

ONTARIO LAND SURVEYORS IN SESSION.

(Continued from page 4.)

dinner of the association was held at McConkey's Restaurant.

On Thursday the proposed legislation re civil engineers was discussed, and a committee appointed to meet representatives of the Society of Civil Engineers in a conference with reference to the provisions of the bill now before the legislature. Other matters of importance were discussed, after which officers were elected as follows: President, H. J. Bowman, Berlin; vice president, F. L. Foster, Mine Centre; secretary-treasurer, A. J. Van Nostrand, Toronto.

A. W. Campbell and H. L. Esten were appointed as auditors, and J. F. Whitson and K. Gamble as scrutineers. The secretary-treasurer was voted the sum of \$200 for his services, and after the usual votes of thanks the convention adjourned.

The papers presented at the meeting were as follows: "Permanent Way," by W. E. McMullen, St. John, N. B.; "Progress of Gold Mining in the Central Belt of the Rainy River District," by H. W. Selby, Dinorwic; "Surveying the Mining Lands of Ontario," by F. L. Forster, Mine Centre; "Dominion Land Surveys," by C. F. Aylesworth, Jr., Madoc; "More Reminiscences of an Old Land Surveyor," by C. Unwin, Toronto; "Some Incidental Benefits from the Growth of Forests," by Thomas Southworth, Toronto; "Azimuths," by L. B. Stewart, Toronto; "Explorations," by J. Dickson, Fenelon Falls; "Highway Culverts and Bridges," by A. W. Campbell, Toronto; "The Calculation of Strains in Bridge Trusses," by J. Warren, Walkerton; "Railway Location Work," by J. D. Evans, Toronto; "Our Professional Standing," by B. J. Saunders, Fort William; "Survey of the Boundary Line between Hupis and the Algoma Districts," by A. Niven, Haliburton; "A Trip to the Yukon and Return," by L. Bolton, Lis-towel; "The Registry Act," by P. S. Gibson, Willowdale; "Open Questions," by H. J. Bowman, Berlin; "Drains of Field Tile," by W. F. Van Buskirk, Stratford; "The Lake Wawanosh Drainage Scheme," by John H. Jones, Sarnia; "The Payne River Drainage Scheme," by T. H. Wiggins, Cornwall.

LEGAL DECISIONS AFFECTING MUNICIPALITIES.

JOHNSON VS. TOWN OF PETROLEA.—By the original judgment, which was sustained by the Court of Appeal, and which is now confirmed by the Supreme Court, an injunction was granted, restraining the town of Petrolea from polluting Bear creek with refinery refuse, sewage, salt water, and other noxious matters, and awarding the plaintiff damages. The Supreme Court upheld the original judgment, and the plaintiff retains his injunction and damages, and the costs at every stage of the action.

The Imperial Oil Company, of Petrolea, were defendants in the original action, but Mr. Justice Meredith dismissed the action as against them, with costs, and his judgment was, so far as the Imperial Oil Company were concerned, confirmed by the Court of Appeal. Mr. Johnson entered a cross appeal in the Supreme Court of Canada against the judgment in favor of the Imperial Oil Company. His appeal has been allowed by the Supreme Court with costs, and the original judgment is to be varied accordingly.

The plaintiff in this action represents a syndicate of farmers living along Bear creek in Moore and Enniskillen townships, whose lands and crops have been damaged and whose water supply has been rendered useless by the noxious matter thrown into the stream at Petrolea. The litigation has been very prolonged, and every device known to the law has been adopted by the defendants in order to outwit the plaintiff, but the farmers retain their judgment with costs.

MUNICIPAL DEPARTMENT

ONTARIO WATER WORKS SYSTEMS.

The following tabular history of water works systems of towns and cities in Ontario of less than 20,000 of a population is compiled by Mr. Willis Chipman, C. E., of Toronto, and is found in the Canadian Engineer for January. The reader will observe that in the great majority of cases the municipalities built their own water works. At the present time only eight are operated by private companies, and of these the city of Belleville and the town of Waterloo are negotiating with the companies for the purchase of the plants. In the case of Petrolea, where the works were constructed in 1896 and 1897, it was thought that the town could ill afford to spend \$172,000 on a water works system, and many predicted that the works would not only be a failure financially but that they would not be a success mechanically. The supply is derived from Lake Huron, a distance of twelve miles in a straight line from the town hall. The water is pumped over a rise of 150 feet above the lake to a water tower in the town, whose base is 87 feet above the lake level. The water works are managed by commissioners.

WATER WORKS BUILT BY MUNICIPALITIES.

