

course contains approximately 3,500 sq. ft., and is separated from the train room by an iron and glass screen, immediately inside of which is the baggage runway, connecting to the outgoing baggage room at the left. The outgoing baggage room is immediately below the incoming baggage room on the first floor, and is of the same dimensions, and as previously stated, is connected with it by a staircase and

large freight elevator.

There are five tracks arranged in the present construction. From the baggage runway, ramps with a grade of 5% descend to the platform level.

To the right of the baggage runway are the machinery and storage rooms, and here are installed the apparatus for heating the water supply to the lavatories and cooling the drinking water. The

heating plant for the building is installed in a separate structure behind the outgoing baggage room.

Along the Lagauchetiere St. front, on the second floor level, is approximately 4,000 sq. ft. of office space, which is to be subdivided later when its uses are determined. On this floor are lavatories and other facilities required for use of the office staff.

## Passenger Car Cleaning on the Canadian Pacific Railway.

By E. Eley, Master Car Builder, Eastern Lines, C.P.R.

Cleaning passenger equipment cars is one of the operations all railways have to expend large amounts of money for yearly, and clean cars is one of the things the travelling public appreciate. Those of us who travel know this from the remarks we hear from passengers. Very few of them, however, know what a vast amount of labor must be spent to keep cars clean and in a sanitary condition.

In this paper I will endeavor to conduct them through a train just arriving from a five days trip across the continent. We will start at the rear end and walk through, noting its condition. If it is in the dry season and ties have been put in the track recently, we have dust covering everything, and it has got into the plush seat covering, carpets and bedding. Beside this, there is the usual amount of paper, orange peel, bottles, etc.

Before we can start our cleaning we find some of the cars are due to be fumigated, which is done once a month; upper berths have to be opened, and blankets, pillows, berth curtains and mattresses spread out so that the fumes will penetrate every part of the equipment, locker doors and lavatories must be opened and all windows and ventilators closed. For an ordinary fumigation, one sheet is used, saturated with formaldehyde and hung up in the centre of the car. The car is then closed up, locked and left for at least an hour and a half, after which it is opened and ventilated for the cleaners to go in. For a thorough fumigation, which is used in cases of actual infection, three sheets are used, saturated with formaldehyde, and hung up, one in each end, and one in the center of the car, and the car left closed at least three hours, after which it may be opened and ventilated.

From sleeping cars, carpets, bedding, seats and seat backs have to be removed from the car for cleaning and airing. To clean these, the following is the usual practice: Blankets and berth curtains are shaken, mattresses are beaten or blown with air, seats and backs are either blown with air or cleaned with vacuum. The carpet is first swept off and then blown with air. All this equipment is then laid on racks or trestles until the interior of the car is cleaned thoroughly and made ready to receive it again.

The interior of the car is cleaned from the headlining to the floor. First we have to get rid of the dust. Deck sash are opened and dust wiped out with a disinfectant solution in the water, dust is got out from between and above the window sash by hammering with the hand, and window sticks covered with a cloth. When we have got down all the dust we can, the floor is swept out. We start again at the headlining and wash it, including the deck sash down to the deck sash rail. All the woodwork below this has to be wiped down, and if necessary washed with castile soap and warm water, and finally the floor and steam pipes are washed with a disinfectant solution in the water; this

includes toilets under washstands, and lockers. Now it is ready to receive the bedding, etc. When this is stowed away, seats and backs are replaced. The woodwork is gone over and polished, sometimes using a renovator; nickel and mirrors are all cleaned and polished, the carpet is laid, and the final finishing touches are given to the car. Passage ways and vestibule floors are scrubbed and a canvas strip laid down and left there until the train is ready to back into the station. This work takes about 35 hours, and with the exception of washing the headlining and polishing the woodwork, where a renovator is used, is performed by two men and a woman, and costs about \$15.50 a car.

