

It is understood he will be succeeded by E. H. Fitzhugh, who resigned the position of General Manager of the Vermont Central Rd., and is now here on waiting orders." The Pacific system embraces 5,924 miles of road.

Another San Francisco telegram of July 10 says:—"Two important changes have been made in the staff of the Southern Pacific Co. J. A. Fillmore, Manager of the Pacific Division, has been relieved, and J. M. Herbert, recently General Superintendent of the St. Louis, Iron Mountain and Southern Ry., succeeds him. E. H. Fitzhugh, lately General Manager of the Central Vermont, is appointed assistant to President Hayes, with an office in San Francisco. That means that Mr. Fitzhugh will fill the place formerly occupied by H. E. Huntington, and will have full power to act in the President's absence."

In our last issue it was stated that J. M. Herbert had been appointed Superintendent of the Pacific division of the S.P. Co. Mr. Huntington, who is referred to in the telegram above quoted, is 1st Vice-President of the Southern Pacific Co.

Thunder Bay, Nipigon and St. Joe Ry.—The officials are: D. F. Burke, President; G. Hodder, Secretary-Treasurer; Directors: Sheriff Thompson and Col. Ray, Port Arthur, and Wm. Hogarth, Fort William.

Fast Run on the M.C.R.

On June 19 the Michigan Central's American express train, no. 31, consisting of 10 cars drawn by standard Atlantic type locomotive 481, driver Waters, conductor T. E. Scott, ran from St. Thomas to Windsor, Ont., 110.99 miles, in 1 hour 49 minutes. A stop of three minutes was made at Tilbury, making the actual running time 1 hour 46 minutes, an average of slightly under 63 miles an hour. Following are details:—

STATION	TIME	MIN.	DISTANCE	Miles per Hour
St. Thomas....	10.59 a.m.	.		
St. Clair Junction....	11.07 "	8	4.23	...
Shedden.....	11.11 "	4	4.83	72.45
Iona.....	11.14 "	3	3.93	78.60
Dutton.....	11.19 "	5	5.95	71.40
Bismarck.....	11.25 "	6	6.53	64.30
Rodney.....	11.29 "	4	4.40	66.00
Taylor.....	11.32 "	3	3.39	67.80
Highgate.....	11.37 "	5	4.74	56.88
Ridgetown.....	11.42 "	5	5.64	67.68
Mull.....	11.47 "	5	5.87	70.44
Fargo.....	11.52 "	5	5.00	60.00
Charing Cross.....	11.54 "	2	2.38	71.40
Buxton.....	11.59 "	5	6.25	76.20
Fletcher.....	12.03 p.m.	4	4.05	60.75
Tilbury.....	12.10 "			
.....	12.13 "	7	6.93	59.40
Comber.....	12.20 "	8	6.60	49.50
Ruscomb.....	12.25 "	5	5.00	60.00
Woodslee.....	12.28 "	3	3.93	78.60
Esex.....	12.33 "	5	5.52	66.24
Maidstone Cross.....	12.38 "	5	4.55	54.60
Pelton.....	12.42 "	4	4.31	64.65
Round House.....	12.46 "	4	5.77	86.55
Windsor.....	12.48 "	2	1.19	
			110.99	

W. S. Stout, Vice-President and General Manager of the Dominion Express Co., returned to Toronto June 22, after an absence of over four months. He went first to England, and then by way of Lisbon, the Cape Verde Islands and Monte Video to Buenos Ayres in the Argentine Republic, visiting England again on his way back to Canada. The object of his visit has not transpired, but we are informed that it was on express business. Mrs. Stout and one daughter accompanied him to England, remaining in Europe while he visited South America.

Grand Trunk Double Tracking.

The double-tracking of the Grand Trunk Western Ry., or the G.T.R. Western division, between Port Huron and Chicago, 335 miles, is being proceeded with, and General Manager Reeve recently stated that 120 miles would be completed this year. Eighty-five miles are under contract, and an additional 18 miles is being done by the Co.'s own forces. This covers the line from Goodell's, mileage 12.78 from Port Huron, to Lapeer, mileage 45.59, or 32.81 miles; from Belsay, mileage 60.52, to Durand, mileage 82.45, or 21.93 miles; from Granger, mileage 224.44, to Stillwell, mileage 255.14, or 30.70 miles; and from Ainsworth, mileage 290.12, to Thornton Jct., mileage 310.10, or 19.98 miles.

The contract work is generally light side earthwork without classification, while that being done by the Co.'s men is chiefly steam shovel work in grade reductions, one mile having about 125,000 cubic yards of excavation. There are in use two steam shovels, rapid unloaders and side levellers, with which appliances each shovel is moving about 48,000 cubic yards a month, without night or Sunday work. But little of the grading is completed, though work is being done on most of the sections east of Durand, and also on those further west, except through marshes, where wet weather has prevented work. Of the work being done by the Co. the grading is completed between Attica, mileage 38.47, and Lapeer, mileage 7.1, and 6 miles of track are laid. The grading is also completed by the Co.'s force from Inlay City, mileage 33.77, 4 miles easterly and 3 miles of second track are laid. The grading east of Inlay City will be completed early in Aug. Under the terms of the contract the grading, bridging and masonry east of Durand, the contractors for which are W. O. Johnson and Sons, Flint, Mich., is to be completed by Aug. 15; and that between Granger and Thornton Jct., the contractors for which are E. Phalen & Co., Valparaiso, Ind., by Sept. 1. The work is so far advanced by the contractors as to ensure its completion by the dates named.

