Mr. J. S. Anthes, furniture manufacturer of Berlin, also spoke in response to the last-named toast.

Mr. Hugo Kranz spoke in response to the toast "Educational Interests." He declared himself in favor of technical education. Some years ago, he said, Germany was a purely agricultural country. The government decided to send an expert to the United States to report as to the products of industries and if Germany was equal with other countries. This expert reported in the negative, and as a result technical schools were started. To-day Germany occupies a foremost position among the manufacturing countries of the world, largely due to her system of technical schools.

The toast of "Sister Associations" came next. Mr. E. J. Philip, in responding, said that the Canadian Association of Stationary Engineers was the only association that gave a man a practical benefit that remained with him. Mr. Wickens followed, explaining the difference between the Canadian association and the Ontario association, and pointing out the necessity of having boilers in charge of competent men. An ordinary boiler, he said, had an explosive force equal to two kegs of gun-powder.

The toast of "The Press" was acknowledged by Mr. W. A. Smith, of the Canadian Engineer, T. S. Young, of the ELECTRICAL NEWS AND ENGINEERING JOURNAL, and by representatives of the Berlin press. Mr. Dixon then favored the audience with another song. Then followed the toast of "The Ladies," responded to by Mr. Dover and Mr. Geo. O. Philip; "Berlin and Waterloo Association," proposed by Mr. E. J. Philip and responded to by Messrs. W. Oelschlager, Geo. Steinmetz and J. Wendell; "Host and Hostess," by Mr. Philip, on behalf of Mr. A. Walper. The banquet was brought to a close by the singing of "God Save the Queen," and by giving three cheers and a tiger for Berlin.

CONVENTION FLASHES.

The Alpha Chemical Co., of Berlin, distributed among the engineers sample boxes of Moody's metal polishing paste.

Mr. Joseph H. Walker, chief engineer of the Kincardine electric light plant, although not a delegate, was a visitor to the convention.

Mr. G. O. Philip, a brother of Mr. E. J. Philip, is an engineer in heart, if not in practice. Someone suggested that he be made a life member of the association.

The thanks of the association are due Mr. Samuel Rogers, of the Queen City Oil Co., for a substantial contribution towards the expenses of the convention.

Mr. Geo. Steinmetz, vice-president of the Berlin association, is chief engineer at the power house of the Berlin Gas & Electric Light Co. He was at one time a traveller for engineers' supplies.

Even the oratorical powers of Mr. James Dixon, chief engineer at the Toronto city hall, were not sufficient to fittingly express the appreciation of the hospitality extended by the authorities of Berlin.

The Babcock & Wilcox Co., of Montreal and Toronto, displayed in the convention hall their "Beats All" improved pump governor, reducing valve, steam trap and Crosby steam gauge, which attracted much attention.

The local association were assisted in the entertainment of the delegates by Messrs. R. Wegener and H. D. McConachie, resident representatives respectively of the Queen City Oil Company and McColl Bros., Toronto.

Mr. Nathan Uttley, of Waterloo, may be said to be the father of engineers. Although 67 years of age, he is now firing under five boilers of 70 h.p. each in the Waterloo Woollen Mills, which position he has occupied for 18 years. His son, Mr. J. Uttley, is chief engineer of the plant.

That the engineers might remember the brands of oil manufactured by the Queen City Oil Co., Mr. R. Wegener, the local representative, placed in the hands of each person at the banquet a package of matches, each match bearing the name of some brand of oil made by his company.

Too much credit cannot be given to the energetic local committee for their faithful labors to make the convention a success. While every member was true to his duty, special thanks are due the chairman, Mr. W. Oelschlager. From the arrival of the first train until every delegate had departed from the town, he was ever on the alert to add to the comfort and pleasure of the visitors. Mr. Oelschlager is a member of the firm of Oelschlager Bros., engineers and machinists, of Berlin, who manufacture high speed engines, steam pumps, power and hand hoists, etc.

Mr. T. J. Halsey, of the Fairbanks Company, of Montreal, lost no opportunity to make known to the engineers the merits of the goods of his company. He had a choice exhibit of the Fairbanks renewable asbestos disc valves, asbestos pack cocks for boiler blow-offs, and lines of vulcabeston packing. A special feature of their Globe disc valves is the very simple manner of renewing the disc. They are held in a central position by guides cast on the valve body, and have no nuts, screws or pins to become detached in use. The discs can be put in place by simply removing the bonnet of the valve, slipping a new disc on the end of spindle, and replacing the bonnet again.

MOTOR CARRIAGE TRIP ON COUNTRY ROADS.

ON August 15th Mr. E. J. Philip, chief electrician for the T. Eaton Company, ran his motor carriage from Toronto to Berlin, to attend the convention of the Canadian Association of Stationary Engineers, of which society he is a past-president. Mr. Philip was accompanied by his mother, who is seventy-four years of age. The following account of the trip has been furnished to the ELECTRICAL NEWS:

"Leaving Toronto at 11.15 a.m., we arrived in Berlin about 8.30 p.m. About two hours was lost at noon and forty-five minutes at tea, making the running time about 6½ hours, or a speed of 12 miles an hour. This, of course, included stoppages to inquire as to the best route. The trip was made practically without a hitch, and the total load moved was about one ton, there being, besides the weight of the carriage, that of the passengers, an extra two gallon can of gasoline, and a valise. About four gallons of 74° stored gasoline and 11 pails of water were used on the trip. At 12.30, when on the road between Brampton and Cooksville, a key fell out of a bronze pinion. It was found to be too long, and after cutting it off with the tools at hand, we were invited to partake of dinner by a farmer. When a start was again made it was 2.30, having lost two hours. The water tank was filled before starting,

MR. E. J. PHILIP AND HIS AUTOMOBILE.

and the run from this point to Georgetown was made without a stop except to inquire the way. At Georgetown the water tank was filled, some gasoline put in the tank, and the engine oiled up. From Georgetown to Guelph being all up hill, we used nearly as much gasoline and water on this run as from Toronto to Georgetown. Guelph was reached about 6.30 p.m., when we had supper, filled the water tank and oiled up. Leaving again at 7.20, we arrived in Berlin about 8.30.

"The return journey was made without incident. We left Berlin about 7 p.m., and ran down to Galt, stopped over night, left Galt at 7:15 a.m. for Hamilton, arriving at 9:30. The water tank was filled at Sheffield and Dundas; it was leaking badly all the way home, and lost more water than was evaporated by the heat. At Hamilton we took the boat for Toronto. The carriage caused much sensation along the road, and seemed to be regarded as a wonderful curiosity by men, women and children.

"The carriage was built by the Winton Motor Carriage Co., of Cleveland, Ohio, and weighs 1,600 pounds, with gasoline and water tank filled. The motive power is supplied by a 7½ h.p. horizontal gasoline engine; the cylinder and frame is cast in two pieces, and is made of bronze. It has a thin sheet brass jacket through which the cooling water circulates. The water tank is also made of this sheet brass, with plenty of ribs to give a sufficient radiating surface.

"The firing of the mixture is done by eight cells of Nungesser battery. The spark takes place between the platinum points, operated by a cam, and there is an explosion every second revolution. The distinctive feature of this carriage is the method of regulation. This is obtained by making the suction or admission valve stem very long, so that it extends through a head into a small cylinder. A piston is put on the stem in this cylinder, and between the little piston and head air is pumped by a small