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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF PUBLIC WORKS, TENDERS, ADVANCE INFORMATION, AND MUNICIPAL PROGRESS

EVERY SATURDAY

Vol. 3.

Toronto and Montreal, Canada, June 11, 1892.

No. 17

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY SATURDAY
As an Intermediate Edition of the "Canadian Architect and Builder."

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14 KING ST. WEST, TORONTO, CANADA.
Telephone 2362.

24 Temple Building, Montreal
Bell Telephone 2199.

Information solicited from any part of the Dominion regarding contracts open to tender.

ADVERTISING RATES ON APPLICATION.

At its Convention held in Toronto, Nov. 30 and 21, 1880, the Ontario Association of Architects signified its approval of the CANADIAN CONTRACT RECORD, and pledged its members to use this Journal as their medium of communication with contractors with respect to advertisements for Tenders.

The following resolution was unanimously adopted at the First Annual Meeting of the Province of Quebec Association of Architects, held in Montreal, Oct. 10th and 11th, 1890: "Moved by M. Perrault, seconded by A. F. Dunlop, that we the Architects of the Province of Quebec now assembled in Convention being satisfied that the CANADIAN CONTRACT RECORD affords us a direct communication with the Contractors, resolved, that we pledge our support to it by using its columns when calling for Tenders."

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ST. THOMAS PIPE & FOUNDRY CO., LTD.,
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Notice to Contractors

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up till Eleven o'clock a.m. of the 17TH DAY OF JUNE 1892, for the

SUPPLY OF BRICKS

for the year ending June 30th, 1893.

Specifications and forms of tender may be obtained on and after Monday, June 6th, 1892, at the office of the City Engineer.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 5 per cent, on the value of the work tendered for under \$1,000, and 2½ per cent, that amount, must accompany each and every tender, otherwise it will not be entertained. All tenders must bear the bona fide signatures of the contractor and his sureties (see specifications), or they will be ruled out as informal.

The Committee do not bind themselves to accept the lowest or any tender.

JOHN SHAW,

Chairman Committee on Works,
Committee Room, Toronto, June 2nd, 1892.



Notice to Contractors

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to Eleven o'clock a.m. on TUESDAY, JUNE 14TH, 1892, for the following works:

ASPHALT PAVEMENT

On Victoria Street, from King Street to Adelaide Street.

Plans can be seen and forms of tender obtained at the City Engineer's office on and after Tuesday, May 31st, 1892.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 5 per cent, on the value of the work tendered for under \$1,000, and 2½ per cent on the value of the work tendered for over that amount, must accompany each and every tender, otherwise it will not be entertained. All tenders must bear the bona fide signatures of the contractor and his sureties (see specifications) or they will be ruled out as informal.

The Committee do not bind themselves to accept the lowest or any tender.

JOHN SHAW,

Chairman Committee on Works
Committee Room, Toronto, May 27, 1892.



NOTICE TO CONTRACTORS.

Proposed New Roadways.

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to Eleven o'clock a.m. on TUESDAY, JUNE 14TH, for the following works:

King street, from Simcoe street to Bathurst street, asphalt and scoria tooting on concrete foundation.

King street, from Bathurst street to Sirachan avenue, six inches of concrete under track allowance.

Yonge street from Bloor street to the C. P. R., cedar block with granite tooting and cobble stone, on concrete foundation.

Queen street, from Yonge street to Bathurst street, asphalt with scoria tooting, on concrete foundation.

Queen street, from Bathurst street to Gladstone avenue, cedar block, with granite tooting and cobble stone, on concrete foundation.

Queen street, from Gladstone avenue, to Roncesvalles avenue, cedar block with granite tooting and cobble stone on concrete foundation.

The above work is to be done on the track allowance on the streets named.

Plans can be seen and forms of tender obtained at the City Engineer's Office on and after Tuesday, June 7th, 1892.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 5 per cent, on the value of the work tendered for under \$1,000, and 2½ per cent, on the value of the work tendered for over that amount must accompany each and every tender, otherwise it will not be entertained. All tenders must bear the bona fide signatures of the contractor and his sureties (see specifications) or they will be ruled out as informal.

