

important functions: First—It enables trainmen to keep up communication between the van and engine while trains are in motion. Secondly—On long freight trains, signals may be given instantaneously to front and rear trainmen from any car in the train. Thirdly—Danger signals are given automatically to front and rear directly a train breaks in two. The reverend professor personally superintended the recent successful test on the Canadian Pacific.

THE Canadian Pacific Railway have nine parties in the field at present locating the line of the Crow's Nest Pass Railway. The following well-known Eastern engineers are in charge of these parties: Chas. Garden, of Winnipeg, and E. Force of Ottawa, are locating the line west of the Pass to Michael Creek. Wm. McCarthy, of Ottawa, and Wm. Burns, of Renfrew, are completing the location along Elk River west to the crossing. H. W. D. Armstrong, of Toronto, is working between Elk River and Kootenay River. G. H. Garden, of Montreal, is closing up his work between Fort Steele and Cranbrook. W. S. Cranston, of Ottawa, is locating some heavy work along Moyie Lake, and W. J. Earl and G. Hannington, of St. John, N.B., are locating the line between Moyie Lake and West Kootenay. The location of the line will soon be completed to West Kootenay.

THE reported discoveries of very rich gold bearing quartz in the Michipicoten district of Ontario are yet unconfirmed. While there is certainly gold there in considerable quantities, the extent of the deposits will not be known till Prof. Wilmott, who has been sent out by the Ontario Government, makes his report.

FIRES OF THE MONTH.

Aug. 31st.—G.T.R. station, at Deseronto, Ont.—Aug. 31st.—A. H. Davidson's saw mill, Colpoys Bay, near Wiarton, Ont.—Sept. 5th.—W. N. Roberts' sash and door factory, Renfrew, Ont. Loss, \$15,000.—Sept. 7th.—David Donaldson's planing mill, Lanark, Ont. Loss, about \$4,000.—Sept. 17th.—McMillan's 30,000 bushel elevator, at Emerson, Man. Loss, \$15,000.—Sept. 17th.—The St. Maurice Lumber Company's saw mill, Three Rivers, Quebec. Damages, \$50,000; insurance, \$40,000.—September, 20th.—The Hull Lumber Co.'s mill, Ottawa. Loss, about \$100,000.—Sept. 20th.—The Goldie Milling Co.'s cooper shop, Highgate, Ont. Loss, \$400.—Sept. 21st.—Terrell & Racine's foundry, Quebec, moulding shop and pattern room. Loss, \$15,000.—Sept. 24th.—Damages to extent of \$1,000 to the moulding shop of Kingston foundry.—Sept. 28th.—Gillies & Co.'s shingle mill, Sand Point, Ont. Loss, about \$8,000.—Sept. 29th.—Perry & Black's sawmill, Fergus, Ont. Loss, \$1,200.—Oct. 4th.—Damage to Central Prison, Toronto, twine and broom factories, \$80,000.—Oct. 5th.—Damage to Graham Nail Works, Toronto, amounting to \$150.

Personal.

P. S. ARCHIBALD, C.E., late chief engineer I.C.R., is practising as a consulting engineer.

I. C. BURKEE has been appointed to succeed W. B. Mackenzie as assistant engineer, I.C.R.

H. M. JACQUES, B.A.Sc., has been appointed demonstrator in mining, in McGill University.

THE death occurred recently at Truro, N.S., of James Odell, C.E., at the advanced age of 75 years.

ALEX. BEGG, editor of the *British Columbian Mining Record*, is dead, at Victoria, B.C., aged 65.

JOHN STARK, a boiler-maker in the C.P.R. shops, Toronto Junction, was run over and killed by a train at Guelph, Ont., recently.

J. O. Wisner, who was one of the earliest manufacturers of agricultural implements, in Brantford, Ont., died at his home there, Oct. 3.

ROBERT PATTERSON, who resigned his position as engineer at the Hamilton General Hospital to go to the Klondyke, was drowned in the Athabasca.

E. HAY, a member of the Amalgamated Society of Engineers, who was employed as engineer by the Montreal rolling mills, died suddenly, Sept. 24th.

THE governors of the Kingston, Ont., School of Mines have appointed H. R. Landis, New York, mining engineer for one year at a salary of fifteen hundred dollars.

M. F. CONNERS, B.A., Sc., analyst and assayer, Bank Street Chambers, Ottawa, whose card appears in another column, announces that he is prepared to make analyses and assays of ores, minerals, etc.

