

there is no wrench that excels it. Every wrench is warranted. This wrench is equally suitable for square and hexagon nuts, iron rods, etc.

Length.	Capacity.
10 inch pipe .....	$\frac{3}{8}$ to $\frac{1}{2}$
14 inch pipe .....	$\frac{1}{4}$ to $1\frac{1}{2}$
18 inch pipe .....	$\frac{1}{4}$ to 2
24 inch pipe .....	$\frac{1}{2}$ to $2\frac{1}{2}$

For discounts and further particulars address Aikenhead Hardware Co., Toronto.

### NEW CATALOGUES.

Lundell Fan Motors, catalogue 66; Sprague Electric Co., New York. Jack & Robertson, Montreal, sole agents for Canada. This is a most attractive booklet of 40 pages, bound in green and gold, and profusely illustrated.

Electric Power—The Lundell Motor, Catalogue No. 58; The Sprague Electric Co., New York. Jack & Robertson, Montreal, sole agents for Canada; 70 pages; paper; illustrated.

Greenfield Flexible Metallic Conduit, Catalogue No. 63; Sprague Electric Co., New York. Jack & Robertson, Montreal, sole agents for Canada. This valuable specialty is very fully illustrated in some 20 pages, paper.

### FIRES OF THE MONTH.

July 5th. Winnipeg Trunk and box factory; loss, \$5,000; insurance, \$1,200.—July 12th. Houd & Co.'s furniture factory; loss, \$8,000; insurance, \$4,000.—July 24th. Str. "Mistassini," on Lake St. John, Que.; loss, \$50,000.—July 26th. J. F. Beckhan's saw mills, Holmes & Arpin's box factory, D. Gagne's door and sash factory and W. S. Scott's cabinet factory, Montreal; loss, \$13,000.

### LITERARY NOTES.

"Transformer Design," a treatise on the design, construction and use of transformers, by Geo. Adams, A.I.E.E., A.M.I.M.E.; cloth, 75 pages, 34 diagrams: Spon & Chamberlain, New York.

The weekly news edition of the Street Railway Journal is a new and most welcome recruit to the ranks of technical journalism. This edition is devoted primarily to the publication of street railway news and current happenings related to street railway interests.

"A Practical Handbook on the Care and Management of Gas Engines," by G. Lickfield, C.E., authorized translation by G. Richmond, M.E. This compact little volume also contains instruction for running oil engines. Cloth, 113 pages, illustrated: Spon & Chamberlain, New York, publishers.

"Small Accumulators; How Made and Used," is an elementary hand-book for the use of amateurs and students; edited by Percival Marshall, A.I., Mech.E. This is a scientific handbook of great value to the class of readers for whom it has been specially prepared.

We have received the Transactions of the Association of Civil Engineers of Cornell University, Vol. VII., 1898-99. This volume contains addresses by non-resident lecturers, miscellaneous papers, constitution and list of members of the association. Among others these are interesting papers; Notes on the Use of Concrete in Dams, Data of Stream Flow in Relation to Forests, Locks and Lock Gates for Ship Canals, etc.

Wallace Bentley, A.I.M.E., Halifax, Eng., is the author of a most valuable series of technical works. Rules and definitions specially arranged for the use of students in the engineering subjects is a surprisingly full store of exact information contained in so small a compass as to be very convenient for reference. In our column, "The Practical Man," we quote a few paragraphs on Toothed Gearing, which will show the reader the value of these works of reference. Questions in Applied Mechanics (with answers), is a companion volume, as is Questions in Machine Construction and Drawing. Sketches of Engine and Machine Details is a cloth bound volume of some hundred pages, each crowded with carefully prepared drawings of details which cannot but be of great assistance not only to technical students but to everyone who wishes an exact knowledge of engine and machine details.

We have on our desk the calendar of the School of Mining, Kingston, Ont., for 1899-1900, which contains a full announcement of the work of this progressive institution. Wm. Mason, Bursar, School of Mining, Kingston, Ont.

The illustrated supplement to the Nelson Miner presents a great variety of views of the town of Nelson and surrounding localities in its numerous illustrations, and in the text gives a good deal of information as to the people and places shown.

The Department of Public Works, St. John, N.B., has issued the Engineer and Superintendent's Report on Sewerage and Water Supply. This work is in charge of Wm. Murdoch, C.E., and all engineers must feel interested in the thorough manner in which everything is carried on. Mr. Murdoch's methods in cleaning the city water mains have been fully described in The Canadian Engineer in the past. We shall give some of the more recent results in the early future.

We have received from the Civil Engineering Society of Purdue University, La Fayette, Ind., the Proceedings of the Purdue Society of Civil Engineering, 1898. There are some interesting articles on irrigation problems, and a discussion of block asphalt under the title of The Coming Pavement. We learn that paving blocks of crushed stone and asphalt were first manufactured in San Francisco in 1869. Since that time the methods of manufacture and the necessary machinery have been perfected until it became possible to manufacture them at prices that would permit of competition with other pavements. For the past thirteen or fourteen years the tests of this pavement have proved that it was no longer an experiment. Baltimore has a sample of the asphalt block pavement that has been in use for fifteen years, and is still in good condition. The blocks are 4 in. by 4 in. by 12 in. in size, composed of about 85 per cent. crushed stone and 15 per cent. asphaltic paving cement and subjected while at a high temperature to a pressure of 120 tons to the block. The blocks weigh eighteen pounds each, they are laid crosswise of the street, making a pavement 4 inches deep. The cost is about \$2 per square yard.

### THE ROYAL ELECTRIC CO., LTD.

The annual meeting of the shareholders of the Royal Electric Company was held July 18th. Among those present were: D. Morrice, Lieut.-Col. Strathy, F. L. Beique, C. S. Campbell, H. B. Rainville, Herbert Wallis, G. F. C. Smith, A. F. Riddell, J. R. Meeker, G. R. Marler, John Date, Edwin Hanson, Frank Newman, A. Brunet, W. H. Browne, the manager, James Wilson, Mr. Morrison, G. H. Smithers, Edward Rawlings, H. G. Strathy, George Caverhill, and L. McL. Spackman.

The manager, W. H. Browne, made some explanations in regard to the operations of the company since its inception and during the past year. He said that, in the electrical business, inventive genius was so prolific that the plant or apparatus for manufacturing electricity soon became obsolete. Hence, during the existence of this company, \$1,800,000 of equipment had become useless, or superseded by improved machinery and methods. The whole of that \$1,800,000 had not been written off, but \$600,000 to \$800,000 had, and, while there was certainly a million dollars in the nominal assets, which was really not in existence for any practical purpose, he thought the proper thing to do was to distribute the loss over a number of years, as they had been doing. Speaking of underground conduits, Mr. Browne said the time was coming, and they soon must meet the necessity. The cost of total conversion from pole wiring to conduits would be \$1,500,000, but entire conversion was not necessary, as in some of the residential quarters it was not called for. He explained that, notwithstanding the large outlay for conduits, the expenses of maintenance would be sufficiently reduced to pay the interest on the outlay. The prices of current in Montreal would not be reduced to the point consumers expected, even if the source of supply was the water power of Chambly.

Colonel Strathy nominated as directors the following gentlemen: Col. J. A. L. Strathy, D. Morrice, James Wilson, H. B. Rainville, R. Forget, J. R. Meeker, A. Brunet, F. L. Beique and George Caverhill.

From last year's board there were left out of this year's nomination, the following: Hon. J. R. Thibault, A. R. Macdonell, H. S. Holt, Edwin Hanson and Robert Cowans.