The committee do not bind themselves to accept the lowest or any tender.

JOHN SHAW,

Chairman of Committee on Works,
Committee Room, Toronto, June 1st, 1892.

TO BUILDERS.

About \$50 worth of Stained Glass to be made up to order, for sale at a discount. Address "Stained Glass," care CANADIAN CONTRACT RECORD.

TENDERS WANTED.

Tenders will be received at the office of the undersigned until noon of SATURDAY, THE 18TH INST., for several trades and works required in the erection of a Residence on Bagot Street for James Campbell, Esq. The lowest or any tender will not necessarily be accepted.

POWER & SON, Architects,
Kingston, Ont.

TO CONTRACTORS.

Tenders are invited for all trades in connection with Additions to the Art Gallery, Phillips Square, Montreal. Plans and specifications may be seen at the offices of the undersigned on and after Monday the 13th inst. and tenders are to be sent in not later than noon MONDAY, THE 20TH INST. It is not guaranteed that the lowest or any tender shall be accepted.

TAYLOR & GORDON, Architects,
Montreal.

TORONTO JUNCTION SEWERAGE WORKS

TENDERS

Will be received at the office of the Town Clerk until 6 p.m., JUNE 16TH, for the necessary materials for the construction of about

9,200 Lineal Feet of Sewers

9 inch, 12 inch, 15 inch, 18 inch and 20 inch diameter.

Specifications, instructions, forms of tender, etc., may be seen at the sewerage Works office Toronto Junction, and at the office of the Chief Engineer, 103 Bay Street, Toronto.

WILLIS CHIPMAN,

Chief Engineer.

June 10th, 1892.



NOTICE TO CONTRACTORS.

Tenders for Dredging Slips.

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to eleven o'clock a.m. on TUESDAY, JUNE 14th for the work of Dredging Slips.

Specifications and forms of tender may be obtained on and after Monday, June 6th 1892 at the office of the City Engineer.

A deposit in the form of a marked cheque payable to the order of the City Treasurer, for the sum of Five per cent, on the value of the work tendered for under \$1,000, and 2½ per cent, for the value of the work tendered for over that amount, must accompany each and every tender, otherwise it will not be entertained.

All tenders must bear the bona fide signatures of the contractor and his sureties (see specifications), or they will be ruled out as informal.

The committee do not bind themselves to accept the lowest or any tender.

JOHN SHAW,

Chairman of Committee on Works,
Committee Room, Toronto, June 4th, 1892.

TO SEWER CONTRACTORS.

The City of Winnipeg invites tenders marked as such for the construction of

150 CATCH BASINS.

Sealed tenders for same addressed to the undersigned will be received up to

12 o'clock, noon, on Thursday, 23rd Inst.

Plans and specifications can be seen at the office of the CANADIAN CONTRACT RECORD 14 King St., west, Toronto. Each tender must be accompanied by an accepted cheque for the sum called for in form of tender supplied which sum will be subject to forfeiture in case of failure to sign written contract with approved sureties.

The lowest or any tender not necessarily accepted.

J. W. COCKBURN,

Chairman Committee on Works,
Winnipeg, June 6th, 1892

TO REMOVE PAINT STAINS FROM GLASS.—American potash, 3 parts, unslacked lime 1 part. Lay this on with a piece of wood, allowing it to remain until the paint becomes soft.

CONTRACTS OPEN.

TRENTON, ONT.—Mr King Mabey will erect an elevator this summer.

WALES, ONT.—The G. T. R. intends building a new station at this place.

CALGARY, N. W. T.—A new station will be erected here this summer by the C. P. R.

PRINCE ALBERT, ONT.—The Town Council are considering the question of better fire protection.

FORT WILLIAM, ONT.—The purchase of an electric light plant for lighting the streets is being considered.

FREDRICKTON, N. B.—Messrs. Hale & Murchie have decided to rebuild their saw mill which was destroyed by fire last week.

PETERBORO', ONT.—The Peterboro' Canoe Company will erect a building suitable for the manufacture of canoes, skiffs and fittings.

