Duet—By Prof. Cline and La Roy Melard.

The toast list was then handed over to the vice-chairman, Bro. Wm. Norris, and the following toasts were responded to:

Toast—"Our Manufacturers," responded to by Mr. Watson, of Kingston, for the oil companies; Bro. Clappirson, of Hamilton Engine Packing Co.; Bro. Brice, of Brice Electric Works, Hamilton; and Mr. Holden, of Hamilton.

Songs—By E. Martin and M. Thomas.

Toast—"Our Sister Associations," responded to by Bro. Phillips and Bro. Huggett, of Toronto.

Song—"Larboard Watch," Prof Cline and La Roy Melard, after which Bro. A. E. Edkins sang "The Maple Leaf."

Toast—"The Press."

Responded to by Mr. Martin, of Toronto *Globe*, and Mr. R. J. Robb, of Hamilton *Spectator*.

Song—Mr. E. Martin.

Toast—"Learned Professions."

Responded to by Bro. Pettigrew, of Hamilton Board of Education.

Bro. A. E. Edkins, of Toronto, then proposed a toast to Hamilton No. 1, which was responded to by Bro. Joseph Langdon, president, and Bro. William Norris, corresponding secretary.

Toast—"The Ladies."

Responded to by Bro. D. Robertson and Bro. Peter Stott, of Hamilton No. 2.

Toast—"Our Host and Hostess."

Responded to by H. Moxey.

During the evening the following letters of regret were read: Bro. Devlin, of Kingston branch; from Montreal branch; A. D. Stewart, mayor; from Ottawa branch; S. S. Ryckman, M.P. for Hamilton, J. T. Middleton, M.P.P. for Hamilton; J. M. Gibson, M.P. for Hamilton.

Our meetings of late have been very interesting; some important discussions have taken place. The members of this branch are very much disappointed at the results of the bill when it went into committee. It seems strange that when such an important matter is brought forward, that it should be dealt with in such a light manner. We are in hopes that the leaders of the movement will take time to consider the most effectual manner to bring the bill before the Government. The great trouble, in my mind, is that the Stationary Engineers are not heard enough of outside of their lodge rooms. It is time that more attention was paid to outside matters, and to the professional part of our meetings, and the meeting once each week instead of once in two weeks. I hope to be able to say more upon this subject in the future.

WM. NORRIS, Cor. Sec.

THE ENGINEERS' LICENSING BILL.

Editor CANADIAN ENGINEER.

SIR,—From the wide-spread interest taken by engineers, steam-users and employers in the bill recently before the Ontario Legislature for the licensing of engineers and the inspection of boilers, there is no doubt that many would like to know the results, and the present situation. A carefully prepared bill, one in which every precaution was taken to have it work equitably and smoothly, was entered by the member for West Toronto, Mr. Crawford. At the second reading of the bill a short discussion was had on the merits of it, with the result that the principle of the bill was agreed to and a special committee was appointed for the purpose of further considering the bill. This committee consisted of twenty-one members, and seemed to be loaded up the wrong way, as, after quite a stormy meeting, the committee, on resolution, accepted the principle of the bill, but objected to the details and machinery of it. There were only thirteen members of the committee present. Many of the absentees were avowed friends of the measure, and it is very probable that the result would have been very different had they been present. It is the old story of where a few who were opposed to the measure watched it closely, and were on hand at the right moment to defeat it, while friends, who were not enthusiastic, suffered other engagements to keep them from the meeting, and so lost the cause. It is to be hoped that the Government will take the matter up in the near future, as the necessity of such a measure is becoming more apparent each year, and is being adopted in different forms by many of the States and some of the European countries.

ENGINEER.

Toronto, May 3rd, 1895.

THE MONTH IN MONTREAL.

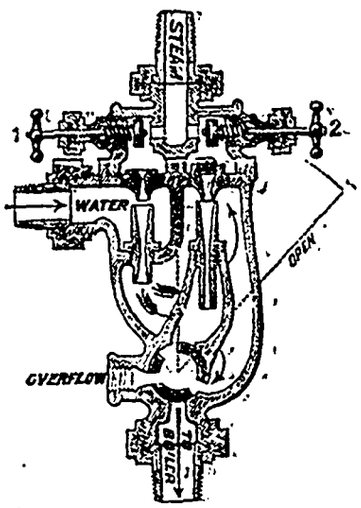
Montreal No. 1 has had a very satisfactory month. There have been several initiations. A paper on "Evaporation" was read by Bro. Granberg. There has been the usual number of knotty questions asked and answered. We had on exhibition in our hall a curiosity that I think no other branch of the association can boast of, that is an engine made almost entirely by a jack-knife and an old file. Most of the metal is made from tea chest lining; it works with steam. The maker, J. Wilson, is a fireman with two years' experience.

A. W. BROWN, Cor. Sec.

THE "NIAGARA" INJECTOR.

The boiler feeder which is very rapidly becoming popular among steam users and boiler makers throughout Canada is the "Niagara" Injector, manufactured by W. H. Stirling, of St. John, N.B. The claims for superiority are as follows:—

The machine is complete in itself, *requiring no valves*, as will be seen in cut.



It can be throttled by means of valve No. 1 on suction side, so as to supply from full capacity down to required quantity, thus reducing the quantity of steam used, and delivering the water 90° hotter. This feature will save the price of the injector many times over in fuel alone. The foregoing fact has been demonstrated beyond doubt by the "Niagara" Injector being connected where other machines have been taken off.

The machine is meeting with great success for the short time it has been on the market.

Mr. Stirling has shipped these injectors to nearly every western city in Canada as far west as British Columbia.

The "Niagara" Injector is sold in Montreal by W. H. Nolan, Canadian Machinery Agency, 321 St. James st., and Samuel Fisher, 57 Sulpice st.

SAFETY VALVES.*

BY W. G. BLACKGROVE, TORONTO.

The safety valve is a device constructed to relieve the boiler of all surplus steam generated therein above a given pressure. It is a factor that cannot be ignored, and the usual practice of opening the valve or causing it to blow-off at least once a day does not really seem sufficient to be a guarantee that it will perform the duty required of it just at the time it should work to best advantage.

A safety valve may readily stick, especially those that are constructed to prevent the steam blowing into the engine-room whenever the valve performs its duty. A valve of this kind is usually fitted with a cap surrounding the stem through which it is intended to move, without friction, and also without permitting an escape of steam around the sides of the stem; and for this reason there is great danger of its sticking, and that without any indications which will call attention.

Valves of this kind, whenever inspected, will be found to have the stem thickly covered with mineral matter, which has been carried off with the steam, and finally adheres to the stem with such tenacity that it can only be removed by filing or sand-papering. Such accumulations enlarge the stem, and a similar deposit in the cap often produces such a condition of affairs that to start the valve from its seat, even when the lever is removed, requires considerable effort. Under such conditions the valve is not corroded to its seat, as usually expressed, but the stem and cap are caused to adhere on account of the accumulation deposited from the flow of steam, which carries with it more or less water from the boiler, which in turn deposits the sedimentary matter carried over.

* A paper read before the Toronto Branch, Canadian Association of Stationary Engineers.