

ONTARIO  
NORTHLAND  
RAILWAY

ABITIBI PULP  
& PAPER  
RAILWAY

# Railway Rolling Stock Orders and Deliveries.

The Timiskaming & Northern Ontario Ry. has received 4 locomotives which have been rebuilt by Canadian Locomotive Co.

The C.P.R., between Nov. 14 and Dec. 16, ordered a single track, steel under-frame flanger, to be built at its Angus shops, Montreal, and bought 2 Jordan ballast spreaders.

The G.T.R. has received a steel under-frame from Canadian Car & Foundry Co., for mail car 48, under construction at the G.T.R. Point St. Charles shops; also 11 steel underframe cabooses from its Montreal shops.

The Brazilian Railway Board's mikado (2-8-2) locomotive, 39 1/2 in. gauge, details of which were given in Canadian Railway and Marine World for Oct., 1922, page 528, has been delivered by Montreal Locomotive Works.

The C.P.R. has ordered 16 Pacific type locomotives from American Locomotive Co., and has made enquiries for the following additional rolling stock:—12 combination mail and baggage cars; 6 cafe parlor car frames; 6 buffet car frames; 300 composite coal cars, 75 tons capacity; 50 oil tank cars, 50 tons capacity;

Flues, diam.	5 3/4 in.
Grate area	16.16 sq. ft.
Heating surface, tubes and flues	415 sq. ft.
Heating surface, firebox	36 sq. ft.
Heating surface, total	501 sq. ft.
Superheater heating surface	95 sq. ft.
Water capacity	1,560 gall.
Fuel capacity	2 tons

As will be seen by the accompanying illustration, the locomotive is labelled Abitibi Railway & Navigation Co., as some of the company's other rolling stock is. That was the name under which it was originally proposed to incorporate, but the company was incorporated as Abitibi Transportation & Navigation Co., as stated in Canadian Railway and Marine World at the time.

## Canadian National Railways' Orders.

As stated in Canadian Railway and Marine World for January, R. C. Vaughan, Vice President, Purchasing, Supplies and Stores Department, C.N.R., received tenders to Dec. 14, 1922, for a large quantity of rolling stock and work equipment, and orders have since been given for 77 locomotives, 155 passenger train cars, 2,700 freight cars, 272 freight car bodies, 100 ballast cars, and a quantity of work equipment, details of which are as follows:

Locomotives.—Thirty-five mikado type

Injector	Hancock type EA for 3,500 gall. on right side only
Trailing truck	Commonwealth
Engine truck	Economy
Cab	steel, vestibule type

Eight mikado type for Grand Trunk U.S. lines from American Locomotive Co., 4 for Central Vermont Ry. and 4 for G. T. Western Lines. These will be very similar in design to the standard U.S. R.A. light mikado, and will have the following chief specifications:

Wheel base, engine, rigid	16 ft. 9 in.
Wheel base, engine	36 ft. 1 in.
Wheel base, engine and tender	71 ft. 5 1/2 in.
Cylinder, diam.	26 in.
Cylinder, stroke	30 in.
Firebox	11 1/4 x 84 1/4 in.
Tubes, number	216
Tubes, diam.	2 1/4 in.
Tubes, length	19 ft.
Flues, number	40
Flues, diam.	5 3/4 in.
Boiler pressure	200 lb.
Weight on drivers	220,000 lb.
Tractive power	54,700 lb.
Tender, water capacity	10,000 U.S. gall.
coal capacity	16 tons
weight loaded	190,000 lb.
Valve gear	Walschaert
Stoker	Duplex
Feedwater heater	Superheater Co.'s

Ten mountain type for Canadian National Rys., and 6 mountain type for the G.T.R., from Canadian Locomotive Co. The only available details concerning these are as follows:

Wheel base, engine, rigid	10 ft. 6 in.
Wheel base, engine	41 ft. 8 in.
Wheel base, engine and tender	about 79 ft.
Heating surface, firebox and arch tubes	348 sq. ft.
Heating surface, tubes and flues	3,731 sq. ft.
Heating surface, total	4,079 sq. ft.
Driving wheel diam.	73 in.
Driving wheel centers	cast steel
Driving journals, main	12 x 13 in.
Driving journals, other	10 x 13 in.
Cylinder, diam.	26 in.
Cylinder, stroke	30 in.
Boiler, type	endial stayed, with combustion chamber
Boiler, pressure	210 lb.
Tubes, number	188
Tubes, diam.	2 1/4 in.
Flues, number	40
Flues, diam.	5 3/4 in.
Tractive power	49,600 lb.
Tender, water capacity	10,000 imp. gall.
coal capacity	15 tons
tank	water bottom
trucks	Commonwealth 6-wheel
wheels	34 1/4 in. diam.
wheels	semi-steel centers with steel tires
frame	Commonwealth cast steel
Feedwater heater	Superheater Co.'s
Stoker	Duplex
Valve gear	Walschaert
Superheater	Robinson
Brakes	Westinghouse no. 6 E.T.
Safety valves	3 World type
Injector	Hancock type EA, for 3,500 gall. on right side only

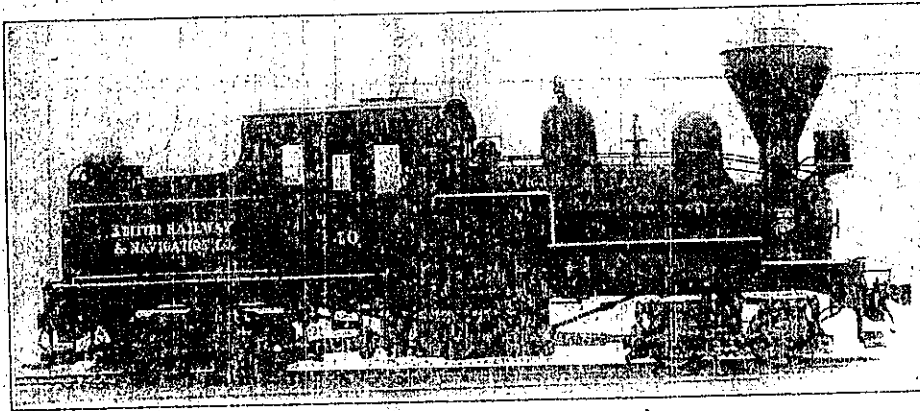
Trailing truck	Commonwealth
Engine truck	Commonwealth
Cab	steel, vestibule type

Five 8-wheel switching for G. T. Western Lines, from Lima Locomotive Works, Lima, Ohio. The chief dimensions will be as follows:

Wheel base, engine	15 ft. 6 in.
Wheel base, total	53 ft. 4 1/4 in.
Cylinder, diam.	26 in.
Cylinder, stroke	30 in.
Firebox	10 1/2 x 75 1/4 in.
Tubes, number	223
Tubes, diam.	2 in.
Flues, number	32
Flues, diam.	5 3/4 in.
Flues, length	15 ft.
Weight on drivers	210,000 lb.
Weight of tender	166,360 lb.
Tractive power	52,300 lb.
Boiler pressure	190 lb.
Tender, water capacity	9,000 U.S. gall.
Tender, coal capacity	10 tons
Valve gear	Young
Power reverse gear	Racconet

Three 6-wheel switching locomotives for Central Vermont Ry., from Lima Locomotive Works, Lima, Ohio. The chief details will be as follows:

Wheel base, engine	11 ft. 6 in.
Wheel base, total	46 ft. 1 1/2 in.
Cylinder, diam.	22 in.
Cylinder, stroke	26 in.
Driving wheel diam.	56 in.



Shay Locomotive, Abitibi Transportation & Navigation Co.

300 steel underframe flat cars, 40 tons capacity.

United States locomotive builders shipped 210 new locomotives in Dec., 1922, the largest number since Jan., 1921, 1924 being for domestic use and 16 foreign. The unfilled orders on Dec. 31, 1922, were 1,498 domestic, and 94 foreign. The total shipments for 1922 were, domestic, 1,056; foreign, 218; total, 1,274, against domestic, 830; foreign, 519, and total, 1,349, in 1921.

Abitibi Transportation & Navigation Co.'s Shay locomotive, which has been received at Iroquois Falls, Ont., from Lima Locomotive Works, Lima, Ohio, as mentioned in Canadian Railway and Marine World for Dec., 1922, has the following chief details:

Gauge	4 ft. 8 1/2 in.
Fuel	Bituminous coal
Engine wheel base	27 ft. 2 in.
Truck wheel base	4 ft. 2 in.
Weight, total	96,000 lb.
Weight, on drivers	96,000 lb.
Maximum tractive power	20,835 lb.
Factor of adhesion	4.61
Diam. driving wheels	29 1/2 in.
Cylinders, no.	3
Cylinders, diam.	10 in.
Cylinders, stroke	12 in.
Boiler, diam.	42 3/4 in.
Boiler, pressure	180 lb.
Firebox, length	34 1/4 in.
Firebox, width	42 1/2 in.
Tubes, no.	63
Tubes, diam.	2 in.
Tubes, length	8 ft. 11 in.
Flues, no.	10

for Canadian National Rys. from Montreal Locomotive Works, and 10 mikados for G.T.R. from Canadian Locomotive Co. The only details concerning these available at the time of writing are as follows:

Wheel base of engine, rigid	16 ft. 6 in.
Wheel base of engine, total	35 ft. 1 in.
Wheel base, engine and tender	about 63 ft.
Heating surface, firebox and arch tubes	300 sq. ft.
Heating surface, tubes and flues	3,297 sq. ft.
Heating surface, total	3,597 sq. ft.
Diameter of driving wheels	63 in.
Driving wheel centers	cast steel
Main journals	11 x 13 in.
Other driving journals	10 x 12 in.
Cylinder diameter	27 in.
Cylinder stroke	30 in.
Boiler, type	extended wagon top type
Boiler, pressure	185 lb.
Tubes, number	244
Tubes, diam.	2 in.
Flues, number	40
Flues, diam.	5 3/4 in.
Flues, length	18 ft.
Tender, water capacity	8,300 imp. gall.
coal capacity	12 tons
trucks	4-wheel pedestal and equalizer type
wheel diam.	34 1/4 in.
wheel type	Semi-steel centers with steel tires
tank, style	water bottom
frame	Commonwealth cast steel
journals	6 x 11 in.
Tractive power	54,600 lb.
Feedwater heater	Superheater Co.'s on 10 and Worthington on 35
Stoker	Duplex
Valve gear	Walschaert
Superheater	Superheater Co.'s type A
Brakes	Westinghouse E. T. no. 6
Safety valves	3 World type

August, 1922.