STRATFORD, ONT.—The Perth Flax Company, of which Mr. John Hogarth is manager, proposes to erect a binder twine factory in this city.

LACHUTE, QUE.—The ratepayers have earned a by-law authorizing the Council to effect a loan of \$30,000 for the construction of an aqueduct.

BADES, ONT.—Messrs. J. & J. Livingstone will shortly commence the erection of a brick addition to their linseed oil works, 100x62 feet.

PORT COLBORNE, ONT.—Mr. H. Cronmiller was in Ottawa during the past week in connection with the erection of a glass factory on Government land in this town.

ST. JOHN, N. B.—The Board of Trade have adopted a resolution asking the Government to erect a grain elevator at the St. John terminus of the Intercolonial railway.

NIAGARA FALLS, ONT.—The by-law to raise by way of debenture the sum of \$10,000 for the erection of a new high school building was carried by the ratepayers on Monday last.

STRATHROY, ONT.—J. E. Northcott, Commissioner is calling for tenders for the construction of two pile bridges in the Township of Carleton Place. Tenders close on the 11th inst.

QUEBEC, QUE.—Tenders will be called for shortly for the erection of the Frontenac Hotel. The C. P. R. will commence the erection of elevators on the Louise embankment at an early date.

SMITH'S FALLS, ONT.—The sum of \$10,000 for the construction of a post office at this place has been passed by the Dominion Parliament. The building will be constructed of brick with stone trimmings.

RAT PORTAGE, MAN.—The Citizens' Telephone and Electric Company will receive tenders until the 17th inst. for the erection of a power house, flume and penstock, and for excavating rock for raceway.

KINGSTON, ONT.—Mr. Landryou will erect three brick buildings on Alfred street. The leading business men are considering the erection of a grain elevator with a capacity of half a million bushels. The estimated cost is \$100,000.

VICTORIA, B. C. The Tacoma Lumber Syndicate have decided to erect a new mill. Plans will shortly be prepared for a new building to cost not less than \$100,000, which will be equipped with the most improved machinery.

YARMOUTH, N. S.—A public meeting was held recently to consider the question of constructing a system of water works. The majority of citizens were in favor of placing the sum of \$325,000 at the disposal of the council to carry on the work.

GATINKA POINT, QUE.—The councillors of Gatteau Point and East and West Templeton have appointed a committee to select a site for the construction of a bridge over the Gatteau river. The cost is estimated at \$40,000, the sum of \$30,000 having already been secured.

NEW WESTMINSTER, B. C.—Mr. A. H. Iowle architect, is calling for tenders for a hotel building to be constructed of pressed brick and stone, for Mr. L. Guichon, also for the carpenter and joiner work, plumbing and electric wiring of a block to be erected for Messrs. Duncan & Batchelor.

MOOSE, JAW, N. W. T.—The congregation of St. John the Baptist church will erect a new edifice.—Mr. J. A. Macdonald, architect, of Regina, is preparing plans for a large brick residence to be erected at this place for Mr. Potter, agent of the Massey Harris Company, and for a new Episcopal church to replace the one destroyed by fire last winter.

LONDON, ONT.—In reply to a request from the City Council Mr. Cronyn, President of the Street Railway Company has stated that the company will commence the construction of the electric street railway at an early date. A charter, which therefore, not be granted the new company applying for the same.—The Superintendent of Waterworks will receive tenders until Tuesday, the 14th inst., for the erection of a brick addition to the steam pumping station at Springbank.

MONTREAL, QUE.—The City Clerk will receive tenders until Wednesday, the 15th inst., for executing repairs at No 3 Fire Station.—It is stated that Mr. W. C. Macdonald has purchased property on University Square on which he intends to erect a new building for the law faculty

of McGill University.—C. T. Ballard, architect, is preparing plans for two villas in Upper Lachine. Tenders will be called for shortly.—It is stated that negotiations are in progress for the immediate completion by the C. P. R. of the Ottawa and Montreal railway westward from Rigaud to Ottawa, a distance of 80 miles.

