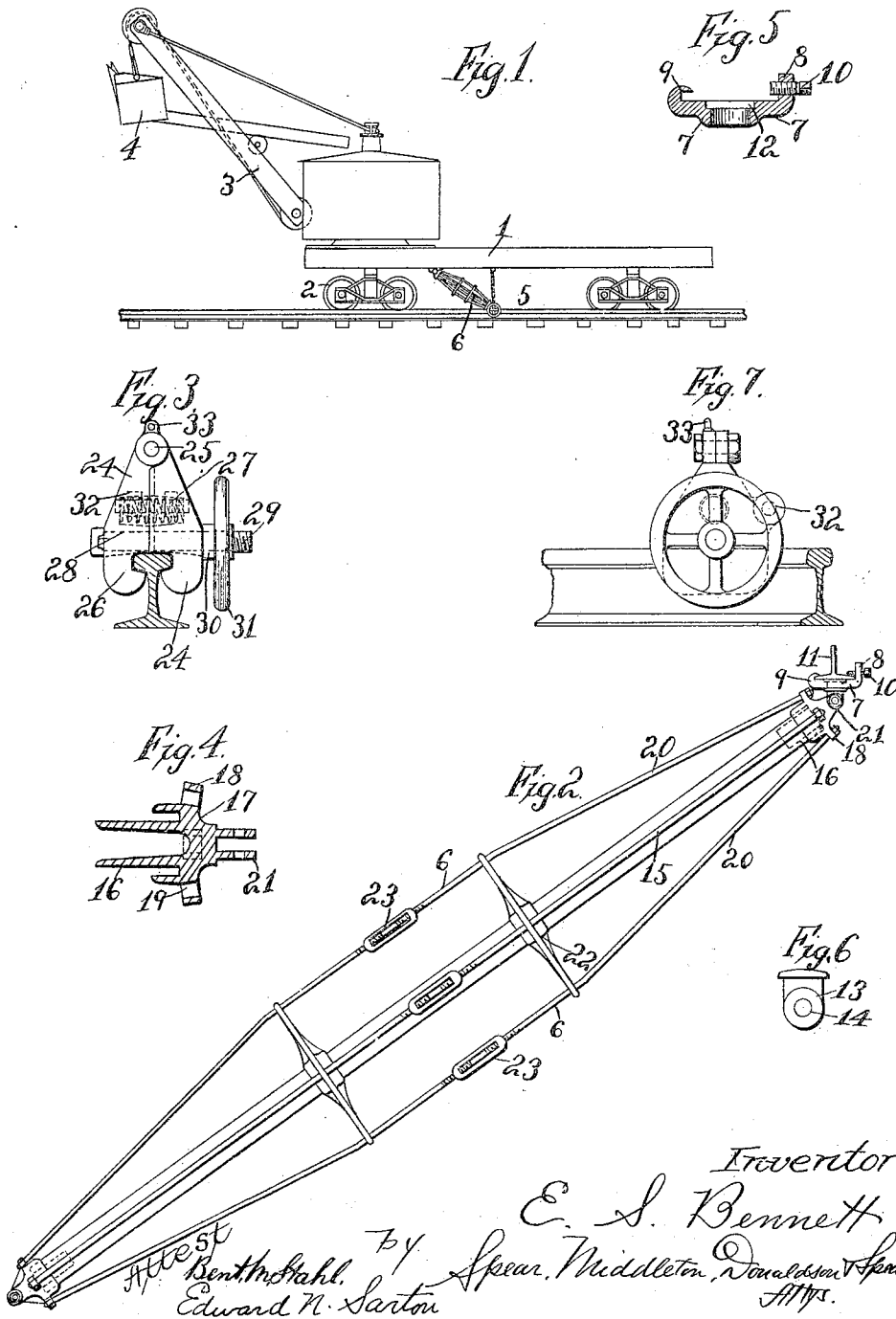


922,450.

Patented May 25, 1909.



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SHOVEL-CAR.

No. 922,450.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ERASTUS S. BENNETT, a citizen of the United States, residing at New York, N. Y., have invented certain new and useful Improvements in Shovel-Cars, of which the following is a specification.

My invention relates to steam shovel cars, and particularly means whereby the shovel car may be chocked on its rails and held firmly in place while in action.

I aim to provide a construction which will take the strain from the king bolt and truck, the means employed by me consisting generally of a connection from the body of the shovel car to the rail extending in inclined position substantially coincident with or parallel to the incline of the boom, so that the said connection will be in position to receive the strain directly and relieve the king pin and truck in this respect.

The invention consists in the features, combination and arrangement of parts hereinafter described and particularly set forth in the appended claims.