## Railway Development, Projected Lines, Surveys, Construction, Betterments, Etc.

**Abitibi Transportation & Navigation Co., Ltd.**—Canadian Railway and Marine World for June stated that it had been officially advised that the Abitibi Power Paper Co., had let a contract to build, this year, a standard gauge logging railway from Iroquois Falls, Ont., to a junction with the National Transcontinental Ry. at Hughes, Ont., 16 miles, that Iroquois Falls is the terminus of the Timiskaming & Northern Ontario Ry.'s 7-mile branch from Porquiss Jet, Ont., 225.7 miles north of North Bay, and that Hughes is 29 miles east of Cochrane. This meagre information was only obtained after we had written two letters to the company. We then wrote again, asking the usual information we obtain in regard to such matters, including the name and address of the contractor; what the contract included; section and weight of rails to be used; name of engineer who made the survey; a blue print showing the routes; who would be in charge of construction for the company, and what rolling stock it was intended to acquire. The company's Secretary replied, repeating that a contract for all the work had been let, and the equipment purchased, under agreement to purchase, declined to give any further information. We wrote him again, pointing out that such information is invariably furnished as in regard to railway contracts awarded and urged that it be supplied, but our request was ignored and our letter was not even acknowledged. In Canadian Railway and Marine World's 24 years history, its Editor cannot remember having been similarly treated before; railway officials and projectors being almost invariably willing to furnish full information. However, in spite of the company's refusal, we are able to give considerable information about the matter, and shall give more from time to time in our readers' interests.

The Abitibi Power & Paper Co. has a large pulp and paper plant at Iroquois Falls and extensive timber limits in the surrounding districts. Press reports state that the company wanted to build a railway from Iroquois Falls, via Hughes, to ultimately reach James Bay, or navigable waters flowing into it, and to do business thereon as common carriers. The question of the construction of such a line was considered by the Ontario Government in June, when a deputation from the company waited on Hon. M. Doherty, then acting Premier, and other members of the cabinet, the Chairman and other members of the Timiskaming & Northern Ontario Ry. Commission being present. The commissioners objected to the company's application, on the ground that the projected line would interfere with the T. & N. O. Ry.'s business, and that it would parallel the extension of that line now under construction from Cochrane northerly. As a result, it was decided that the company may build a railway from Iroquois Falls to Hughes, but that it shall be used for logging purposes only. The Ontario Government, on June 28, issued letters patent of incorporation under the Ontario Companies Act, for the Abitibi Transportation & Navigation Co., Ltd., for the following purposes: To carry on a lumber, timber and pulpwood business; to construct, purchase or otherwise acquire, steamers, scows, tugs and booms or any other kind of crafts or appliances for inland navigation and to employ and operate the

maintain embankments, booms and other works and equipment of all kinds for the purpose of carrying on such business; and to construct and operate lumbering and logging railways or tramways as herein-after provided, sidings and appliances, provided, however, that any railway or tramways constructed or operated by the company shall be located from Iroquois Falls not farther north than Hughes and, together with any sidings in connection therewith, only on the present concession of Abitibi Power & Paper Co., Ltd., and, only for lumbering and logging for the supply of pulpwood to that company, limited; and further provided, that this company shall not in the exercise of its powers accept from or deliver to any railway other than the Timiskaming & Northern Ontario Ry. any business or traffic other than pulpwood for the Abitibi Power & Paper Co. The authorized capital is \$2,000,000, in shares of \$100 each, and the head office is in Toronto. The provisional directors, of the usual dummy variety, are: G. H. Kilmer, H. H. Davies, J. D. Rumball, L. A. Landriau and A. L. Lewis, solicitors, Toronto.

The Ontario Companies Act provides for granting charters for any of the purposes to which the Legislature's authority extends, except those of railways, incline railways and street railway companies, etc. It is evident from the charter having been granted under this act that the line to be built by the company is not considered a railway in the ordinary sense, but merely a logging line.

We have ascertained that the contractor for the 16-mile line is the Grenville Crushed Rock Co., Ltd., of Montreal, and that its contract includes clearing right of way, grading, building of culverts and bridges, track laying and ballasting, and is being carried out under the direction of Andrew Wheaton, who is stationed at Iroquois Falls. Sub-contracts have been let as follows: Mile 1 and 2 to Stewart & McLean, Iroquois Falls, this is heavy shovel work and 2 steam shovels are being used; mile 5 and 7 to Dempsey & Deschamps, Iroquois Falls; mile 9 and 16 to McLean & Wheaton, Hughes; bridge across Abitibi River, and trestles and timber work, to John McPeake. At the time of writing, July 21, the right of way has been practically all cleared, and grading is being done over from 12 to 15 miles, the bridge and trestle work being also under way. It is reported that 80 lb. rails will be used on the main line, and that a number of spurs, to be built from the main line at various points to facilitate getting out logs, will be laid with 56 lb. rails.

A Montreal press dispatch says that the Abitibi Power & Paper Co., expects to save \$500,000, or \$2 a share on its common stock, in operating costs, by hauling logs on the railway (June, pg. 286).

**Burrard Inlet Tunnel and Bridge Co.**—The Dominion Parliament has extended the time within which the company may build a bridge and tunnel, or either of them, with connecting railways at the second narrows of Burrard Inlet, Vancouver, B.C. The charter is held by the municipalities which the railway line, bridge and tunnel will connect with the steam railway lines. (Nov., 1921, pg. 583.)

**Dominion Atlantic Ry.**—We are officially advised that the following betterments are either in hand, or will be done this year: The construction of five in-

lb. rails of 10 miles of track, from mile 7 to 12, Windsor Branch; from mile 9 to 11, Kentville Subdivision; and from mile 62 to 65, Yarmouth Subdivision; the gravel ballasting of 10 miles as follows: Between mile 0 and 5, Windsor Branch, and between mile 62 and 72, Yarmouth Subdivision; the erection of a station, 18 x 46 ft., at Round Hill, N.S.; the erection of a 40,000-gall. tank at Grand Pre, N.S., and the installation of a wig-wag signal at Windsor, N.S. (June, pg. 286.)

**Hudson Bay Ry.**—In the discussion on the estimates, on an item of \$7,000,000 towards deficiency in revenues to meet working expenses on the Canadian Government Railways, in the House of Commons recently, A. Knox, Prince Albert, Sask., raised the question of the Hudson Bay Ry., and after reviewing the history of the project, asked the Government to give some assurance that it would be sympathetically considered and brought to completion at an early date. He also advocated the investigation of Churchill as a port before any further work be done at Nelson. A number of other Western members having spoken in favor of the completion of the line, the Minister of Railways stated that the railway had so far cost approximately \$20,000,000, and the estimates indicated that it would take a further sum of \$5,000,000 to complete it to Nelson, with an additional \$10,000,000 to complete terminal and port facilities. It had been suggested that notwithstanding the expenditure of \$6,000,000 on navigation facilities at Nelson, that the development there be abandoned in favor of Churchill. Under such circumstances the Government could not be expected to give an immediate answer to the question submitted. When the new directors of the Canadian National Rys. are appointed the matter will be brought to their attention, and he had no doubt they would, at the earliest possible date, give it the consideration it deserves. There was no tendency on the part of the Government to refrain from doing anything which was in the public interest, and this problem would be given due consideration. (June, pg. 236.)

**Kettle Valley Ry.**—The Dominion Parliament has extended the time within which the company may build its projected railway from Coalmount, B.C., on the joint section operated by the K.V.R. and the Victoria, Vancouver & Eastern Ry. and Navigation Co., generally south-erly to the Granite Creek coal areas, about 12 miles.

A press report states that the construction on the extension of the Penticton-Dog Lake branch, from the south end of the lake to Oliver, is progressing rapidly. The rock cut south of Okanagan Falls, and the bridge at the outlet of Vausseaux Lake are reported completed, and the only works now to be done to make the extension ready for track laying are two of the smaller bridges and some easy grading near Oliver. The car barge to be used for the traffic on Dog Lake, between the two sections of the branch, is reported completed. It will be used to convey rails and other material for the track laying and completion of the line. It is expected to have track laying finished about Aug. 15. We are officially advised that bridge 8.2 over Nicola River, on the Merrit Branch, which is to be reconstructed, was built in 1906 and consists of a Howe truss

Car 2718, badly wrecked in an open switch accident at Queen and Connaught last spring still reposes at Hillcrest shop with no repair work done; it is doubtful that the car will ever be rebuilt..... West end ignitron rectifier substations are being constructed on Lansdowne Ave., Shaw St. and Lippincott St. to replace the Harrison St. substation, the last rotary convertor station in service..... Also planned is a new substation on Granby St. in central Toronto, to bolster sub-way power.

ALL-TIME ROSTER OF ABITIBI POWER & PAPER CO.  
(Iroquois Falls Division)

(Consequent upon the admittedly incomplete information on the locomotives owned by this property in last month's issue, Mr. R.F. Corley has supplied the following list of the locomotives used here. He mentions also that the main line of the railway actually saw its last run in October 1953 although it was not pulled up until 1954, as stated. The company still does its own plant switching at Iroquois Falls).