HAMILTON, ONT.—Messrs. Wood, Vallance & Co. have decided to erect a four-story brick ware house at the south-east corner of King William and Hughson streets.—Building permits have been granted as follows: W. J. McDonald, brick dwelling on King William street for R. Gibb, cost \$1,600, and for alterations to the Shedden Company's building corner of Catharine and King William streets, cost \$1,400; W. A. Lodge, brick dwelling on Markland street, between Bay and Ontario streets, cost \$2,000; Robert Raw, two two-story brick dwellings on Markland street, between Bay and Carline streets, cost \$2,500.—Tenders are invited by the City Clerk for the construction of a pipe sewer on Euclid avenue.

WINNIPEG, MAN.—Mr. Van Horne, President of the C. P. R., states that the company will erect a new station in this city during the present summer. He has also informed the Grain Exchange that the company will co-operate in the erection of a large grain elevator, also that the machinery shops will be enlarged and considerable new machinery added.—Plans are now being prepared by a Minneapolis architect for the new opera house to be erected by Messrs. Mackenzie & Ross on the site of the old Princess opera house on Portage avenue. Building operations will be commenced in about a week.—Hugh McGowan, architect, is calling for tenders for the erection of a Baptist church.—W. Chesterton, architect, is preparing plans for a brick residence to be erected on the corner of Broadway and Edmonton streets for Mr. McLeod, post office inspector. It will be built in the Queen Ann style, and will cost about \$6,000.—It is stated that the capital has been obtained in England for building a railway from this city to Fort Churchill, on Hudson Bay, to connect with a line of steamships running to England.

OTTAWA, ONT.—E. F. E. Roy, Secretary Department of Public Works, will receive tenders until Friday, the 24th inst., for the construction of two cylindrical boilers. Plans and specifications may be seen at the office of the Superintendent of Dredging, Sorel, Que., and at the Department of Public Works, this city.—Mr. Wm. Rea, Secretary Public School Board, will receive tenders until Friday, the 17th inst. for the supply of school furniture required in the furnishing of two new schools.—The Secretary of the Department of Public Works will receive tenders until Thursday, the 30th inst., for the quarrying and delivering rubble and dimension stone from the Penitentiary Quarry, St. Vincent de Paul.—A deputation from the vicinity of Peterboro', recently interviewed the Minister of Railways and Canals urging the granting of a subsidy for the construction of 22 miles of the Lake Ontario, Peterboro', Sudbury and Sault Ste Marie Railway from Lakeside to Boboygeon. The total length of the proposed road is 460 miles. The promoters of the Brockville and Westport Railway are asking assistance from the Government to enable them to extend their line from Westport to Palmer's Rapids, a distance of 30 miles.—The plans of a proposed dam and highway bridge across the Assiniboine river near Pratt's Landing, Portage la Prairie, Man., have been deposited with the Minister of Public Works for approval.

TORONTO, ONT.—H. Paul, architect, 519 Queen street west, wants tenders for the erection of four houses. A petition has been presented to the Council for the construction of a granite sidewalk on the north side of Queen street, between Yonge and James streets.—The City Engineer has recommended that the street railway on Dundas street be extended from its present terminus on Lansdowne avenue to Bloor street, and that the paving of Dundas street be carried on at the same time that the tracks are being laid. Also for a cedar block pavement on Bloor street from Dufferin to Dundas street.—A company is being formed for the purpose of building and operating an electric street railway in the village of East Toronto. Mr. D. G. Stephenson is president of the new company, Ald. Hallam, vice-president, and Mr. A. W. Dingman, managing director and secretary. The Town Council, at a meeting held on Wednesday last, granted the company the necessary franchise. Arrangements will also be made to introduce an electric system of street lighting.—Building permits have been granted as follows: Chas. Thorne, 4 King st. e., det. 2-story & attic bk. dwelling, w. side Pine Hill Rd., cost \$6,000. Jas. Hewlett, Yonge St. Arcade, pr. s. d. 2-story & attic bk. dwellings, 615 Jarvis st., cost, \$10,500. D. Rands, 7 Lansday ave., two pr. s. d. 2-story & attic bk. dwelling, 140 Blecker st., cost, \$12,000.—The Council have decided to erect additional buildings at Centre Island, at a cost of \$1,500.—It is the intention of Mr. W. Bowman, to erect three 2-story brick houses on Daves Road, in the east end of the city.—Mr. J. Henderson, of St. Patrick street, is about to erect three 2-story brick houses on north side of Union avenue, near Yonge street.—The Parks and Gardens Committee will ask the City Council for the sum of \$1,500 for filling in the lagoon at Centre Island.

