car, rope storing means on the outer face of this car end and within the fenders, and means for securing said rope at the other end of the car.

6. A car having a floor structure and one end wall, deflecting fenders extending outward from each end of the floor structure, a bar centrally bent and secured to the upper portion of the said end wall to form a deflecting fender, the ends of this bar extending as an inclined stay brace to the side edges of the floor structure, a rope storing means secured to the outer face of the end wall within said fenders, and means for securing said rope to the fender at the other end of the car.

Signed at Black Diamond, Washington, this 18th day of July, 1918.

RASMUS CHRISTIANSEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."