<u>NUMBERS</u>	<u>TYPE</u>	<u>BUILDER &amp; DATE</u>	<u>REMARKS</u>
30	2-6-0	M.L.W., 1922	Acquired new - used for main line haulage - relegated to standby locomotive when no. 80 acquired.
40	Shay	Lima, 1923	Acquired new - used on woods spur line - retired when no. 70 acquired.- scrapped 1951-2
50	Shay	Lima, 1924	Acquired new - used on woods spur line - relegated to standby when no. 70 acquired. Stored unserviceable from 1952.
60	0-6-0	Can.Locol, 1909	From Temiskaming & Northern Ontario 854, 1954 - used for switching at Iroquois Falls mill - surplus when 80 acquired - Transferred to Iatagami R.R. in 1950 in exchange for latter's 102, which was used as a steam generator - scrapped July, 1951 at Smooth Rock.
70	Shay	Lima, 1926	Built for Tallasee Power Co. (Conn.) for dam construction (1922-29); sold to Quebec for Gerson Dam construction; in dead storage for about 3 years; to Fraserdale, Ont., about 1938 for construction of Island Falls Canyon Dam, sold 1940 to Standard Chemical Co., South River; sold to Abitibi in 1947 after overhaul at O.N.R. Shops. Used on Woods spur line re-

Abitibi Power & Paper  
Iroquois Falls. Ontario

60 O-6-0 1909 KINGSTON # 904  
19X26 50"  
ex T&NO 154, 854 (1935) 803 (1940)  
acquired Dec 1941  
~~50~~

70 Shay Lima 1926 # 3298 acquired 4-194  
ex Tallahassee Power Co.  
ex Dominion Const. Co.  
ex Standard Chemical Comp.

~~20~~ Shay

30 2-6-0 MLW 1922.

40 Shay Lima 1922

placing 40 and 50 - stored  
unserviceable from 1952.

80 1000 H.P. Diesel Scraper M.L.W., 1950 Replaced no. 30 on main line  
and no. 60 in mill switching.

### Use Location Chart For Motive Power

<u>Date</u>	<u>Main Line</u>	<u>Woods Spur (Idle 33)</u>	<u>Iroquois Falls Mill</u>	<u>Retired</u>
1915	30		30	
1913-14	30	40, 50	30	
1916	30	40, 50 (one spare)	60	
1917	30	50, 70 (50 spare)	60	40
1950	80 (30 spare)	50, 70 (50 spare)	80 (30 spare)	60 (to Mattagami)
1952 to Oct. 1953	80 (30 spare)	(Abandoned)	80 (30 spare)	50 - 70
Oct. 1953 to present	(Abandoned)	-----	80 (30 spare)	

### C.N.R. NOTES

The motive power for the Museum train, Mogul 674, has been loaned for the winter to a plant at Bronsonville, P.Q.

The C.N.R. applied during December to the Board of Transport Commissioners for authority to discontinue all scheduled local passenger train service on Prince Edward Island between mid-April and mid-December. Existing through trains between Charlottetown and the mainland coast connection would continue, and a new Daily except Sunday mixed train service would connect Summerside with the through train. Buses would handle passenger service elsewhere from April to December, while railway owned trucks would take care of express traffic. Trains would then be able to run as required for freight only.

System Vice-President of Research and Development S.W. Fairbrother said recently that applications will soon be made for permission to abandon a considerable mileage in unprofitable branch lines, although locations are as yet not revealed.

### NAME OF NEW C.P.R. TRAIN ANNOUNCED

The 1955 Canadian Pacific calendar shows an illustration of the new all-stainless steel train which will be inaugurated this summer. The name of the train, as shown on the calendar, is "The Royal Canadian". This train will, in effect, replace the present transcontinental trains, 3, 4, 7 and 8 on an accelerated schedule.

The train will operate from Vancouver to Montreal and Toronto, using the same diesel locomotives all the way without change.

End.

## Gasoline Traction for Light Hauling on Abitibi Power and Paper Co.'s Railway.

Abitibi Power and Paper Co. received Iroquois Falls, Ont., in Dec., 1934, a complete underframe, with power plant, and trucks, of a traction unit to which the name "Locomo-truck" has been applied. The underframe was built by General Motors of Canada, Ltd., at Shawwa, Ont., and the assembly was shipped to Iroquois Falls on a flat car. The body was built by Abitibi Co. The unit, weighing 22,000 lb., and designed for a gross load (weight of vehicle plus load) of 70 tons, is powered by a General Motors truck type model 525 engine, which develops up to 130 b.h.p. and for which the brake horsepower and torque curves are given in an accompanying illustration. The underframe is built up with channel side rails, with outside rails supported by outriggers and gusset plates, and with front and rear bracing of channel angle braces. Length over all is 368 in. and width over all 102 in. The main frame members are 9 1/16 x 5/16 in. with 1/4 in. reinforcement along entire length, and the members of the sub-frame to which the driving torque is transmitted are 9 x 3 1/2 x 9/32 in. The sub-frame is supported by 14 outriggers extending from the main frame. The buffer beams are of 9 11/16 x 3 1/2 x 5/16 in. material.

The leading truck, of conventional light railway design, was manufactured by Canadian Car and Foundry Co. The leading truck journals are 3 3/4 x 6 3/4 in., bearings being of plain type, in white alloy, and the leading truck wheels are of cast iron and 22 in. diam. The rear truck is built up with two Timken floating worm drive axles, with differentials locked, the front one being equipped with double end worm shafts to

transmission and Spicer needle-bearing propeller shafts. The gear ratios in the transmission are:—1st, 6.27:1; 2nd, 3.43:1; 3rd, 1.73:1; 4th (direct), 1:1; 5th (overdrive), 0.67:1; reverse, 8.15:1. In addition to the main transmission, there is one-to-one reversing transmission mounted amidships in the drive line, the

truck wheels are of Bendix internal expanding automotive type. All brakes are operated by Bendix Westinghouse pneumatic equipment. Engine cooling is taken care of by a radiator, of the usual automobile type, mounted at the front of the chassis. The control equipment includes a hand brake control box, gear

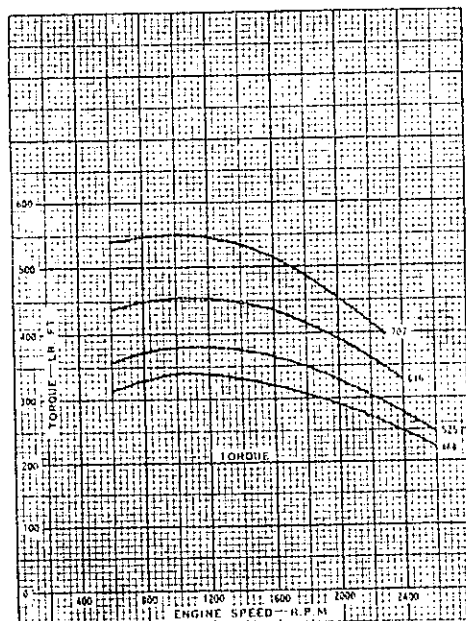
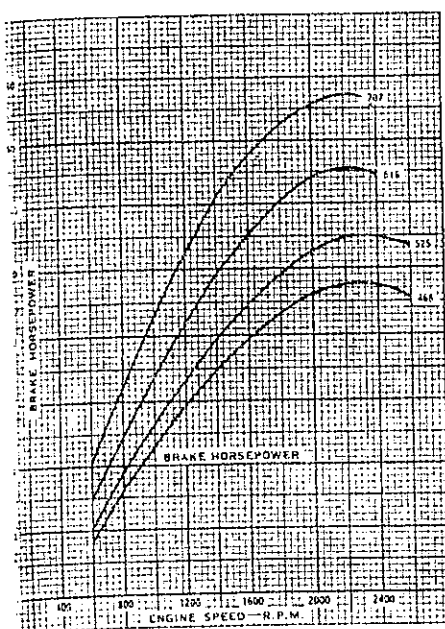


Chassis for Locomo-truck, Abitibi Power and Paper Co.

effect of which is to make available the same reduction ratios in reverse as in forward motion; thus, the locomo-truck has the same maximum speed in reverse as in forward motion, viz., about 36 m.p.h. The drive is transmitted from the sub-frame to the main frame through bolster plates, allowing free swivelling action and making it possible for the trailing truck wheels to track properly on the sharpest curves the locomo-truck is required to negotiate.

shift control box, interconnecting hand and foot throttle control, clutch pedal (connected to control valve for air-operated clutch), and sand box control valve. The controls are grouped conveniently, and located underneath the instrument panel, which carries the speedometer, ammeter, gasoline gauge, oil gauge, air pressure gauge, switches, etc. A standard railway coupler is fitted at each end of the unit, and a footboard is provided at the front end.

The model 525 engine with which the locomo-truck is powered, so called because piston displacement is 525 cu. in., is a 6-cyl., valve-in-head type, with cylinders 4 1/2 in. bore by 5 1/2 in. stroke, the specifications showing S.A.E. rating of 48.60 h.p. and brake h.p. of 128 at 2,100 r.p.m., the governed speed. Maximum torque is 380 ft. lb. at 1,000 r.p.m., and compression ratio is 4.45:1. Weight, without accessories, is 1,355 lb. In the cylinder block construction, the water jackets extend to the full height of the block, and as large space is provided between the barrels, even cooling throughout the block is assured. Replaceable hardened semi-steel sleeves are inserted in each cylinder bore and accurately ground to size; thus, a hard cylinder wall is provided, also an easy method of replacing individual sleeves when necessary. The crankcase is of aluminum alloy. The crankshaft is of drop-forged, heat-treated alloy steel, statically and dynamically balanced and drilled for high pressure lubrication of bearings; diameter is 2 1/2 in. and weight is 141 lb. It is supported in seven main bearings, both the upper and lower halves being steel-backed and babbit-lined. Total bearing length is 14 19/32 in., and projected area is 40.14 sq. in. The pistons, of split skirt type, are of heat-treated aluminum alloy, with the four ring grooves all above the piston pin. The lower groove is drilled and slotted for oil control. The piston pins are of tubular alloy steel, 1 3/8 in. diam., hardened, ground and lapped to a tolerance of 0.00025 in. The hole through the pin is tapered at both ends, i.e., the greatest wall thickness is at the center of the pin, affording great strength with



Brake Horsepower and Torque Curves for model 525 engine used in Locomo-truck.