FIRES.

A business block in Deseronto, Ont., owned by A. Smith, of Smithville, was destroyed by fire on Tuesday last. Insurance, \$2,000.—The building at the corner of Miguonne and St. Lawrence sts., Montreal, occupied by W. Toussignat, as a drygoods store was damaged by fire to the extent of \$5,000 on Tuesday last.—The jail and jailer's residence at Sudbury, Ont., was destroyed by fire on Thursday last. Loss \$5,000. no insurance.

CONTRACTS AWARDED.

BRANDON, MAN.—Messrs. Kourke and Cass, of Winnipeg, have secured the contract for the erection of the new asylum here.

MURDEN, MAN.—The contract for the erection of the new hospital has been awarded to Messrs. Scott & Rutherford, at the price of \$7,200.

WALKERVILLE, ONT.—The Kerr Engine Co. have been awarded the contract for the engine and pump for the North Bay water works.

EXETER, ONT.—The contract for the Aux Sauble bridge on the line between Huron and Middlesex Counties has been awarded to Mr. S. Harly of this town.

OWEN SOUND, ONT.—Messrs. D. Kennedy & Sons, of this town, have been awarded the contract for water power machinery for the Niagara Falls and River Electric Railway. The contract will amount to a'out \$20,000.

INGERSOLL, ONT.—The Dominion Government Engineer has recommended that the Guelph Silica Barytic Stone Co. of this place be given the contract for the Government pavements at Walkerton, Strathroy and other places.

VICTORIA, B. C.—Messrs. Humber & Sons have been awarded the contract for the erection of the new drill shed. Mr. John Trague, architect, has awarded the contract for Messrs. Young Bros. new building on Government street to Messrs. Elford & Smith.

GUELPH, ONT. The tenders for the new rink for the Guelph Curling and Skating Rink Company have been awarded as follows: Mason and brick work, Kennedy & Son; carpentering, F. Simmons; painting and glazing, Field & Holman; tin-smithing, W. Sunley; plastering, Peter Martin. The contract will be in the neighborhood of \$6,500.

OTTAWA, ONT.—The contract for the new building on Albert street for the Electric Street Railway Company has been awarded. Mr. Wm. Stewart, of this city, has secured the stone and brick work, and the Hamilton Bridge Company the iron work.—The Dominion Government has awarded the Canadian Rubber Company of Montreal the contract for supplying 1,500 feet of fire hose for use in the Northwest mounted police department.

MONTREAL, ONT.—Chris. Chfi, architect, has awarded contracts for a house on Summerville Ave. as follows: Stone mason, Oumet & Labelle; Brickwork, A. Gauthier; painting, J. Kimber & Son; plumbing, Booth & Ballantyne; plastering and mosaic work, John McLean.—Roy and Gauthier, architects, have awarded the contract for a brewery and bottling establishment for John Labatt of London, Ont., to M. P. Didier & Co.—J. R. Gardner, architect, has awarded the contract for a church at St. Henry as follows: Masonry and brick work, J. Lewis; other trades, B. S. Wickware.

WINNIPEG, MAN.—The contract for the erection of the North Central school has been awarded to Mr. D. D. Wood, whose tender was \$24,467. The plans were prepared by Mr. George Brown.—Mr. Reid has been awarded the contract by the C. P. R. of replacing the wooden bridges between Fort William and Rat Portage with stone structures.—The council have accepted the tender of Messrs. Clarke & Connelly for the construction of sewers on 6th street south, from Portage avenue to 3rd street south, and avenue south, from 9th street south to the parish line, and on 9th avenue north from Princess street to the rear of lots 23, 24 and 25. Logan estate, at the price of \$1,961.

