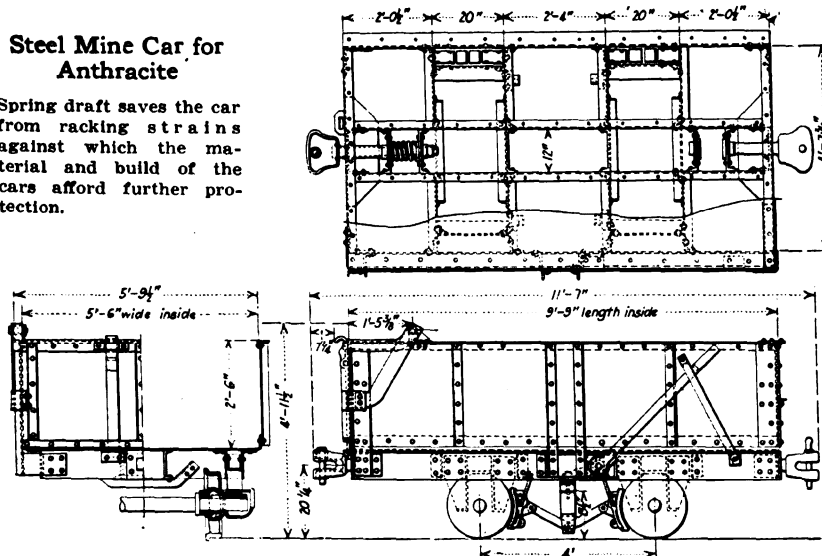


Steel Mine Car for Anthracite

Spring draft saves the car from racking strains against which the material and build of the cars afford further protection.



in others are filled from chutes. This company also operates extensive strippings. It would, of course, be inconvenient to provide a different type of car for each variety of service and it is necessary as a result to build the cars of such a design that they will meet all conditions encountered. But though there is room in the underground workings for a high car, yet it must not be so high as to render hand loading difficult. It must be strong enough to withstand the shock of coal falling from a chute, as well as the rough usage to which it is subjected in the strip pits when loaded by steam shovel.

In order that it may possess the necessary strength such a car is unavoidably heavy and as a result must be so designed that it will not readily leave the track. Furthermore, rolling friction must be reduced as far as possible. To lessen wear and tear also, it is advisable to provide such a car with brakes instead of depending upon spragging as is customary in many anthracite collieries.

At the operation above mentioned the car employed has a capacity, level full, of 134 cu.ft. The inside dimensions are:—Length, 9 ft. 9 in.; width, 5 ft. 6 in., and depth, 2 ft. 6 in. The over-all dimensions are: Length, outside to outside of bumpers, 11 ft. 7 in.; width, 6 ft. 2 in.; height, 4 ft. 11½ in. The height of the top of the side boards is, however, only 4 ft. 6 in. The wheel base is 4 ft. and the track gage is 36 in.

DRAWHEADS ARE FURNISHED WITH SPRINGS

In external appearance this car is strongly suggestive of railroad equipment of the gondola type. The framework is entirely of steel, the sides and bottom being strengthened and braced with angle iron. The drawheads are spring-mounted, stress upon the body of the car being thus reduced. Springs also are employed above the journal box to reduce the jolting which rough track will cause and the stresses incident thereto. The springs on the drawhead and journal boxes, as well as the long wheel base render the car not only easy riding but enable it to hold the track much better than if these springs were omitted and the wheel base made short.

Brakes are rather unusual in the anthracite field, but their employment on a car of this size and weight renders the wear and tear much less than it would be if sprags only were employed. Furthermore, sprags

tend to cause flat wheels and excessive wear upon the flanges so that in time a wheel thus worn will tend to climb the rail, and consequently the car that it supports is liable to derailment.

Two different types of trucks are employed. These use the Hyatt-Fleming and the American Car & Foundry roller-bearing wheels, respectively. Both types have given excellent satisfaction. The use of either reduces rolling friction which is highly necessary in a car of this size and weight. The cars themselves were built by the American Car & Foundry Co.

An extremely simple yet effective device is employed for holding the car door closed. This consists of a steel locking bar working vertically along the endgate and fitting into a suitable hole in the bumper. To open the door it is only necessary to raise this bar about two inches. The dump in the breaker is so arranged that a hook on the end of the vertical locking bar engages a crane, which in this case is merely a horizontal bar, and as the car tilts forward to discharge its contents the endgate is first unlocked and then raised.

All in all this car satisfies the conditions imposed by the operation where it is used. It is of rugged construction, and consequently the repairs are low. It may be used effectively in any one of the many diverse workings, so that several distinct types of car are not required. Rolling friction and consequently draw-bar pull is reduced to a minimum. Its large capacity lessens the number of car loads necessary to transport a given output. It is exceptionally easy riding and consequently holds the track much better than the ordinary rigid or semi-rigid car. And, lastly, the brakes obviate the wear to which cars are subjected when sprags are used exclusively.

Thirty Millions in Compensation Paid Workmen in Pennsylvania

SINCE the Workmen's Compensation Board has been in operation in Pennsylvania, a period of five years, \$28,712,768 of compensation has been paid out, according to figures just tabulated by the board. During a portion of 1916 and the year 1917, \$7,247,196 was paid through the board; in 1918, the payments were \$4,412,881; in 1919, \$6,039,076; in 1920, \$7,001,197, and during the first six months of 1921, \$4,012,412.

During the five-year period the awards of compensation for fatal injuries have aggregated \$30,075,765. The amount actually paid out for such compensation has been \$8,448,859 and the disability compensation paid, \$20,263,903.

The total amount awarded for permanent injuries during the five years was \$9,154,075 and the amount already paid, \$5,314,880. During this period the board has awarded for the loss of legs, \$936,576; the loss of arms, \$745,345; loss of hands, \$2,071,955; loss of feet, \$976,227; loss of eyes, \$3,983,868 and miscellaneous, \$440,104. These awards are for the loss of 501 legs, 386 arms, 1,286 hands, 671 feet, 3,210 eyes and there were 112 miscellaneous accidents.

There were 15,212 fatal accidents reported, 3,067 of permanent disability, 1,048,119 of temporary disability, making a total of 1,066,398 accidents. Agreements were approved in 11,824 fatal cases, 6,009 of permanent disability, 337,478 of temporary disability, or a total of 355,311.