Hull Electric Co's Snow Sweeper and Locomotive.

The Hull Electric Co. has added to its equipment a combined snow sweeper and locomotive, built by the Ottawa Car Manufacturing Co., with the following dimensions:—

The cab is of wood construction with 16 steel panels, 4 windows on each side and 3 at each end. A sliding window on each side is provided for look out, and there broom drive shaft, air compressor, motor resistance, air tanks, etc. This housing is made of sheet steel in 2 sections, so that it can be made shorter when the car is used as a locomotive.

The brooms are driven by a Westinghouse 101-B motor. The trucks are equipped with Westinghouse 101-B motors, 4 motors, double end equipment, with Westinghouse 402 controllers. The sweeper is equipped with Ohio Brass Co. pneumatic sanders. The lights are in one circuit of 5 lights, arranged at center of cab. The air brakes are Westinghouse, type S.M.E.; the trucks wheelbase is 4% ft.

The body is painted antique brown with gold numbers.

Answers to Questions on Electric Railway Topics.

The following answers to questions sent to the American Electric Railway Association's question box, have been supplied by R. M. Reade, Superintendent, Quebec Ry., Light, Heat & Power Co., Quebec, Oue.:—



Combined Snow Sweeper and Locomotive, Hull Electric Co.

is a large sliding door on one side. The roof is of the turtle back type, supported on steel carlines. The interior of body is finished in ash, natural finish. The special machine is designed so that

The special machine is designed so that the motorman can operate all the apparatus used for lowering and raising the brooms, also the plough, without leaving his controller. The brooms and plough are lowered and raised by a chain device wound on to a cast iron drum, worked by a worm and gear on a 1 13/16 inch c.r. shaft, connected by miter gears to the winding machine shaft inside of cab operated by motorman.

The brooms are mounted on a heavy shaft and supported by 3 heavy malleable iron pedestals with bronze bearings. They are driven by heavy chain and sprocket drive. from main driving shaft, which is directly connected to the motors by gear and pinion drive, having the same gear ratio as the truck motors. The broom drive shaft is of cold rolled steel and supported by 2 heavy cast iron pedestals with babbited bearings. A heavy sprocket is fitted and keyed on one end of shaft, from which power is transmitted to the broom shaft sprocket.

Motor housing is provided at each end, to enclose broom driving motors for Route Accounting Methods. — What method should be pursued in allocating expenses and earnings, as between different lines and routes of the same system? We have always allocated expenses on a mileage basis of the different lines and

We have always allocated expenses on a mileage basis of the different lines and routes. We have a car hour basis, but it is not so satisfactory. Earnings for each line or route are kept separate.

Track Maintenance Economies. — In view of the necessity of economizing in the use of both labor and materials, what economies in track maintenance can be put into effect with the least inconvenience to the public and the least permanent injury to the company's property?

ent injury to the company's property? Due chiefly to the high cost, besides prices and delivery on rails not guaranteed by factories, we have been using for the past two or three years, a welding motor generator set. It has played a very important part in our railway track repairs, and by this means we are obtaining renewed life in the track on many parts of the system. After metal has been welded, the finished work is ground off to a smooth surface by means of the Atlas rail grinder. Built up welds are being made at cupped joints, at chipped intersecting flangeways and at other badly worn parts. In fact, many pieces of track have been restored which otherwise would have required renewal at the time repair was made. Even if the percentage of unsuccessful repairs is large, the cost of them is so small that as a whole the work undoubtedly figures as an economy. All this work is being done at night between 12 midnight and 5 a.m., when cars have stopped running.

Concrete vs. Wooden Ties.—Taking into consideration the difficulty of securing, and the increased cost of, wooden ties, what is your opinion as to the desirability of substituting concrete ties therefor?

So far, we have had no difficulty in getting suitable ties, costing us 75c each. We have had no experience with concrete ties.

Movable Snow Breaker.—What is a good and cheap type of movable snow breaker for use on an interurban line, where they can be placed in the fields, only after the crop has been harvested, and must be removed in the spring?

We have used with good success rough wooden fences 12 ft. by 8 ft. high as a snow break. They are inexpensive, and easily put together by any track gang. Material required: 3 rough scantlings 3 x 4 in. x 8 ft., 8 rough boards 4 x 1 in. x 12 ft., 3 short scantlings 3 x 4 in. x $4\frac{1}{2}$ ft., 3 machine bolts 7 x $\frac{1}{2}$ in. To make—the three long scantlings are laid parallel on the ground 6 ft. apart, and 7 of the rough boards are nailed at right angles to the scantlings, leaving 6 in. between each board; the 3 short scantlings are bolted to the center of the long scantlings acting as hinges; the 8 board is now nailed to the 3 short scantlings about a foot from the ends of same, enabling the fences to be folded and easily carried, when not in use.

Repairs in Asphalt Pavement.—What is the best method of temporarily patching holes in asphalt pavement between tracks? Can asphalt block or concrete be used for this purpose with good results?

All our pavement between tracks is either scoria, asphalt blocks or macadam. We have had no experience with asphalt pavement between tracks. I see no reason why asphalt blocks could not be used for patching asphalt between tracks.

Women as Conductors.—Can women conductors be effectively used in the smaller cities, say those having populations between 20,000 and 50,000? If not, why?

why? No experience. I see no reason whatever why women conductors could not make good in the smaller, as well as the larger, cities.

Emergency Motormen.—Will companies whose lines serve munitions plants or other centers of war or government activities, give their experience in the employment of employes of those plants in the operation of cars for single trips to the plants in the morning and away from the plants at night? Am informed that this method of making up the shortage in labor has proved successful in a number of instances.

ber of instances. Before the Ross rifle factory closed down 18 months ago, situated on the upper town, we ran single trip cars from the lower level of the city (two miles from the factory) in the morning, to the factory, and from the factory in the evening. The employes of the factory living on the lower level soon got to know of this convenience, patronizing these cars well, due to our announcing the fact in the press that they would be carried without transferring morning and evening.