Curves marked 468, 616 and 707 are for other engines, as explained in accompanying descriptive matter.

transmit the drive to the rear one. The two axles are mounted in the sub-frame and held in place by radius or torque rods. The rear truck wheels are of cast steel, with removable steel tires, 30 in. diam. Power is transmitted from the engine to the rear truck driving wheels

The transmission gear shifting is effected by Bendix Westinghouse pneumatic gear shift mechanism, with remote control, the control apparatus being mounted in front of the driver's seat, at the right side of the engine. The brakes for the leading truck wheels are of the



## Railway Rolling Stock Orders and Deliveries.

Shale Brick Co. Cooksville, Ont., has bought 3 rebuilt flat cars, 80,000 lb. capacity, 40 ft. long, from Canadian Equipment Co., Montreal.

The Timiskaming and Northern Ontario Ry. has received 2 rebuilt locomotives from Canadian Locomotive Co., completing an order for 6 rebuilt locomotives.

Abitibi Transportation & Navigation Co., Iroquois Falls, Ont., has bought, through Canadian Equipment Co., Montreal, a Russell no. 2 snowplough for use on logging railway.

The Quebec Development Co., Quebec Que., has ordered 8 four-wheel locomotives type Q318, and 5 four-wheel locomotives, type Q319, from the Montreal Locomotive Works.

The Esquimalt and Nanaimo Ry. (C. P. R.) is equipping one of its locomotives with Pyle National headlight, and also applying Pyle National lighting equipment to 8 passenger cars.

The C. P. R., between Dec. 17, 1922 and Feb. 10, received 1 single track steel underframe flanger, from its Angus shops, Montreal, and 69 freight refrigerator cars from Montreal Steel Car Corporation.

Sir William Arrol and Co., contractors, St. Catharines, Ont., have bought 15 rebuilt western air dump cars, 12 yd. capacity, with 19 ft. bed, from Canadian Equipment Co., Montreal. They have steel underframes, long cylinder air dump equipment, wood beds, and are of standard western construction.

The prosperity being enjoyed by U. S. locomotive builders is indicated in a report issued recently by the U. S. Commerce Department, Washington, which shows that in Jan. 1923, there were 229 locomotives shipped, compared with 210 in Dec., 1922, and but 74 in Jan., 1922. There were unfilled orders for 1,788 locomotives on hand at the end of Jan. 1923, compared with 1,592 at the end of Dec. 1922, and but 207 at the end of Jan. 1922.

The Timiskaming & Northern Ontario Ry. was reported, in a United States paper of Jan. 20, as contemplating buying 15 Pacific type locomotives, which did not coincide with Canadian Railway and Marine World's information, as we were officially advised on Jan. 15 that the road was not in the market for additional equipment. Enquiry at North Bay has confirmed the previous information, and that such an order as mentioned is not contemplated. The T. & N. O. management has, however, been discussing with manufacturers the design of certain types of equipment which it is anticipated will be required, but has not asked for tenders.

P. Lyall and Sons Construction Co., Welland Canal contractors, Thorold, Ont., have bought 2 six-wheel rebuilt switching locomotives, (0-6-0), and 19 rebuilt air dump cars, 16 cub. yd. capacity, of Kilbourne and Jacobs Manufacturing Co., standard construction, from Canadian Equipment Co., Montreal. The locomotives were built originally by the C. P. R., and have cylinders 18 x 24 in.; extended wagon top boilers, 56 in. dia.; 175 lb. working pressure; Westinghouse automatic and straight top air brakes; 10 ft. wheel base, total weight, engine and tender, 151,000 lb.; tractive power, 24,000 lb.; tender capacity, 3,000 gall. water and 5 tons coal.

The Belgo Paper Co. has ordered a 6-wheel saddle tank oil burning switching locomotive, (0-6-0) from Canadian Locomotive Co. Following are the chief details:—

Gauge	4 ft. 8½ in.
Weight in working order	91,000 lb.
Wheel base	9 ft. 6 in.
Heating surface, firebox	74 sq. ft.
Heating surface, tubes	716.5 sq. ft.
Heating surface, total	790.5 sq. ft.
Driving wheels, dia.	42 in.
Centers	cast iron
Driving journals, dia. & length	6½ x 8 n.
Cylinders, dia. and stroke	15 x 22 in.
Boiler, type	Radial stay
working pressure	180 lb.
Tubes, no. and dia.	132-2 in.
Tubes, length	10 ft.
No. 6 locomotive inspirators	
Injectors	2 in. locomotive pop
Safety valves	Westinghouse Automatic
Brakes	Metallic
Packing	1,500 imp. gall.
Capacity, water	500 imp. gall.
fuel oil	

Grant Smith and Co. and McDonnell have bought 2 rebuilt 10-wheel locomotives, (4-6-0) from Canadian Equipment Co. for use on their Timiskaming and Northern Ontario Ry. contract. They have cylinders 18½ x 26 in.; 53 in. driving wheels; 8 x 12 in. journals; extended wagon top boilers, 60 in. dia., 175 lb. working pressure; 24 ft. 7 in. total wheel base, 240,500 lb. total weight, engine and tender, and are equipped with Westinghouse automatic and straight air brakes, Sharon couplers, and with tender capacity for 500 gall. water, 9 tons coal. They have also bought from the same company, 6 box cars, 60,000 lb. capacity, 36 ft. long, and 6 flat cars, 40 ft. long. The box cars are 36 ft. long over end sills, 8½ ft. wide inside and 8 ft. 1½ in. high inside, and have Murphy outside metal roofs, M.C.B. couplers, simplex bolsters, Westinghouse air and hand brakes, etc. The flat cars are 40 ft. long over end sills, 10 ft. wide over all, 6 ft. high to top of brake shaft, and are equipped with Miner tandem coupler, with Sharon yoke, simplex bolsters, McCord journal boxes, etc.

The C.P.R. 16 Pacific type (4-6-2) locomotives which are being built at Montreal Locomotive Works, as mentioned in our last issue, will have the following details:—

Weight on drivers	181,500 lb.
on engine truck	58,500 lb.
on trailing truck	59,000 lb.
total	299,000 lb.
Wheel base, driving	13 ft. 2 in.
total engine	34 ft. 9 in.
Cylinders, dia. and stroke	25 x 30 in.
Driving wheels, dia.	75 in.
Engine truck wheels, dia.	31 in.
Trailing truck wheels, dia.	45 in.
Driving journals, main	11½ x 21 in.
others	10½ x 14 in.
Engine truck journals	7 x 8 in.
Trailing truck journals	9 x 14 in.
Boiler, type	Straight top radial stay
pressure	200 lb.
Firebox, length and width	11½ x 84½ in.
Tubes, no. and dia.	305-2½ in.
Flues, no. and dia.	38-5½ in.
Tubes and flues, length	18 ft. 6 in.
Heating surface, tubes and flues	3,232 sq. ft.
firebox	298 sq. ft.
total	3,530 sq. ft.
Grate area	65 sq. ft.
Tractive power	42,600 lb.
Factor of adhesion	4.25
Superheater	Superheater Co.
Reverse gear	C.P.R. standard screw
Tender frame	Commonwealth steel
truck wheels, type and dia.	Steel tire, 36½ in.
Tender truck journals	6 x 11 in.
Water capacity	8,500 imp. gall.
Coal capacity	12 tons

### Canadian National Railways' Orders.

In addition to the orders given by the Canadian National Ry. for locomotives, cars, and work equipment, as stated in Canadian Railway and Marine World

for February, 1,000 automobile cars have been ordered, 600 from Canadian Car and Foundry Co., Montreal, and 400 from National Steel Car Corporation, Hamilton. They will have the following general dimensions:—

Length inside	40 ft. 6 in.
Length over striking plates	42 ft. 1½ in.
Width inside	8 ft. 6 in.
Width over eaves	8 ft. 1 3/8 in.
Height inside in clear	9 ft.
Height rail to top of car at eaves	12 ft. 8 3/4 in.
Height rail to top of brake mast	18 ft. 0½ in.
Height rail to top of running board	13 ft. 7½ in.
Height rail to top of coupler	2 ft. 10½ in.
Height rail to bottom of center sill	2 ft. 4½ in.
Height rail to center of trucks	31 ft. 1½ in.
Center to center of trucks	132,000 lb.
Load and tare weight of car	5 ft. 6 in.
Truck wheel base	6 ft. 4 in.
Center to center of arch bars	5 x 9 in.
Journals	33 in. cast iron, chilled tread.

They will have steel underframes, steel side framing, and 1½ x 5½ in. pine or fir sheathing, and Hutchins all steel flexible roofs. Equipment will include Laughlin side bearings on 600 cars, and Stuki side bearings on 400; Miner A-2-S draft gear with Farlow attachment; type D couplers with 6 x 8 in. shank; Camel no. 30 automobile car door fixtures; Westinghouse schedule K-C 1012 brake equipment, with braking power 60% light weight at 50 lb. brake cylinder pressure; arch bar trucks; Simplex bolsters on 600 cars, and cast steel bolsters on 400.

Lettering.—We are officially advised that all the rolling stock ordered for construction in Canada and for operation on Canadian National lines in Canada, including the G. T. R., will be lettered "Canadian National" and that the new equipment to be built and operated in the U. S., as specified in Canadian Railway and Marine World for February, will be lettered "Grand Trunk."

Locomotives.—In the specifications for the 35 Mikado locomotives ordered from Montreal Locomotive Works, and the 10 from Canadian Locomotive Co., given in Canadian Railway and Marine World for February, weights were omitted. We are now advised that approximate weights will be as follows:—on drivers, 230,000 lb.; on engine truck, 27,500 lb.; on trailing truck, 55,500 lb.; total engine, 315,000 lb.; tender, 180,200 lb. In the specifications for the 16 Mountain type locomotives ordered from Canadian Locomotive Co., weights were also omitted. The total weight of engine will be approximately 333,000 lb., with 226,000 lb. on drivers, and weight of tender, loaded, will be 208,000 lb. The Mikado locomotives will have Belpaire fireboxes and the Mountain locomotives will have radial stayed fire boxes.

