

and the installation of necessary equipment will begin immediately.

**Souris, Man.**—The C. P. R. has purchased four hundred acres adjoining this town, presumably for a shop site to serve the southwestern lines which converge here.

**Melville, Sask.**—Cushing & Weir have been granted a ten-year franchise to erect an electric light and power plant here at a cost of \$30,000. The municipality will probably purchase the plant at that time.

**Edmonton, Alta.**—Messrs. Phalon & Shirley, of Omaha Neb., contractors, have eighty miles of the contract on the G. T. P. west of the McLeod River, and will start hauling supplies this week.

**Vancouver, B.C.**—F. C. Gamble, engineer of the provincial public works department at Victoria is considering plans for the construction of a sewer on Nanaimo Street.

**Vancouver, B.C.**—P. Welsh, Spokane contractor, of the firm of Foley, Welsh & Stewart, was awarded the contract for the construction of sixty-five miles of the coast section of the V. V. & E., Abbotsford to Hope. They will immediately rush construction.

PERSONAL.

**Messrs. J. H. Walker and J. R. Dixon**, of the Cleveland Bridge and Engineering Company, Limited, Darlington, England, recently arrived in Canada. They may prepare a tender for the construction of the Quebec bridge.

**Mr. D. H. McDougall**, formerly of the Steel Company, was recently appointed superintendent of the Dominion Coal Company.

**Mr. J. J. Wright**, who has been connected with the Toronto Electric Light Company for twenty-seven years, and who has been general manager of the company for a number of years, has been made second vice-president and consulting engineer. His place as general manager has been taken by Mr. H. McRae, who was formerly gen. man. of the Electrical Development Company, and who was succeeded in that position by Mr. R. J. Fleming when the control of that company changed hands some time ago.

**Mr. James V. Costigan** announces that he has associated with himself, Mr. E. H. Cahoon and Mr. C. F. Beck, under the corporate name of The Portage Engineering Company, with offices in the Doyle Block, Akron, Ohio.

ENGINEERING SOCIETY NOTES.

**National Association of Cement Users.**—The sixth annual convention of The National Association of Cement Users will be held at Chicago, Ill., February 21-25, 1910, the headquarters being at the Auditorium Hotel. A very complete programme has been arranged.

**Central Railway and Engineering Club of Canada.**—At the regular monthly meeting of the above society, held at Toronto, on Tuesday evening, January 18th, Mr. James Bannan, chief stationary engineer at the City Hall, Toronto, read a paper on "Temperature Regulation," and Mr. C. A. Jefferis, the retiring president, received a suitable gift in recognition of his services during the past year.

The automatic control of artificial temperature is a comparatively new art, said Mr. Bannan. With the crude methods of heating employed by our ancestors, nothing of this sort was possible and even with the advent of more modern

steam systems the operators were for years forced to be content with such regulation of temperature as could be obtained by manually operating heater drafts, ventilators, etc. As heating appliances approach perfection, however, and the knowledge of hygiene becomes more widely disseminated the question of temperature in our living and working rooms has gradually assumed the importance it deserves, and to meet the demands for means of automatically controlling these temperatures, various appliances have from time to time been placed upon the market. It is a matter of anxious interest in this connection, as showing the difficulty of the problem, that out of the many appliances introduced for this purpose very few have proved practicable. And out of the many hundreds of patents that have been issued for automatic temperature regulation only a few are required to cover the appliances that are in successful operation today. A temperature regulator is an automatic device which will open or close as required to produce a uniform temperature, the valves which control the supply of heat to the various rooms although these regulators are often constructed so as to operate the dampers of the heater. They differ from damper regulators for steam boilers by the fact that the latter are unaffected by the temperature of the surrounding air, although acting to maintain a uniform pressure and temperature within the boiler, while the former are put in operation by changes of temperature in the rooms, heated from a hygienic point of view. The close regulation of temperature in a building is important and from an economic point of view it is even more important.

Many systems of heat regulation are in use and are doubtless worthy of extended notice, but the systems most used and giving the best satisfaction are the Nash, the Johnson and the Power systems. In any of these three systems the motive force for operating or closing the valves which regulate the heat supply is obtained from compressed air, which is stored in a reservoir by the action of an automatic motor. The thermostat acts with change of temperature to turn off or on the supply of compressed air. When the air pressure is in the valves supplying heat they are closed, when if they are opened by a strong spring placed on the spindle of the valve the compressed air is supplied at a pressure of about 15 pounds to the square inch, which is operated automatically to maintain a given pressure. An air pipe leads from the air compressor to the thermostat and another from the thermostat to the diaphragms in connection with valves or dampers. The action of the thermostat is simply to operate a minute valve for supplying or wasting compressed air in the pipe leading from the thermostat to the diaphragm valves.

WEEKLY EARNINGS

NAME OF COMPANY	TRAFFIC RETURNS			
	Week Ending	1910	Previous Week	1909
Canadian Pacific Railway.	Jan. 14	\$1,342,000	\$1,315,000	\$ 970,000
Canadian Northern Railway.	"	185,700	174,000	117,200
Grand Trunk Railway	"	725,025	654,885	645,218
T. & N. O.	Jan. 7	30,899	.....	17,002
Montreal Street Railway	Jan. 15	72,660	73,035	65,717
Toronto Street Railway	"	74,21	74,415	65,935
Halifax Electric	Jan. 14	3,436	3,555	3,129

RAILWAY EARNINGS AND STOCK QUOTATIONS

NAME OF COMPANY	Mileage Operated	Capital in Thousands	Par Value	RAILWAY EARNINGS.				STOCK QUOTATIONS TORONTO					
				Date from	Date to	1910	1909	Price	Price	Price	Sales		
								Jan. 14 '09	Jan. 6 '10	Jan. 13 '10	Week End Jan. 13		
Canadian Pacific Railway...	10,048	\$150,000	\$100	Jan. 1	Jan. 14	\$2,657,000	\$2,063,000	173	180	181	179½	170	
Canadian Northern Railway	3,180	225,000	100	"	"	1,679,910	1,181,458						
*Grand Trunk Railway	3,536	(Gov. Road)	100	"	Jan. 7	30,899	17,002						
T. & N. O.	264.74	18,000	100	"	Jan. 15	145,745	143,240						
†Montreal Street Railway...	141.79	8,000	100	"	"	148,436	131,746	111		128	127	126½	87
Toronto Street Railway...	114	1,400	100	"	Jan. 14	6,991	6,416						
†Halifax Electric	13.3												

\* G.T.R. Stock is not listed on Canadian Exchanges. These prices are quoted on the London Stock Exchange.

† Quoted on Montreal Exchange.