The alignment is not changed materially, except for about 10½ miles near Flint, Mich., mileage 65.51, where the line is diverted to the south 1½ miles to avoid heavy grades, and reduces maximum curves from 4 degrees to 1 degree, also eliminating 170 degrees of curvature. All eastbound grades are reduced to a maximum of 21.12 per mile. On this part of the line there are some grades at present of 48 ft. per mile. Westbound grades are reduced to a maximum of 30 ft. per mile. On the diversion near Flint the eastbound grades are reduced from 48 ft. to 16 ft., and westbound from 70 ft. to 19 ft. per mile.

There are no heavy structures on this part of the line. Generally the bridges crossing streams are deck girders from 35 ft. to 70 ft. spans. There are through girders of 44 ft. and 81 ft. crossing the Pontiac, Oxford and Northern Ry. at Inlay City, and the Pere Marquette Rd., near Flint. Most of these girders were placed upon pile and trestle foundations, and are now being replaced with concrete piers and abutments, some of which are completed, and the others are well under way. H. A. Woods is engineer in charge, with office at Detroit, Mich.

Dominion Railway Act.—Two acts amending the Railway Act were passed at the last session of the Dominion Parliament. In the first the facilities to be afforded under section 240 of the act are defined so as to include the due and reasonable receiving of through traffic at any station, wharf or place where traffic is accepted, and its due forwarding and delivery at its destination at a through rate. The second act deals with the procedure to be adopted in case any company is unable to meet its engagements with its creditors.

C.P.R. Construction, Betterments, Etc.

Crow's Nest Pass Ry.—Ever since the construction of this line, which was built from Lethbridge to Kootenay landing in 1898, a large amount of improvements have been made each year. This season a large expenditure is being made at the loop, 216.7 miles west of Dunmore Jct., in the construction of a tunnel 900 ft. long which will cut off half a mile of detour and four high trestles, each of which would require repair and attention for all time. The tunnel, though comparatively short, has been a difficult problem for some time, as it has to be built through neither rock nor squeezing clay, but a huge heap of loose gravel the drift of some great glacier. The material is so loose that it can only be compared to grain in a bin. To take a shovelful from it would cause runs of material from all directions, and getting under this was the problem.

In clay soils a drift is run in and then lined with timber, but here the timber lining has to be placed first and then the earth core taken from inside. The lining consists of laggings or scantling 2 in. thick by 4 in. wide and 5 ft. long, which are driven horizontally into the hill like sheet piling in advance of the excavation. Like barrel staves these form an arch, and as each foot of material is excavated from within a large timber frame is inserted to take up the pressure. Of course the end or face of the headings must be kept tightly boarded up also, like the side of a grain bin, while a frame is being set up. When another foot of advance is to be made the top face-board is loosened very little, the gravel rushes in and quickly it is forced ahead; then the next board below is moved and so on down to the bottom, the material being wheeled out in barrows. New laggings are driven ahead about every 4 ft., and the staves being 5 ft. long a lap of 1 ft. is secured all around at each joint of this great pipe.

The interior timbering consists of great baulks 1 ft. square of mountain fir—a wood so tough and strong that it has been chosen for the new Arctic exploration ships. These frames are placed only 3 in. apart. Of course the laggings and blockings left in behind them prevents the gravel running out of the space. But timber, be it ever so strong, will not last forever, and of such generous dimensions is the inside of the tunnel as to allow of a thick solid masonry arch being built within the ring of heavy timbering. Masses of coal are sometimes encountered and also fragments of rock, which have to be laboriously bored and wedged apart, as no powder dare be used for fear of starting a cave.

Night and day, shift after shift, the miners hammer and delve in awkward corners by the light of candles placed in a sort of dagger that admits of being stuck into the timber in any direction. When no gas is encountered this candle is preferred to all other lights. Patiently in the damp and dark drift the miner moles ahead and patiently the timberman fits the joints of the heavy frames. A face-board loosened too quickly or a timber support removed too soon and life and limb would be endangered while all the careful effort of months would be lost in a minute.

The wages are good—35c. an hour—paid direct by the Co., which will expend \$100,000 to secure this permanent improvement. C. E. Cantlee is engineer in charge of the work. Olaf Olsen is the contractor.

Canadian Freight Association.

At the spring meeting of the Association at Montreal, the lake and rail rates, differentials, etc., for the season of 1901 were under discussion.

The Merchants Line reported the following as their proposed fleet:—Persia, Ocean, Arabian, Iona, Cuba, Lake Michigan and Melbourne.