BUSINESS FAILURES.

W. H. Millichamp, brickmaker and builder, of Toronto Junction, has called a meeting of his creditors.

Allan C. Thompson, architect, of Adelaide st. East, Toronto, has assigned to Mr. Robert Jenkins.

Messrs. Churchill & Hudson builders and contractors, of Toronto, have been compelled to make an assignment. The assets are said to be \$8,000 in excess of liabilities.

The term penny, as applied to nails, is generally supposed to have been derived from pound. It originally meant so many pounds to the thousand; that is, six-penny means six pounds of nails to the thousand. The thousand was always understood, and six pounds, ten pounds, etc., were gradually shortened until the term penny has entirely taken the place of pound.

MUNICIPAL DEPARTMENT.

MANAGEMENT OF PUBLIC WATER-WORKS.

The efficiency of municipal works depends very largely upon the form of their management, whether directly by the city or town council, by a board, or by one man. Furthermore, the efficiency of the officials or official in charge depends largely upon the method of election or appointment, whether by the mayor, the council, or directly by the people. The collection of the information required for our MANUAL OF AMERICAN WATER-WORKS has enabled us to give with much more accuracy than ever before the facts in regard to one highly important class of public managed works, that of water-works, and the importance of the subject, and the growing interest, in all such matters, will, we think, make the summary which appears below of special value. The variations in practice in different parts of the country are, of course, due to local characteristics, embodied in the general laws of the states or manifested in the unwritten laws of the various sections. These peculiarities and other facts of interest are briefly as follows:

Inquiries regarding the board or other body in whom the management of public water-works is vested elicited responses from about one-fourth of the works in the United States, or 225 out of 879. Of this 225, 23 works are managed directly by the general municipal government, 12 by a board of public works and 190 by a separate body, having a variety of names all of which may be designated for present purposes by the title of water board. The practice in the several groups of states, the total number of public water-works, the number of works reporting and the manner of selecting water boards is shown in detail as follows:

Groups.	Number of Works		Management of public water-works vested in.					
	Total	Reporting.	Board of public works		Water Board		Total	
			Elected by Council.	Appointed by Mayor.	Elected by Council.	Elected by people.		
N. E.	134	41	4	1	6	34	41	
Mid.	116	47	4	11	18	3	47	
S. Atl.	42	14	3	6	4	1	14	
S. Cent.	10	6	2	2	1	1	6	
N. Cent.	255	74	10	15	43	28	76	
N. W.	127	37	6	4	11	1	38	
S. W.	8	3	2	1	1	1	5	
Pac.	37	3	2	2	1	1	6	
U. S.	879	225	23	12	56	76	190	

In general it may be said that the municipal government has direct charge of works only in the smaller places. Boards of public works seldom have control, and of the 12 instances to are in the North Central States. Of these 12 it may be stated that the mayor appoints 5, the council elects 4, the people 3.

In New York, Chicago, Philadelphia and Brooklyn, and it is believed in some other of the largest cities of the country, the management of the water-works instead of being vested in a board is intrusted to one man who is either directly responsible to the mayor or to a commissioner of public works, so responsible. This is the ideal method, as under it the people may look to one man, the mayor, for a good administration of all city affairs and this official will be likely to appoint better men than would be elected by the people or by the city council, and may often reappoint incumbents from previous administrations. Like all other methods this one is, of course, open to abuses which need not be discussed here.

It has been shown above that of the 190 water boards reported 56 are appointed directly by the mayor, while 58 are elected by the council, the election in many cases doubtless, being approved by the mayor. Boards elected by the councils are directly responsible to the general city government, and are generally to be preferred

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

to those elected by the people, on much the same grounds as those given for appointments by the mayor. Thus 30 per cent. of the boards reported are raised to office in the most desirable way, another 30 per cent. in the next desirable, and the minority, or 40 per cent., in the least desirable way. This classification, of course, does not take into account local reasons favorable to one or another method, but is based upon the general principle that one official, or as few as possible, should be directly responsible to the people, and all others to the one or to the few comprising the council.