THE chair of mining engineering, at the Kingston, Ont., School of Mining, has been filled by the appointment of Courtney De Kalb, who lately resigned a similar position in the Rolla School of Mines, in Missouri, U.S.

F. J. RASTRICK, architect and civil engineer, died on the 13th September 19th, at his residence, in Hamilton. He was a native of Staffordshire, England, and had resided in Hamilton since 1853. He was a member of the council of the Ontario Association of Architects, Toronto, and was instrumental in establishing the Public Library and Art School in Hamilton.

Marine News.

J & R. WEBB, Montreal, recently launched a tug which they built for W. Davis & Sons, contractors.

A. DEVOE, Cape Breton, and John F. Devoe, of Little Bras d'Or, have invented a one blade spiral propeller.

JOSEPH L'ETOILE, of Ottawa, has invented a submarine search-light which was, it is said, successfully tested in the Ottawa River recently.

THE amount of freight handled this year by the steamers plying between Toronto and Montreal, is the largest in the history of both the R. & O. Navigation and Merchant Line steamers.

POTTER BROS., of Canning, N.S., have completed their steamer the "Beaver," which will at once be put on the route between St. John, N.B., and Parrsboro, Canning and Wolfville, N.S.

It is said in London that Sir Weetman Dickinson Pearson's company has submitted a proposal to complete the canal from Ottawa to Georgian Bay, on conditions which are believed to be satisfactory.

CAPT. COATES, Fort Frances, Ont., and Capt. Mosher, are building another steamer, "City of Alberton," for service on Rainy Lake. It will be somewhat similar to the "Maple Leaf," but a little more elaborate in finish.

PLANS and specifications are out for the construction of a very large barge to carry coke-laden cars from Comox to Vancouver, B.C. The craft, which is to be built for the Messrs. Dunsmuirs, will be capable of receiving twelve loaded cars at a time. It will be 190 feet long, and will have a beam of 45 feet.

A CHANGE has been announced in the eastern terminus of the Canada Atlantic Railroad from Rouse's Point, N.Y., to Swanton, Vt., and the extension of the line west from Ottawa to Parry Sound, by which it is proposed to open a new trunk line between the great lakes and New England points. It is stated that a line of steamboats will be run from Chicago to Parry Sound, and at Swanton the Canada Atlantic will connect with the Central Vermont and the Boston and Maine Railroads.

MR. MARGARCH, the Government engineer, has recently returned from Manitou, where he has been building a dam, which enables vessels of four feet draught to get within seven miles of Rainy Lake, thus making navigation possible over a distance of sixty miles. Instructions have also been received from the department instructing Mr. Margarch to go on with the building of another dam at Dryden, on Wabigoon River, which will raise Lake Wabigoon to high water level and make another stretch of forty miles of water navigable. So that from the track to Fort Frances can be reached by making two portages only. There are now four steamers on the Wabigoon, and one on the Manitou.

A. P. Low, of the Geological Survey, who went to Hudson Bay last spring with the "Diana," has returned to Ottawa. The "Diana" entered Hudson Strait on Jubilee Day, June 22nd. On July 6th, she met thick weather, and was fast in an ice pack; on the 9th she reached loose ice, and on the 12th clear water in Hudson Bay. On July 16th, Mr. Low's party were landed near Douglas Harbor, a place Mr. Low describes as affording first-rate shelter. On the 18th, the "Diana" steamed away and Mr. Low set forth on his coastwise journey eastwards. On the 26th their yawl became fast in the shore ice and remained until Aug. 1st. It was on Aug. 1st the party reached Stupart's Bay, where some years ago the observer, after whom the place is named, established a station. The party reached the southernmost part of Ungava Bay on Aug. 24th. There at Fort Chimo they found the Hudson Bay Company's steamer "Erik," which had arrived on the 20th from Fort Churchill on the west coast of Hudson Bay, the earliest passage on record. The captain reported, however, that the ice pack had been the most formidable in his experience of six years' navigation of these waters. From Fort Chimo, Mr. Low made a trip in his sail boat across to George River, on the east side of Ungava Bay, returning on Sept. 7th. Next day the boat and her outfit were put on the "Erik," which took them out of the strait and around to Nachvak on the Atlantic coast. Dr. Bell and his party made a very successful survey of the coast. They also traveled for seven days into the interior of Baffin Land, and discovered an immense lake over 80 miles long. He further explored the region for gold, but found nothing of much practical use.