Car Conversions.—It was stated in Canadian Railway and Marine World for February that authority had been given for the conversion of 1,000 30-ton steel frame box cars into stock cars, and 50 box cars into cabooses, at Montreal shops. We are officially advised that the conversion of the box cars into stock cars will include a rearrangement of inside lining; application of 18 x 30 in. sliding end doors and standard stock car side doors, with Camel stock car door fixtures; provision of continuous feed racks; rearrangement of brake equipment to conform with latest C.N.R. standards; provision for application of double deck should same at any time be considered necessary; repainting standard color of stock cars, and renumbering



Abitibi has received 30 flatcars  
at Iroquois Falls. They were shipped  
from Chicago Heights Ill.  
p565 11-1922 receives 2-6-0

922 p597 Essex Terminal orders one loco MLW 20x26 50"

Jan 1923 p8 Abitibi Ry  
- grading, trestle building track  
laying and ballasting on the 16 miles  
had been nearly completed and a  
5 mile spur line had been built from  
mile 8 into the bush

p7 1923 Abitibi bought 4,000 tons of relaying  
rails, 2500 ton 85lb and 1,500 tons of 56lb  
from Cdn Equipt Corp.

p4 Abitibi has bought a small  
Shay loco from Lima Loco 1-1923

p52 Abitibi Shay No 40

Abitibi opened for traffic Dec 23 1922

A spur from mile 8 extends

5 miles in of temporary nature.

p278 6/1923 Ry has been delivering  
wood since January.

# Birthdays of Transportation Men

April 16 to May 15

Many happy returns of the day to—

T. FRANKLIN AHEARN, President, Ottawa Electric Railway Co., Ottawa, born there, May 10, 1886.

R. A. BAINBRIDGE, formerly Engineer, Esquimaux and Vancouver Ry., Victoria, B.C., born in Northumberland, England, May 1, 1865.

A. R. BELL, Harbour Master, Hamilton, Ont., born at St. Thomas, Ont., May 10, 1885.

QUINTIN BOYD, Division Master Mechanic, Canadian National Ry., Capreol, Ont., born in Ayrshire, Scotland, May 8, 1892.

E. V. BUCHANAN, General Manager, London, Ont., Public Utilities Commission, and General Manager, London Railway Commission, born at Hamilton, Scotland, May 7, 1887.

R. V. CARLETON, District Master Mechanic, Quebec District, Canadian Pacific Ry., Montreal, born at Delvin, Westmorland, Ireland, May 7, 1881.

W. R. CATTON, Manager of Hydro-Electric Division of Brantford, Ont., Public Utilities Commission, and Brantford Municipal Ry., born at Brantford, Ont., April 18, 1896.

P. S. CHALMERS, Regional Treasurer, C.N.R., Winnipeg, born at Aberdeen, Scotland, April 16, 1890.

G. COBB, Superintendent, Newfoundland Ry., Bishop's Falls, Nfld., born at Comar Angus, Scotland, April 21, 1885.

A. V. COLLINS, formerly Travelling Auditor, Canada Steamship Lines, Ltd., Toronto, born at Island Point, N.S., April 21, 1862.

C. E. COWIE, General Freight Agent, United Kingdom Traffic, C.N.R., London, born at Iowa City, Iowa, April 10, 1883.

H. A. CRISWELL, Treasurer, Canada Steamship Lines, Limited, Montreal, born in Nottingham, England, May 6, 1891.

J. B. CURRAN, acting Assistant Superintendent, C.N.R., Toronto, born at West Hill, Ont., May 3, 1893.

A. D. CUTHBERT, Division Engineer, C.N.R., Colborne, Ont., born at Glasgow, Scotland, May 5, 1885.

M. McD. DUFF, Assistant to Chairman, Canadian Pacific Steamships, Ltd., Montreal, and President, Shipping Federation of Canada, born at Montreal, April 19, 1876.

G. C. DUNN, formerly Assistant to Chief Engineer, C.N.R., Toronto, now at Perth, Ont., born at Quebec, Que., May 15, 1882.

ERNEST DUPONT, Assistant Superintendent, C.N.R., Campbellton, N.B., born at Mont Joli, Que., May 3, 1887.

V. E. EKE, Passenger Traffic Manager, C. N. Steamships, Montreal, and President, Montreal Passenger Club, born at Brighton, England, April 19, 1901.

W. E. EVANS, General Tie and Timber Agent, C.N.R., Montreal, born there, April 17, 1873.

E. E. FAIRWEATHER, K.C., acting Chief Counsel, in charge of Legal Department, C.N.R., Montreal, born at Annapolis, N.J., April 29, 1884.

S. W. FAIRWEATHER, B.Sc., Chief of Research and Development, C.N.R., Montreal, born at Annapolis, N.J., April 30, 1892.

JAMES FERGUSON, Division Engineer, C.N.R., London, Ont., born at Blairgowrie, Scotland, May 6, 1880.

J. F. FLYNN, Chairman, Western Lines, Canadian Freight Association, Winnipeg, born at Hensler, Ont., May 14, 1890.

P. H. FOX, Superintendent, C.N.R., Allandale, Ont., born at Medicine Hat, Alta., May 6, 1888.

ALVIN GALLACHER, Superintendent, Great Lakes Steamship Service, Canadian Pacific Ry., Port McNicoll, Ont., born at Tecumseh, Ont., May 13, 1887.

WILLIAM GIBSON, Freight Agent, C.P.R., Port Arthur, Ont., born at Glasgow, Scotland, May 2, 1891.

Wm. G. HAMILTON, Freight Claim Investigator, C.P.R., Toronto, and Secretary, Transportation Club of Toronto, born there, May 2, 1893.

W. J. HOTRUM, Superintendent of Terminals, C.N.R., Black Rock, N.Y., born at Hamilton, Ont., April 27, 1891.

R. E. JOHNSTON, Division Freight Agent, C.N.R., Edmonton, Alta., born at Toronto, May 3, 1883.

D. G. KILBURN, B.Sc., M.E.I.C., Chief Engineer, Board of Transport Commissioners for Canada, born at Stratford, Ont., May 6, 1881.

W. H. KYLE, B.Sc., C.E.S., A.M.E.I.C., Division Engineer, Montreal Terminals, C.N.R., born at Montreal, May 19, 1903.

ALMANZOR LARROQUE, District Supervisor, Car Service, C.N.R., Lévis, Que., born at Beaumont, Bellechasse Co., Que., May 1, 1892.

W. O. LHER, of Medical Service, C.N.R., Montreal, born at Ste. Ursule Falls, Que., April

A. M. LINDSAY, Superintendent, Rolling Stock, Montreal Trunkways Co., born at Waimate, South Island, New Zealand, May 11, 1883.

C. E. LITTLE, chief clerk to Assistant Freight Traffic Manager, C.N.R., Toronto, born at Hamilton, Ont., April 29, 1896.

SAMUEL McELROY, Assistant Superintendent, C.N.R., Kamloops, B.C., born at Lindsay, Ont., May 1, 1875.

D. F. McGREGOR, General Agent, C.N.R., Toronto, born at Paisley, Ont., April 24, 1882.

I. J. McNAUGHTAN, Assistant Superintendent, C.P.R., Craubrook, B.C., born at Alexandria, Ont., May 12, 1899.

F. J. MYERS, Special Representative to Vice President, C.N.R., Winnipeg, born in London, England, May 15, 1824.

P. J. MYLER, Chairman of the Board, Canadian Westinghouse Co., Hamilton, Ont., born at Pittsburgh, Pa., April 24, 1839.

J. H. NORFON, Assistant General Freight Agent, C.N.R., Moncton, N.B., born at Shaftesbury, England, April 21, 1884.

H. C. PATTIN, General Manager, Toronto Transportation Commission, born at Boston, Mass., April 25, 1886.

T. E. P. PRINGLE, General Agent, Passenger Department, C.N.R., Boston, Mass., also General Passenger Agent, Central Vermont Ry., at St. Albans, Vt., born at Hamilton, Que., May 1, 1887.

I. C. RAND, K.C., Commission Counsel, Montreal, and Regional Counsel and General Claims Agent, Atlantic Region, C.N.R., Montreal, N.B., born there, April 27, 1884.

Wm. H. ROACH, Master Mechanic, C.N.R., Ottawa, Ont., born at Inlets, Ont., May 7, 1884.

H. C. ROCHESTER, General Car Accountant, C.N.R., Montreal, born at Prince Albert, Sask., April 22, 1892.

ALBERT SHELBURNE, Auditor of Claims, C.P.R., Montreal, born at Winchester, Mass., April 24, 1891.

L. K. SILLOCK, Vice President, New York Air Brake Co., Watertown, N.Y., formerly in Canadian Northern Ry. service, Toronto, born at Germantown, Pa., April 30, 1886.

H. N. SMITH, Superintendent of Motive Power and Car Equipment, C.N.R., Saskatoon, Sask., born at Tawas City, Mich., April 17, 1881.

ROBERT SURGEON, Freight Claim Agent, Financial and Accounting Department, C.N.R., Montreal, born there, May 4, 1882.

L. B. UNWIN, Vice President and Treasurer, Financial Department, C.P.R., Montreal, born in Kent, England, May 11, 1861.

J. M. WALKER, General Agent for Scotland, C.N.R., Glasgow, born there, May 11, 1880.

A. F. WHITE, A.M.E.I.C., Engineer, Toronto, Hamilton & Buffalo Ry. Co., Hamilton, Ont., born at St. Thomas, Ont., May 7, 1889.