In the accompanying drawings,—Figure 1 is a side elevation of a shovel car with my invention in place. Fig. 2 is a side view of the truss or arm connecting the chock with the body of the car. Fig. 3 is a cross section of the rail with the chock in place. Fig. 4 is a detail of one of the fittings of the truss or connecting arm. Fig. 5 is a sectional view of the bracket for joining the connecting arm or truss to the frame of the car. Figs. 6 and 7 are views of detail parts.

In these drawings, 1, indicates the car frame, 2 the forward truck, 3 the boom, 4 the shovel, and 5 the rail upon which the shovel car is supported and moved.

Ordinarily the chocking is done by clamps secured to the rail and bearing on the wheels, but by this method of chocking severe strains have to be borne by the king pin and forward truck. Instead of this means of chocking, I employ an arm or truss 6, connected with the body of the car and extending rearwardly and downwardly in inclined position substantially coincident with or parallel to the inclined position of the boom, the lower end of the said arm being connected with the rail so that the strain incident to the operation of the machine tending to move it backward along its tracks will be borne by the inclined chock arm, and this will receive the strain in a line substantially coincident with the incline of the beam. In other words, it will in

effect form a continuation of the beam to its point of attachment with the supporting rail or track.

For connecting the chock arm or truss with the car body, I employ a bracket or casting 7, having an upturned ear 8 at one side and an overhanging flange 9 at the other side, the upturned ear having a set screw 10 so that the bracket can be attached to the lower flanges of the angle iron beam forming a part of the frame of the car, said beam being shown in place at 11 in Fig. 2. The bracket has a socket 12 in which the flanged head or pin 13 is supported, the said head having an eye 14 formed therein with which the upper end of the truss or arm is pivotally connected. The truss or arm itself is composed of a central bar 15, fitted to the extensions 16 of heads 17, the said heads having flanges 18, provided with openings 19, through which the rods 20 pass, the ends of the said bars being headed and thus secured in place. The upper head 17 has ears 21 pivotally connected with the eye 14. The bars 20 at or near their central portion are held by brackets or plates 22 supported on the central rod 15 of the chock arm and having openings at its outer portions through which the bars 20 pass. These bars are provided with turn-buckles at 23 by which they may be adjusted.

The chock arm at its lower end has its head or fitting pivotally connected with the chock jaws 24. These jaws are pivoted to each other at their upper ends 25 and at their lower ends they are provided with hooked portions 26 adapted to grasp the head of the rail. They are normally forced apart by a spring located in sockets between the chock jaws and for forcing them toward each other so as to grasp the rail I provide a rod 28 secured to one jaw and extending through the other, its screw threaded extremity at 29 having thereon a nut 30 which may be turned by the hand wheel 31 so as to force the jaws together to clamp upon the rail. The point of pivotal connection between the chock arm and the chock jaws is at 32 at one side of the jaws, but at a point above where the chock jaws engage the head of the rail, so that the pressure or strains transmitted through the chock arm will tend to tilt the chock jaws and secure a firm grip thereof upon the head of the rail, and the greater the pressure the greater the gripping action will be.

The chock jaws at their upper ends are provided with an eye 33 to receive any suit-

able form of chain or other suspension device by which the chock jaws and their arms may be supported from the frame of the car when not in use.

5 Having thus described my invention, what I claim is:—

1. In combination with a shovel car having a truck and a boom, a chock consisting of an arm extending from the body of the car to the track in inclined position and connected at its ends to the car body and track respectively, substantially as described.

2. In combination in a shovel car having an inclined boom and a truck, a chock consisting of an arm extending in inclined position in rear of the truck from the car body to the track and connected thereto, substantially as described.

3. In combination with a shovel car, a chock, consisting of an arm connected with the body of the car, a pair of chock jaws pivotally connected together and embracing the rail, the said chock jaws being pivoted to the lower end of the arm at a point above the rail head, substantially as described.

4. In combination with a shovel car, a

chock arm having a pivoted and swiveled connection with the car body, chock jaws pivoted to the lower end of the said arm, and means for operating the said jaws to grasp the rail, substantially as described.

5. In combination, a bracket having means to grasp the lower flanges of the side bar of the car having a pin swiveled therein, a chock arm pivotally connected with the said pin, chock jaws pivotally connected with the said arm, and means for operating the said jaws to grasp the rail, substantially as described.

6. In combination with a shovel car having a truck and an inclined boom, a chock consisting of an arm extending from the body of the car to the track and inclined substantially coincident with or parallel to the inclined boom, said arm being connected to the car and to the rail, substantially as described.

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

ERASTUS S. BENNETT.

Witnesses:

GEO. H. LIGHTFOOT,
M. L. JUSTIN.