

the Lower House, to look after said Bill and endeavour to have it passed."

The Treasurer, Mr. Denison, moved the resolution of which notice had been given for the last three months in the *Canada Farmer* and the *Journal of the Board of Arts and Manufactures*, that the by-laws be amended, so that members, instead of season tickets, should receive four single tickets, each entitling to one admission.

After some discussion, the motion was put and carried.

Motions of thanks were unanimously carried to the retiring president, Col. Johnson; to the railway and steamboat companies, for their liberality in carrying freight and passengers to the exhibition and return at reduced fares; to the local committee for the valuable assistance they had rendered; and to the mayor and corporation of the city of Hamilton, for the ample manner in which they had carried out their engagements.

#### PETROLEUM AS FUEL.

The following article and correspondence is from the *London "Oil Trade Review,"* a weekly journal issued from the office of the "Grocer." The subject treated of has been discussed and experimented upon on this side the Atlantic for some time past, as one of great interest both to the oil-producers and to the steam-shipping interests. If a really successful mode of using petroleum as fuel for raising steam in ships has been discovered, it will, apart from mere comparative cost of coal and petroleum, be invaluable to vessels engaged in lengthy sea voyages. Should such a new demand for petroleum be created, we doubt not but many new sources of supply will also be discovered, to meet the increased demand.

"It appears that the use of petroleum as fuel as a substitute for coal on board ships is not unlikely to prove a success, notwithstanding the failure, as regards comparative economy, of the various experiments mentioned from time to time in these columns. We have been favoured by Mr. C. J. Richardson, architect, with a private view of a process conceived by him, without the knowledge of any other being previously tried; he not having become aware of that fact till it was pointed out to him in a recent number of this journal. His plan, therefore, has the merit of being purely original, as far as he is concerned. We were much interested in the preliminary experiments we saw tried, which lead us to hope very strongly that the philosopher's stone has at last been found. Petroleum as a fuel to the steam engine at a less or equal cost would completely revolutionize our system of steam navigation. One great desideratum in its use is the utilization of the whole, or nearly the whole, of the material applied. This, we are inclined to think, is accomplished in the process

adopted by Mr. Richardson, though the apparatus is not in a sufficiently forward state to enable us to make a practical test from which to derive our calculations. The invention has been submitted to the Admiralty; and as soon as we hear the result we shall give our readers full particulars concerning it. At present we do not feel ourselves at liberty to give any details, as steps are only now being taken to secure for it the American and Continental patents. Steam power in long voyages is now used only as an auxiliary to sails; but should we succeed in finding an economical substitute in petroleum, the order of things will be reversed. The Admiralty send out to China every year immense quantities of coal at 15s. per ton for their vessels; all the great companies navigating those seas send out coal, the depôts for which are kept up at an enormous cost, in addition to the great amount of labour entailed in its use, and the room required for its storage in ships. If petroleum could be substituted it would be a great commercial triumph."

#### Petroleum as Fuel.

"SIR,—Being engaged in perfecting a method for burning petroleum as steam fuel on a very simple principle, using for the purpose an extremely small apparatus, for which I have taken out both English and foreign patents, I read carefully over the late articles that have appeared in your paper relative to the subject.

"The impression gained from them, especially that of the 6th August, is, that it was our common coal that was used against petroleum, by the Commission appointed by the American Government to examine and report on the subject, and likewise by Professor Fisher, of Newhaven, and that 198 gallons of the oil were found to have only the same heating power as 2,000 lbs. of coal. Premising that I believe the processes upon which the experiments were made wasted half the oil, it was not our common coal that was used, but anthracite coal, one akin to petroleum. Its effect as a fuel is the rapid production of an intense heat, confined to a surface not extending more than a few inches above the bars, and acting in that way, is, I believe, much more powerful than the English coal. It is commonly used in New York; the Americans understand it, we do not. The price of the Welsh anthracite coal is 11. 7s. per ton in London, and that is not so good as the American.

"Professor Fisher's experiments were carried out only on a small scale. To fully settle the comparative value of the oil against coal, an oil-burning apparatus should be kept in full operation for eight or ten hours, under the boiler of an engine of at least six-horse power.

"The statement relative to the *Persia* steam vessel is to be found in the report of the American Commissioners. Now our cousins are very 'cute calculators. I should long hesitate to put aside as worthless anything they brought forward on such a subject, especially if it was with the sanction of the head engineer of the American Navy. But, Sir, admitting that for all common purposes the present price of petroleum renders it incapable of competing with coal as steam-fuel, there are many items which add to the price of coal for a great ocean steamer, which must be