It should be borne in mind, however, that nearly half of the board selected by the people are in New England, where the good old-fashioned town meetings still prevail, where affairs are largely managed, as one might say, by committees of the whole, and where the direct responsibility to the people of all intrusted with public business naturally follows.

The North Central States the local government of which, in some particulars, is similar to that of New England, have 28 of 76 boards elected by the people, the Middle States have 13, and for all the remainder of the country but one board is reported, and that is in the Pacific States. While information regarding the management of all public works might alter the above ratios it is thought that the reports received are a fair index of the general practice of the whole country.

Next in importance to forms of management and methods of appointment is tenure of office. This is shown below for 188 public works; the total number of public works, number reporting and number of managing bodies serving for various terms being given in detail. The length of the terms are from one to six years, for life, or perpetual (see note), and the number under each, by groups and for the country, is as follows:

Groups	Total	No Public Works Reporting	Term						Life	Perpetual
			One	Two	Three	Four	Five	Six		
N. E.	134	38	10	4	8					25
Mid.	166	41	10	1	7					110
S. Atl.	47	11	3		3	1	3	2		
S. Cent.	10	6		4	3					
N. Cent.	255	65	25	4	13		2			43
N. W.	177	27	15	5	1					
S. W.	58	4	1	2						
Pac.	37	3	1							
U. S.	870	188	64	27	32	3	5	3		158

*That is, where the managing body is renewed after the same general plan as the U. S. Senate, it never consisting entirely of new members.

From the above it will be seen that for the whole United States 65 out of 188 managing bodies, or over one-third, hold office for one year only, 21 for two and 32 for three years. Eleven bodies hold office from four to six years, and one holds office for life. The number of managing bodies holding office for only one year is surprisingly small, but over against these 65 may be set almost as large a number, 58, designated as perpetual, which are never wholly composed of new members, a fixed number, generally a minority, giving place unless re-elected, to new members at recurring periods. The three to six year bodies stand a fair chance of having, through re-election, at least one old member continually among them so that the showing under tender tenure of office is, after all, a good one, since the three to six year bodies number 43, and these with the body chosen for life and the perpetual bodies number 102 or about 55 per cent. of the total number reporting. In addition it must be borne in mind that many of the works are under the same superintendent year after year, and that upon him the successful operation of the works often almost wholly depends. In many instances the superintendent is the only man who really knows anything about the works, and woe unto that city who loses such a superintendent.

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 (1) A paste of 1 oz. oxgall, 1 gill of strong solution of caustic soda, 1 1/2 tablespoonfuls of turpentine, with enough pipe clay to make it thick, scour well. (2) Use strong lye or make a hot solution of 3 lbs. of common washing soda dissolved in 1 gal. of water. Lay it on the granite with a paint brush.

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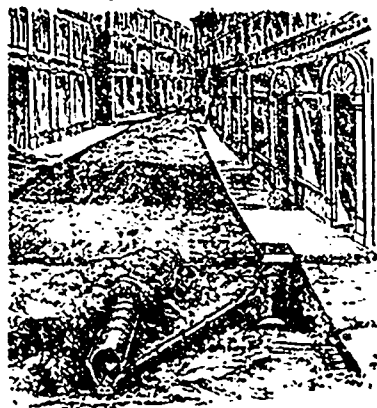
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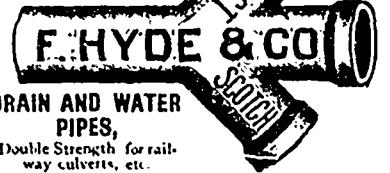
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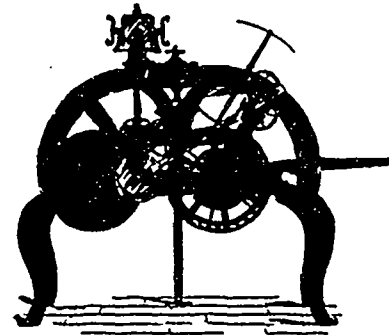


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