This work is performed on observation, sleeping and tourist cars, once in seven days, or in the case of transcontinental trains they are stripped at Montreal or Toronto and Vancouver, which is once in six days. On shorter runs the cleaning given this equipment between strippings is an ordinary cleaning, consisting of sweeping carpets, dusting and wiping woodwork, cleaning windows, mirrors, nickel, etc., and finally vacuuming the cushions, backs and carpet, scrubbing floors in passage ways and vestibules.

We will now take the day cars. We do not remove seats or seat backs from them, windows are opened and the car is swept out then dusted down, headlining washed if necessary, floor and steam pipes scrubbed with a disinfectant solution, and, if necessary, all, or part of the interior, washed down, windows, mirrors and nickel cleaned and polished, seats and backs in the first class are vacuumed and aisle strip blown with air, and laid, and the car is ready for service. If cars are cleaned in the morning and do not leave until night, they quite frequently have to be dusted again just prior to departure.

In the baggage and express cars, the fish racks are lifted and pits swept out, and then rack and pits are scrubbed with clean water without disinfectant, then pits and racks are sprinkled with lime and racks replaced. As necessity requires, these cars are washed down from roof to floor, as being on the front end of trains they get very dirty from smoke from the locomotive. The reason we do not use disinfectant in the water for scrubbing baggage cars is, it would taint some of the commodities carried in them.

Mail cars are cleaned in the same way, except that the floors are scrubbed with disinfectant in the water. This completes the inside cleaning. The outside is cleaned by washing or wiping, according to weather conditions, but the best results are obtained by wiping when it is possible to do so. The windows are occasionally gone over with a little muriatic acid in water whenever necessary to cut the dirt or scum which accumulates, and then washed with clear water. vestibules and steps are wiped down and brass work polished. This is an ordinary cleaning

which they get every time they are in the terminal, but even with this cleaning, in two or three months they get dirty, to such an extent that the numbers cannot be seen, then they are given a terminal cleaning, which consists of scrubbing them with some approved cleaner and thoroughly washing it off, and the car looks as though it had only just come out of the shops.

The people who perform this work are composed of all nationalities, some of them make pretty good car cleaners and others never will. This, then, is the element with which we have to get this work done, and you can readily see it requires the closest supervision to get it done properly. I once saw a woman who was on the terminal cleaning, and using our standard cleaner, put her brush into some fine sand and start to scrub some spots on the outside of the car to remove some excreta which had become dried on so hard that it was almost impossible to remove it without taking off the varnish. She was a foreigner and no doubt in her own home in the country she came from the practice was to use sand and water to scrub the floors. You can readily understand what it means to educate such people and make car cleaners of them.

To supervise work of this nature requires men of energy and patience, and they, like people working under them, require special training, otherwise the class of cleaning deteriorates, then it becomes necessary to make a crusade on better cleaning, and some of our foremen will tell you this occurs quite frequently. It has always been our desire to give our patrons clean and sanitary cars to travel in, and few of them realize the amount of labor which is expended on the equipment for their comfort.

The foregoing paper was read before the Canadian Railway Club in Montreal.

**Steel Rail Deliveries.**—We were officially advised Sept. 9 that the Dominion Iron & Steel Co., Sydney, N.S., had rolled 72,708 tons of steel rails out of the 100,000 tons ordered by the Dominion Government and that 62,973 tons had been shipped to railways as below:

	Tons.	Lbs.
Canadian Govt. Rys. ....	11,280	600
Canadian Northern Ry. ....	17,349	1,690
Canadian Pacific Ry. ....	23,679	840
Grand Trunk Ry. ....	10,314	1,910
Toronto, Hamilton & Buffalo Ry.	351	

The Dominion Transportation Co. has been incorporated under the British Columbia Companies Act, with authorized capital of \$10,000 and office at Victoria, to carry on business as general carriers, railway and forwarding agents and warehousemen, and to operate touring and sight-seeing cars and other similar public conveyances.

The Algoma Central & Hudson Bay Ry. announced Sept. 1, that with the exception of two and a half townships, all its land grants will be thrown open for prospecting purposes for two years.