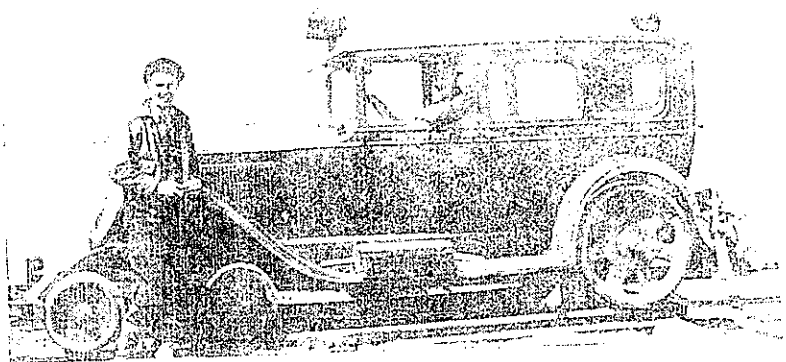
## Long Rail Service for Automobile

The accompanying illustration shows a McLaughlin-Buick automobile of sedan type which was acquired by Abitibi Power and Paper Co. in 1928, and adapted for use on the rails of the company's logging railway in the Cochrane-Smooth Rock Falls-Kapuskasing area. During the 12 years it has been in service, it has covered nearly 200,000 miles and is still going strong. It is employed to transport men and supplies over 28 miles of main line and 25 miles of spur lines. To fit the car for operation on the rails, the automobile wheels were removed and replaced by flanged wheels, and the differential was locked. A number of alterations were made after the car was purchased. The Rout pony trucks were originally equipped with brake shoes, but these were removed, and the present braking gear consists of brake drums on the axle, operated by cable from the steering wheel. The roller bearings at the rear were found to be too light, and were replaced by floating bronze bushings, and the rear axle housing was reinforced by inserting a steel tube in the housing assembly. The differential locking equipment was improved through welding the idler pinion portion solidly to the spider, and a device was

applied to the underframe which permits the car to be turned whenever and wherever necessary. The car is also equipped with a 1½ in. McLaughlin-Buick axle of chrome nickel steel, which requires replacement about once a year. W. Kishbaugh, Manager, Woods Department, Abitibi Power and Paper Co., Iroquois Falls Division, states that the car is in good mechanical condition, despite its 12 years' service. It is capable of speeds up to 50 m.p.h., and is usually operated at about 35 m.p.h.

**U.S.A. Locomotive Condition**—The Car Service Division of the Association of American Railroads reports that, on Feb. 1 this year, 6,324 U.S.A. class 1 railway locomotives were awaiting classified repairs, these having been 15.5% of total locomotives on lines.

**Canadian Pacific Express Co.**—J. T. Kelly, warehouseman, Ottawa, who entered the company's service June 20, 1916, died Jan. 18.—J. J. Ward, who was a messenger, at Toronto, and who entered the company's service Dec. 15, 1901, and was pensioned Feb. 1, 1938, died Feb. 23.



Automobile in Abitibi Power and Paper Co. Railway Service. This McLaughlin-Buick sedan has been in operation since 1928, and has covered nearly 200,000 miles.

## TWO LOCOMOTIVES TO BE GIVEN TO MUSEUM BY ABITIBI POWER & PAPER COMPANY LIMITED

A seventy-ton, three-truck Shay-g geared locomotive, and a comparatively modern 2-6-0 type tender engine are the Association's two latest acquisitions for the Canadian Rail Transportation Museum, bringing the total number of steam locomotives to thirty, and to railway vehicles of all types to an even fifty.

The latest acquisitions are promised by the Abitibi Power & Paper Company Limited, who use the Shay, No. 70, on standby service around Abitibi's Iroquois Falls, Ont. plant. No. 30, the 2-6-0, works at the plant of the subsidiary Manitoba Paper Company at Pine Falls, Man. Both locomotives are presently in operating condition.

The two locomotives have interesting backgrounds. The Shay was built in 1926, and after use by contracting firms, was in service for the Standard Chemical Company at South River, Ont., until about fifteen years ago when it was sold to Abitibi. No. 30, a forty-year-old 2-6-0 was originally built by Montreal Locomotive Works, and there is an interesting legend that it was built for use in China by a contractor, who lost his life in guerilla warfare before the engine was completed. It was then sold to the Abitibi Railway & Navigation Company, the linehaul operation of the Iroquois Falls mill, before that facility was abandoned. The engine was then sent to the Manitoba plant, as a switcher.

During its years of service No. 30 has been altered somewhat as shown in the photographs of both locomotives which appear on the opposite page. The top pic-

ture shows No. 30 as built, and the other view, taken in 1959, shows its appearance today. The third photograph is a recent picture of No. 70 in typical surroundings at Iroquois Falls. In addition to the replacement of the conventional pilot on the 2-6-0, by the familiar footboards, the engine has also acquired smoke deflectors, which were undoubtedly influenced by the practice obtaining on the Ontario Northland Railway; quite possibly ONR installed this equipment during a periodical shopping of the engine for Abitibi. The practical value of deflectors on a 2-6-0 of No. 30's design can be the subject of some debate, but they are perhaps no more unusual than the enclosed all-weather cab, which was usually to be found only on much larger machines.

The Shay -- unusually for such a locomotive, -- sports a feedwater heater, which was not original equipment on No. 70. This locomotive is the last geared locomotive in Canada east of the Rocky Mountains, and both engines represent types not yet to be found in the museum collection.

Delivery of the engines to the Association will await the obtaining of alternate motive power to replace these two units according to advice received by our President.

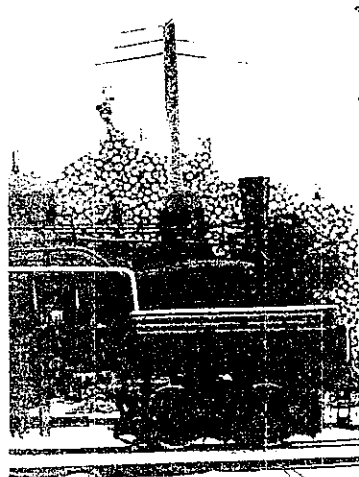
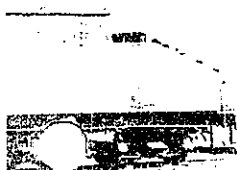
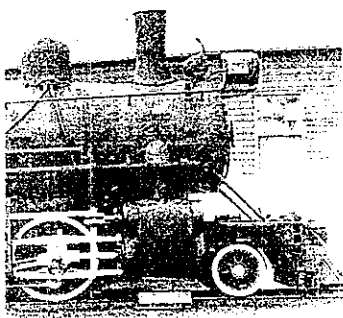
The Association is pleased to record its thanks and appreciation for this gift to the Abitibi Power & Paper Company Limited, a distinguished Canadian company representing Canada's largest industry.

\*\*\*\*\*

(Next Page ---->)

### THIS MONTH'S DIAGRAM

Our drawing this month is a side and front elevation and plan, to scale, drawn by our member Jacques Loiselle, and depicts the 450 class cars of the late Quebec Railway Light & Power Company. One of these cars has been preserved by the Seashore Electric Railway Museum at Kennebunkport, Maine, U.S.A.



# Railway Rolling Stock Orders and Deliveries.

The Timiskaming & Northern Ontario Ry. has received 4 locomotives which have been rebuilt by Canadian Locomotive Co.

The C.P.R., between Nov. 14 and Dec. 16, ordered a single track, steel underframe flanger, to be built at its Angus shops, Montreal, and bought 2 Jordan ballast spreaders.

The G.T.R. has received a steel underframe from Canadian Car & Foundry Co., for mail car 48, under construction at the G.T.R. Point St. Charles shops; also 11 steel underframe cabooses from its Montreal shops.

The Brazilian Railway Board's mikado (2-8-2) locomotive, 39 1/2 in. gauge, details of which were given in Canadian Railway and Marine World for Oct., 1922, page 528, has been delivered by Montreal Locomotive Works.

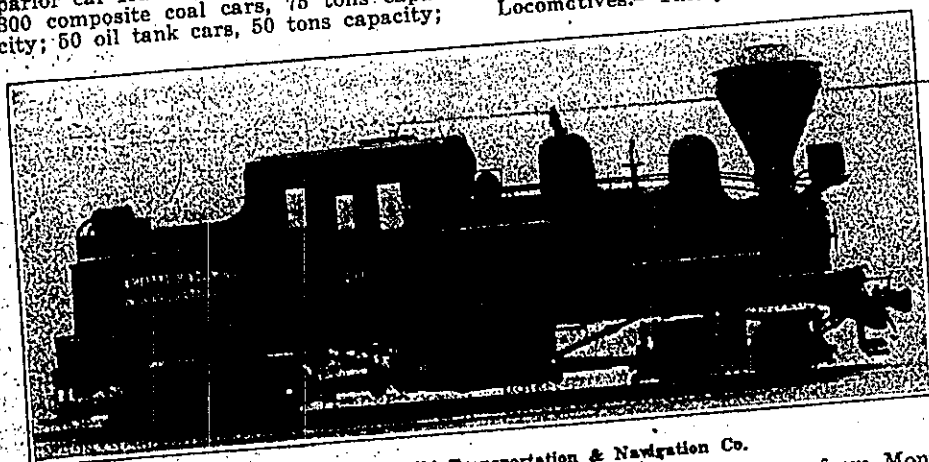
The C.P.R. has ordered 16 Pacific type locomotives from American Locomotive Co., and has made enquiries for the following additional rolling stock:—12 combination mail and baggage cars; 6 cafe parlor car frames; 6 buffet car frames; 300 composite coal cars, 75 tons capacity; 50 oil tank cars, 50 tons capacity;

Flues, diam.	5 1/2 in.
Grate area	1614 sq. ft.
Heating surface, tubes and flues	415 sq. ft.
Heating surface, firebox	86 sq. ft.
Heating surface, total	501 sq. ft.
Superheater heating surface	95 sq. ft.
Water capacity	1,560 gall.
Fuel capacity	2 tons

As will be seen by the accompanying illustration, the locomotive is labelled Abitibi Railway & Navigation Co., as some of the company's other rolling stock is. That was the name under which it was originally proposed to incorporate, but the company was incorporated as Abitibi Transportation & Navigation Co., as stated in Canadian Railway and Marine World at the time.

