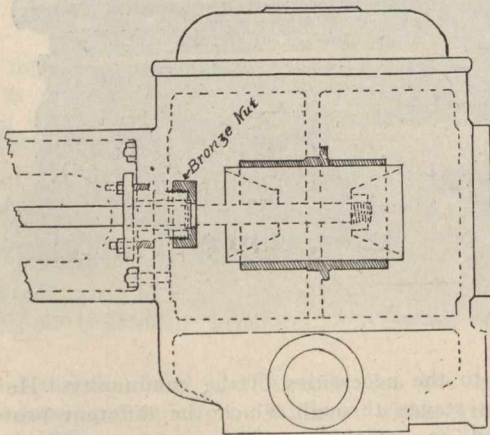


be the finish of education to this. Mathematics and philosophy must be part of the engineer. The real engineer must have these. This placed civil engineering among the learned professions. The carelessness of the true engineer in the United States and Canada had placed the profession in a wrong position. It had been debased and nebulous ideas existed concerning the work of the engineer. The engineer used his knowledge of the laws of nature in designing works in the interests of his fellow-men. Because a man by accident invented something did not make him an engineer. Men like that often do injury to the profession. Without a knowledge of the principles underlying the profession they could not be engineers. The engineer must know nature and her laws. With this he goes forth to work for the advantage of man. The Good Roads Associations in America are but the awakening on this side of the Atlantic of the spirit which actuated the reformers for good roads in Europe. Taking this as a starting point he traced the history of many of the branches of engineers. Men like Edison and Marconi were students who, by their researches, pursued the pathway of the true engineer. They were gathered at this, the first, convention for the purpose of looking back over the year's work—to see what they had done. If they had the true spirit of the engineer they would not be satisfied to play a part like that of the druggist who compounded for the physician. They would not be satisfied to simply follow the guidance of some one else. They would only be satisfied working on the foundation acquired by the thorough mastery of the underlying principles, to evolve that which would be to the advantage of mankind.

The Pacific Northwest Society of Civil Engineers was organized in 1902, at Seattle, but includes British Columbia. Among the papers and discussions during the year were, one on Bearing Strength of Piles, inspired by the failure of a large dock at Seattle, precipitating thirty or forty thousand dollars' worth of property into the sea. This accident caused a great deal of comment, as the dock was constructed by men of reputation; "The Preservation of Metals" and "The Terebo Proofing of Wood," Sanitary Matters, etc.; a comparison between the long-leaved yellow pine of Georgia and other southern states, and the Douglas fir of British Columbia; and at the annual meeting a description, with lantern slides, of the James Bay reclamation works at Victoria.

### REPAIRING A STEAM PUMP GLAND.

The Canadian Steam Pump and Machine Co., of Toronto, had occasion recently to be called upon to repair a break which occurred in a 12-in. by 18-in. by 12-in. by 9-in. compound duplex steam pump. In this case the outside casting of the piston rod gland, which is cast on the stretcher and extends into the water end of the pump, some three inches, was burst off the whole end, thereby allowing



the packing to slip through into the pump. To remove the stretcher, to which gland was cast, would have required the disconnecting of the whole pump, cylinders, piping, etc., which meant a lot of labor and expense. Mr. Dando, the superintendent of the company, decided upon another plan

of cutting a thread on the broken part and screwing on a bronze end in which the throat piece was fitted. They got up a special rig, which successfully accomplished the work, without disconnecting a pipe or even taking out the pistons or rods from the cylinders. By this clever arrangement they had the job completed and the pump running in a very short time. The accompanying sketch shows the bronze nut replacing the broken part.

### ENGINEERS' CLUB OF TORONTO.

The Engineers' Club of Toronto met on the evening of October 14th, to hear a lecture on the De Forest System of Wireless Telegraphy, by Jas. F. Thomson. Unfortunately the lecturer was unable to be present through illness, and his place was taken by Dr. C. A. Chant, who explained the system and gave some demonstrations in illustration of its working. Mr. Chant has given the subject much study, and is well qualified to deal with it. The club, along with the Association of Architects, has weekly lunches in the club rooms on Monday.

### CANADIAN ASSOCIATION OF STATIONARY ENGINEERS.

The 17th annual banquet of Toronto No. 1, Canadian Association of Stationary Engineers, was held at the Walker House, Toronto, on Wednesday, October 14th. After the excellent menu had been disposed of, the following toasts were proposed, President N. V. Kuhlman, in the chair; "The King and Royal Family;" "Ontario, the Banner Province," by T. Crawford, M.P.P.; "Toronto, the Queen City," Ald. Richardson; "Our Guests," by manager Pure Gold Mfg. Co.; "Our Manufacturers," by G. R. Baker, of Westman & Baker Co., and Thompson of the Canadian Otis Elevator Co.; "Our Educational Interests," by A. M. Wickens, of the Canadian Casualty & Boiler Inspection Co.; "The Executive," by President H. E. Terry, Toronto. A programme of songs, recitations and ventriloquism was rendered between the toasts. About 150 members and friends enjoyed the hospitality of the C.A.S.E..

## Personal.

A. B. Kittermaster, C.E., of Sarnia, is dead, aged 74.

Francis McNab, a retired civil engineer of Kingston, is dead.

B. W. Folger, the well known shipping and mining man, of Kingston, is about to remove to Toronto.

James J. Welsh, a railway contractor, who has been operating in the West, has sold his outfit and retired from business.

Alexander Leckie, engineer at Lumsden Bros' canning factory, Hamilton, was severely scalded by a plug blowing out of the boiler.

Alex. Manning, the largest single taxpayer in Toronto, is dead. He was at one time a contractor and had some important canal and railway contracts.

Albert J. Markie, superintendent of the Lincoln Electric Light and Power Company, was instantly killed at St. Catharines by coming in contact with a live wire.

Major Weatherbe, chief of the engineering branch of the Militia Department, who has been in England taking an engineering course, has returned to Ottawa. Captain Maunsell, his assistant, has left to take a similar course.

C. F. MacGill has resigned the position of mechanical superintendent of the Canadian General Electric Company's works, at Peterboro, to go to Pittsburg, where he has accepted a similar position with the Westinghouse Company, at a largely increased salary.

Edward Irving has been appointed manager of the new Canadian office which the Sunbeam Incandescent Lamp Co. has opened in the McKinnon Building, Toronto. The factory is at St. Catharines.