	Pop.	Date.	Cost.
Alexandria.....	1,700	1895	\$23,000
Amherstburg....	2,300	1891	25,000
Aylmer.....	2,200	1891	17,000
Alliston.....	1,400	1892
Beamsville.....	900	1895	14,000
Beeton.....	800	1892	20,000
Bracebridge.....	1,400	1894	20,000
Brampton.....	2,500	1882	65,000
Brantford.....	17,000	1888	230,000

(Small works, built by a private company for fire protection were purchased by the city in 1888.)

Campbellford.....	2,500	1890	\$19,000
Collingwood.....	5,000	1890	79,000
Deseronto.....	3,500	1896	35,000
Dunnville.....	1,800	1891	5,000
Essex.....	1,700	1891	31,000
Fort William.....	3,000	1893	36,000
Galt.....	7,000	1891	157,000
Gananoque.....	3,000	1892	20,000
Goderich.....	4,000	1888	68,000
Georgetown.....	1,500	1891	40,000
Huntsville.....	1,200	1897	20,000
Kingsville.....	1,400	1894
Leamington.....	1,900	1891	16,000
Markham.....	1,100	1891	10,000
Meaford.....	2,000	1892	22,000
Merriton.....	2,000	1888	78,000
Milton.....	1,500	1888	20,000
Morrisburg.....	2,000	1887	26,000
Mt. Forest.....	1893	25,000
Newmarket.....	2,200	1886	20,000
Niagara Falls.....	4,000	1890	77,000

(The original works, built by a company, were purchased by the town in the year given, and the works rebuilt and extended.)

Niagara-on-Lake.....	12,500	\$35,000
North Bay.....	2,000	1892	38,000
North Toronto.....	3,000	1892	40,000
Orangeville.....	4,000	1895	50,000

(Small works built originally for fire protection on main streets. Rebuilt and enlarged in year given.)

Orillia.....	5,000	1892
Owen Sound.....	7,000	1890	\$125,000

(The original works, built and owned by a company, were purchased by the town in the year given, and the works rebuilt and extended.)

Paris.....	3,500	1884	\$40,000
Parry Sound.....	2,000	1892	35,000
Penetanguishene.....	2,200	1891	30,000
Pembroke.....	4,500	1893	56,000
Petrolea.....	6,000	1896-7	170,000
Picton.....	3,300	1889	33,000
Port Colborne.....	1,500	1898	16,000
Port Hope.....	6,000	1895	50,000

(Small works built originally for fire protection on main streets. Rebuilt and enlarged in the year given.)

Renfrew.....	3,000	1897	\$52,000
Sandwich.....	1,500	1891	19,000
Shelburne.....	1,200	1890	13,000
Stouffville.....	1,400	1897	22,000
St Thomas.....	11,000	1891	150,000

(The original works, built and owned by a company, were purchased by the town in the year given, and the works rebuilt and extended.)

Sudbury.....	1,400	1896
Tilbury Centre.....	800	1888	\$16,000
Toronto Junction.....	5,000	1889	180,000
Welland.....	2,500	1888	32,000
Warton.....	2,000	1889	30,000
Woodstock.....	9,000	1892	150,000

(The original works, constructed for fire protection, were rebuilt by the town in 1892.)

WATER WORKS BUILT BY PRIVATE COMPANIES AND ACQUIRED BY THE MUNICIPALITIES.

	Pop.	Date.	Town purchased in 1898 for \$78,000.
Barrie.....	6,000	1891	Town purchased in 1893 for \$102,000.
Berlin.....	8,000	1888	Purchased by the city for \$63,000.
Brantford.....	17,000	1870	Town purchased in 1882 for \$129,000.
Brockville.....	9,000	1884	Town purchased in 1895.
Chatham.....	9,000	1891	Town purchased in 1887 for \$36,000.
Cornwall.....	7,000	1886	Town purchased in 1894 for \$45,000.
Kincardine.....	2,600	1890	Purchased by the town for \$17,000.
Niagara Falls.....	4,000	1884	Purchased by the town for \$35,000.
Owen Sound.....	7,000	1880	

WATER WORKS BUILT BY COMPANIES BUT NOT YET ACQUIRED.

	Pop.	Date.	City now negotiating to purchase.
Belleville.....	10,000	1888	
Cobourg.....	5,000	1888	
Iroquois.....	1,500	1886	
Ingersoll.....	4,000	1891	
Lindsay.....	6,500	1892	
Napanee.....	4,000	1888	
Perth.....	3,500	1897	
Waterloo.....	3,000	1889	

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