Canadian National Railway and Marine World for January, R. C. Vaughan, Vice President, Purchasing, Supplies and Stores Department, C.N.R., received tenders to Dec. 14, 1922, for a large quantity of rolling stock and work equipment, and orders have since been given for 77 locomotives, 155 passenger train cars, 2,700 freight cars, 272 freight car bodies, 100 ballast cars, and a quantity of work equipment, details of which are as follows:

Locomotives.—Thirty-five mikado type



Shay Locomotive, Abitibi Transportation & Navigation Co.

300 steel underframe flat cars, 40 tons capacity.

United States locomotive builders shipped 210 new locomotives in Dec., 1922, the largest number since Jan., 1921, 194 being for domestic use and 16 foreign. The unfilled orders on Dec. 31, 1922, were 1,498 domestic, and 94 foreign. The total shipments for 1922 were, domestic, 1,056; foreign, 218; total, 1,274, against domestic, 880; foreign, 619, and total, 1,349, in 1921.

Abitibi Transportation & Navigation Co.'s Shay locomotive, which has been received at Iroquois Falls, Ont., from Lima Locomotive Works, Lima, Ohio, as mentioned in Canadian Railway and Marine World for Dec., 1922, has the following chief details:

Gauge	4 ft. 8 1/2 in.
Fuel	Bituminous coal
Engine wheel base	27 ft. 2 in.
Truck wheel base	4 ft. 2 in.
Weight, total	96,000 lb.
Weight, on drivers	96,000 lb.
Maximum tractive power	20,885 lb.
Factor of adhesion	4.61
Diam. driving wheels	29 1/2 in.
Cylinders, no.	3
Cylinders, diam.	10 in.
Cylinders, stroke	12 in.
Boiler, diam.	42 1/2 in.
Boiler, pressure	180 lb.
Firebox, length	54 1/2 in.
Firebox, width	42 1/2 in.
Tubes, no.	68
Tubes, diam.	2 in.
Tubes, length	8 ft. 11 in.

for Canadian National Rys. from Montreal Locomotive Works, and 10 mikados for G.T.R. from Canadian Locomotive Co. The only details concerning these available at the time of writing are as follows:

Wheel base of engine, rigid	16 ft. 6 in.
Wheel base of engine, total	35 ft. 1 in.
Wheel base, engine and tender	about 68 ft.
Heating surface, firebox and arch tubes	300 sq. ft.
Heating surface, tubes and flues	3,297 sq. ft.
Heating surface, total	3,597 sq. ft.
Diameter of driving wheels	cast steel
Driving wheel centers	11 x 13 in.
Main journals	10 x 12 in.
Other driving journals	27 in.
Cylinder diameter	30 in.
Cylinder stroke	extended wagon top type
Boiler, type	185 lb.
Boiler, pressure	244
Tubes, number	244
Tubes, diam.	2 in.
Tubes, length	40
Flues, diam.	5 1/2 in.
Flues, length	18 ft.
Tender, water capacity	8,500 imp. gall.
coal capacity	12 tons
trucks, 4-wheel pedestal and equalizer type	34 1/2 in. diam.
wheel type	Semi-steel centers with steel tires
tank, style	water bottom
frame	Commonwealth cast steel
journals	6 x 11 in.
Tractive power	Superheater Co.'s on 10 and 25
Feedwater heater	Worthington on 25
Stoker	Duplex
Valve gear	Superheater Co.'s type A
Superheater	Westinghouse E. T. no. 6
Brakes	World type
Safety valves	

Injector	Hancock type EA for 3,500 gall. on right side only
Trailing truck	Commonwealth
Engine truck	steel, vestibule type
Cab	Commonwealth

Eight mikado type for Grand Trunk U.S. lines from American Locomotive Co., 4 for Central Vermont Ry. and 4 for G. T. Western Lines. These will be very similar in design to the standard U.S. R.A. light mikado, and will have the following chief specifications:

Wheel base, engine, rigid	16 ft. 9 in.
Wheel base, engine, total	36 ft. 1 in.
Wheel base, engine and tender	71 ft. 5 1/2 in.
Cylinder, diam.	26 in.
Cylinder, stroke	30 in.
Firebox	114 1/2 x 84 1/2 in.
Tubes, number	216
Tubes, diam.	2 1/2 in.
Tubes, length	19 ft.
Flues, number	40
Flues, diam.	5 1/2 in.
Boiler pressure	200 lb.
Weight on drivers	220,000 lb.
Tractive power	54,700 lb.
Tender, trucks	4-wheel
water capacity	10,000 U.S. gall.
coal capacity	16 tons
weight loaded	180,000 lb.

Valve gear.....Duplex  
Stoker.....Superheater Co.'s  
Feedwater heater.....

Ten mountain type for Canadian National Rys., and 6 mountain type for the G.T.R., from Canadian Locomotive Co. The only available details concerning these are as follows:

Wheel base, engine, rigid	19 ft. 6 in.
Wheel base, engine, total	41 ft. 8 in.
Wheel base, engine and tender	about 79 ft.
Heating surface, firebox and arch tubes	348 sq. ft.
Heating surface, tubes and flues	3,781 sq. ft.
Heating surface, total	4,079 sq. ft.
Driving wheel diam.	73 in.
Driving wheel centers	cast steel
Driving journals, main	12 x 13 in.
Driving journals, other	10 x 18 in.
Cylinder, diam.	26 in.
Cylinder, stroke	30 in.
Boiler, type	radial stayed, with combustion chamber

Boiler, pressure	210 lb.
Tubes, number	188
Tubes, diam.	2 1/2 in.
Flues, number	40
Flues, diam.	5 1/2 in.
Tractive power	49,600 lb.
Tender, water capacity	10,000 imp. gall.
coal capacity	15 tons
trucks	water bottom
frame	Commonwealth 6-wheel
wheels	34 1/2 in. diam.
wheels, semi-steel centers with steel tires	28 in.
frame	Commonwealth cast steel
Superheater Co.'s	

Feedwater heater.....Duplex  
Stoker.....Walschaert  
Valve gear.....Robinson  
Superheater.....Westinghouse no. 6 E.T.  
Brakes.....World type  
Safety valves.....Hancock type EA, for 3,500 gall. on right side only

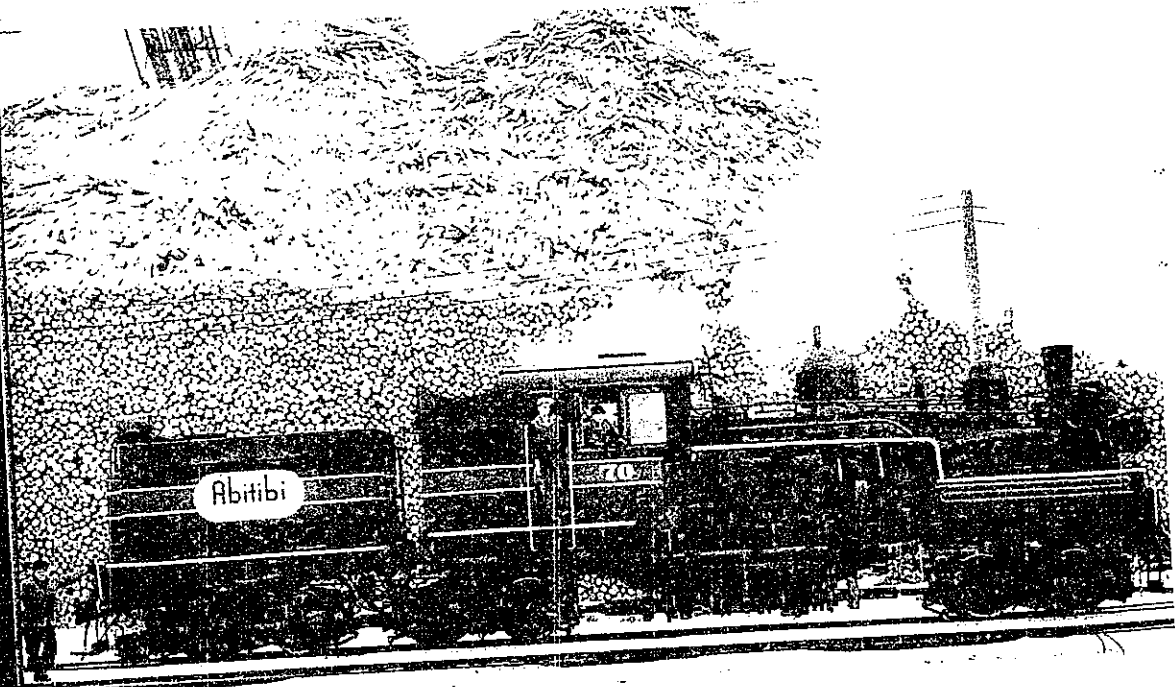
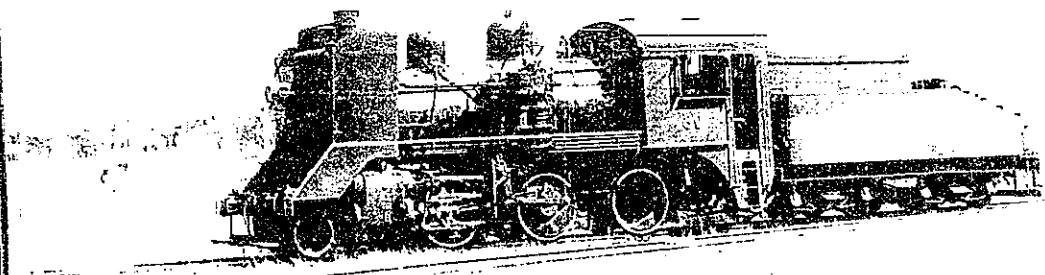
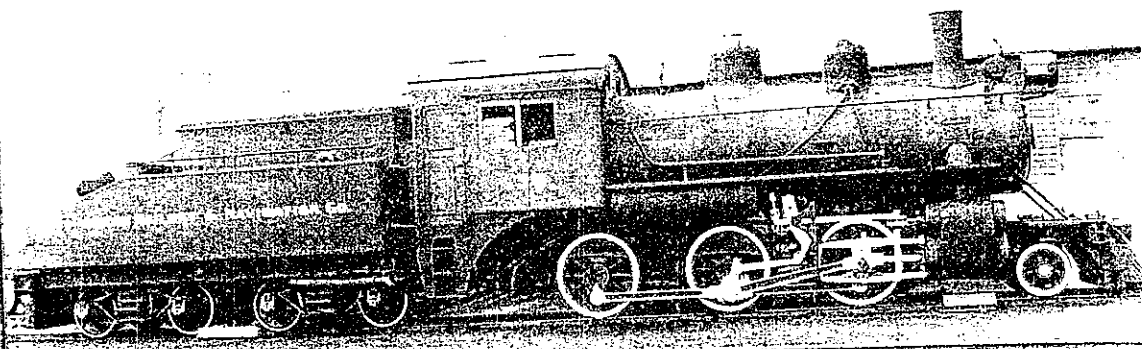
Trailing truck.....Commonwealth  
Engine truck.....steel, vestibule type  
Cab.....

