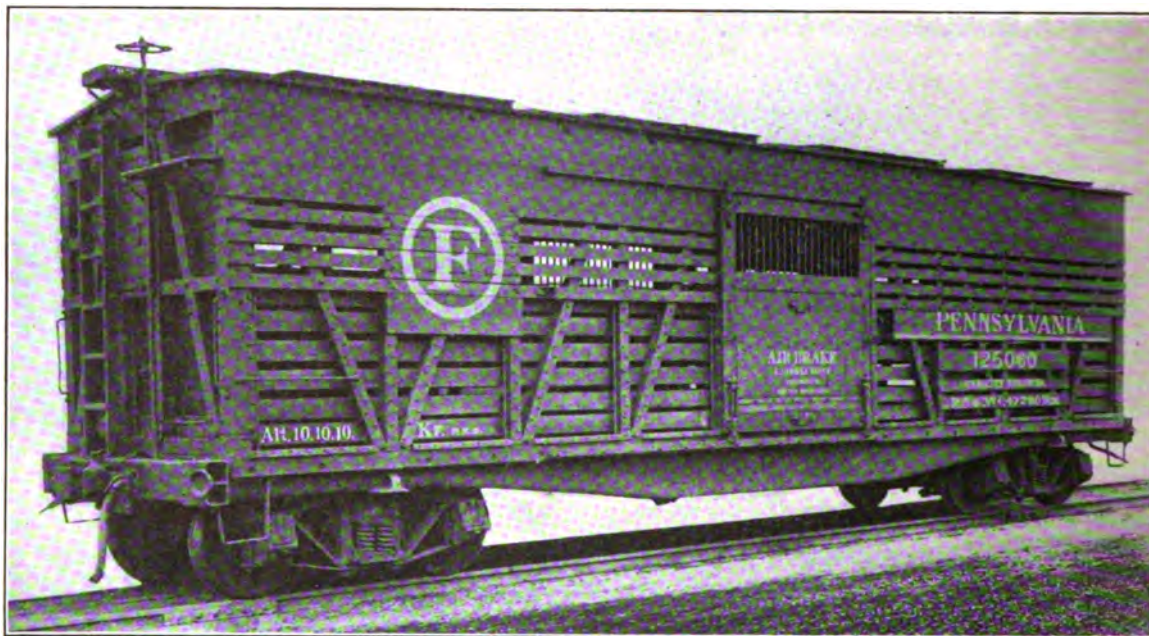


NEW LIVE STOCK CAR

PENNSYLVANIA RAILROAD.

After devoting years to the development of the most suitable design for a standard stock car, the Pennsylvania rail-

inside have been rounded or countersunk, and all edges on side doors and interior walls with which the stock may come in contact have been rounded or chamfered. The floor is rough, in order to afford a firm foothold for animals, and being of oak on a steel underframe the possibility of sagging is eliminated, a feature when present which has resulted in many



STANDARD STEEL UNDERFRAME STOCK CAR

road, in its class "KF," appears to have solved the problem with one which, while answering all service requirements, at the same time embodies many additional safeguards for the protection of the stock.

This feature is particularly prominent in connection with the interior construction. All bolt heads and nuts on the

accidents to stock in transit though falling with the jerk of the train.

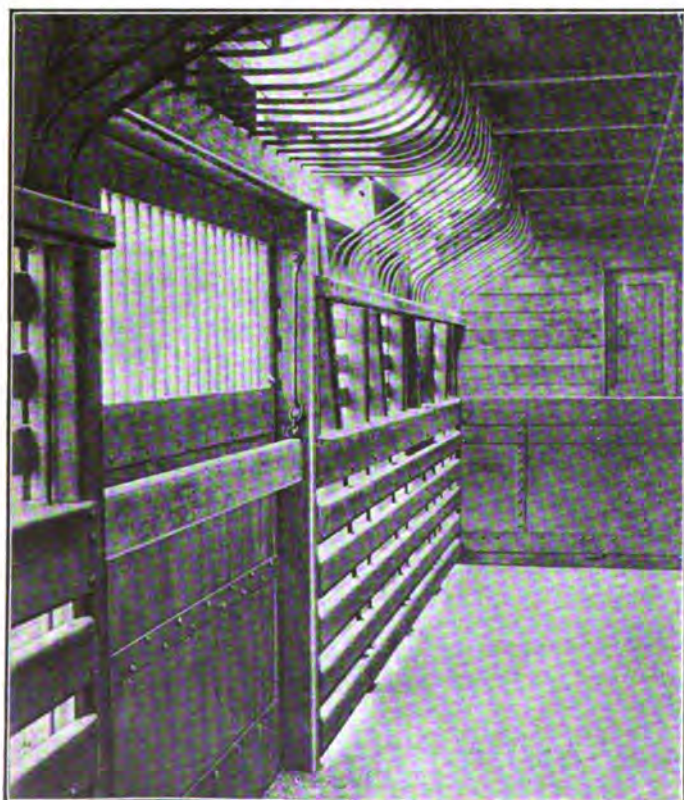
Hay racks within the car extend from end to end, thus permitting feeding in transit, and the car has end sliding doors and handholds on bottom of carlins in order that attendants may enter. The roof of the standard stock car is of twoply thickness, and the upper portion of the hay racks and the ends of the car are boarded solidly to keep out all rain or snow. The trucks are fitted with graduated springs. The underframing, body, trucks and equipment follow the Pennsylvania railroad's specifications for 100,000 lbs. capacity cars with little variation. The general dimensions are as follows:

Length over end sills.....	38 ft. 6 in.
Length outside over body.....	36 ft. 11 3/4 in.
Length inside.....	35 ft. 11 1/4 in.
Width inside.....	8 ft. 5 3/4 in.
Width at eaves.....	9 ft. 10 in.
Height inside, floor to carlin, at side plate.....	8 ft. 3/4 in.
Height from rail to floor.....	3 ft. 6 3/4 in.
Height from rail to running board.....	12 ft. 8 3/4 in.
Height from rail to top of brake staff.....	13 ft. 2 3/4 in.
Distance from center to center of trucks.....	28 ft. 6 in.
Wheel base of truck.....	5 ft. 6 in.
Centers of journals.....	6 ft. 5 in.
Size of journals.....	5 1/2 in. x 10 in.

A model of this car was exhibited at Washington, D. C., October 10-15, on the occasion of the First International Humane Conference in America.

EFFICIENCY IN SHOP OPERATIONS.

It is generally conceded by managers of industrial as well as railroad shops and enterprises that high efficiency in equipment, in the methods employed, and also in the men, is one of the most desirable qualities to be attained. But the measure and development of efficiency and the remarkable results that must follow its cultivation have been clearly understood by but few. By those who are in a position to take a broad view of the situation it is clearly recognized that managements are generally realizing that the old methods are proving inadequate to present requirements, and that new ways are fast becoming a necessity.



INTERIOR VIEW OF STANDARD STOCK CAR