Five 8-wheel switching for G. T. Western Lines, from Lima Locomotive Works, Lima, Ohio. The chief dimensions will be as follows:

Wheel base, engine	15 ft. 6 in.
Wheel base, total	53 ft. 4 1/2 in.
Cylinder, diam.	26 in.
Cylinder, stroke	30 in.
Firebox	108 1/2 x 75 1/2 in.
Tubes, number	228
Tubes, diam.	2 in.
Flues, number	32
Flues, diam.	5 1/2 in.
Flues, length	15 ft.
Weight on drivers	240,000 lb.
Weight of tender	166,800 lb.
Tractive power	52,800 lb.
Boiler pressure	190 lb.
Tender, water capacity	9,000 U.S. gall.
Tender, coal capacity	10 tons
Valve gear	Young
Power, reverse gear	Ragouet

Three 6-wheel switching locomotives for Central Vermont Ry., from Lima Locomotive Works, Lima, Ohio. The chief details will be as follows:

Wheel base, engine	11 ft. 6 in.
Wheel base, total	46 ft. 1 1/2 in.
Cylinder, diam.	26 in.
Cylinder, stroke	26 in.
Driving wheel diam.	56 in.



C.R.H.A. N

TWO LOCOMO  
ABITIBI FO

A sev  
Shay-gear  
comparativ  
tender eng  
ion's two  
for the Ca  
ation Mus  
number of  
thirty,  
of all ty

The  
promised  
Paper Com  
the Shay  
service  
quois Fal  
the 2-6-C  
the subs  
Company a  
locomotiv  
erating c

The  
interest:  
Shay was  
ter use  
was in s  
Chemical  
Ont., un  
ago when  
No. 30,  
was orig  
Locomoti  
an inte  
was buil  
contract  
guerilla  
gine was  
sold to  
Navigat  
operati  
mill,  
abandon  
sent to  
a switc

Dr.  
No. 30  
as show  
both lo  
the op

THIS M  
elevat  
and de  
Power  
shore

removal of Carlton cars from the short section of Danforth on which they now operate will do much to alleviate the nose-to-tail street car operation which prevails here in rush hours, and to allow Bloor cars to make better time through this section. A full double-track diamond will need to be installed at Main and Danforth for this track extension. The loop track will circle two houses at nos. 315 and 317 Main St., and it is difficult to imagine who, other than a railfan, would want to live in these places in the future. Three other houses will be demolished at the loop entrance and exit.

The City of Toronto has given indication that it will proceed with the projected grade separation on Davenport Road in the new year. At this point tracks of the Harbord carline cross the C.N.R. Newmarket Subdivision at grade. Nothing has been said regarding what will be done with the far west end of the Harbord line while (and perhaps after) construction of this underpass is in progress.

#### ABITIBI POWER RAILWAY ABANDONED

Earlier this year the Abitibi Power and Paper Co. discontinued all operations on its private railway which ran some 40 miles north from Iroquois Falls, intersecting the C.N.R. National Transcontinent line east of Cochrane. The company had made an intensive study of the economics of haulage by rail and by truck, and finally decided in favour of the latter alternative. Trackage was removed during the summer and the roadbed was converted into a private roadway for company trucks. Motive power known to be in use on the railway at the time of abandonment included an O-6-0 switcher, no. 60 (formerly used on the Kaming and Northern Ontario Railway 154-854), a Shay, an 80-ton General Electric industrial type diesel, and a M.L.W. 1000 H.P. diesel switcher, no. 80. The railway had a 32-year history, having been constructed in 1922.

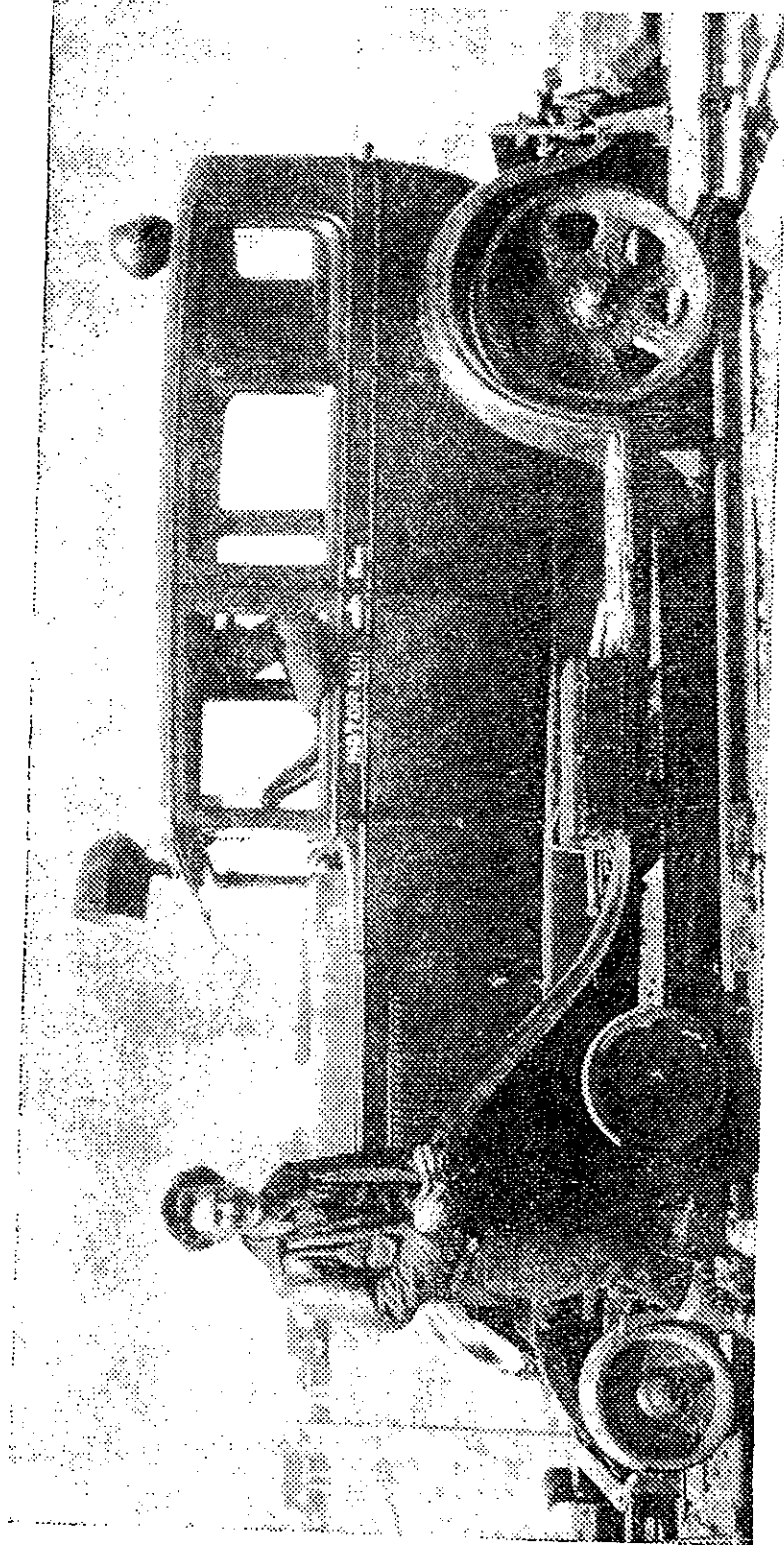
The company still operates a railway connecting with the O.N. at Island Falls Jct. and the short Mattagami Railroad, which connects Smooth Rock Falls to the C.N.R.

#### ALUMINUM SUBWAY CARS ARRIVE

At time of writing, T.T.C. aluminum subway cars 5100-5103 have just been received at Davisville shops after the long journey from Gloucester, England. The cars arrived coated with a protective paint which will be removed forthwith. The aluminum sheets of the body have been butt welded and rivetted, but so expert is the workmanship that the rivet lines cannot be discerned. Two horizontal flutes extending the length of the car body below the windows, to give additional strength, are further departures from the steel cars. Extensive tests with K.W.H. meters are planned in order to measure the power consumption of a train of these cars as contrasted to that of a train of steel cars. Still to be received are the more recently ordered cars 5104 and 5105.

Traffic on the subway continues to grow, and the addition of the cars to the roster will be most welcome to operating officials.





Automobile in Abitibi Power and Paper Co. Railway Service.

This McLaughlin-Buick sedan has been in operation since 1928, and has covered nearly 200,000 miles.

April 1940

CRN  
Ed. Tans