

honourable distinction. These classes do not either detract from, or come into collision with other educational institutions, in any way whatever; they rather assist, and go hand in hand with them, many students of colleges gladly availing themselves of the opportunity of attending these evening classes, and thus securing a practical knowledge of the subjects taught that can otherwise only be obtained in the workshop.

Such classes would be of very great value to the agricultural class in this country, seeing that the programme includes the science of agriculture along with the other sciences and arts.

There is reason to believe that the Educational Departments are not indifferent to these matters. Successful manufacturing requires skilled workmen, and the sooner such classes are engaged here the better. Who will move first?

The importance of this subject should recommend it to the earnest consideration of both the Local and Dominion Governments.

We shall be glad to receive communications from parties who may feel interested in these matters, to learn their views, to give further information if desired, and to encourage and promote such organizations by any means in our power.

#### GAS AND ELECTRIC LIGHTING.

THE subject of supplying the maximum illuminating power at the minimum of cost is an important one for large corporations, companies and the general public.

Gas is beyond doubt the most economical, but the difference in cost between the two systems of lighting is not such as to preclude the rapid advancement and application of Electric Lighting, the numerous and convenient advantages of the latter combined with its novelty and popularity give at once an important standing.

Some of the best towns and cities in the Dominion are more or less lit up with it both by private and public contract.

The Gas Companies are trying to minimize as much as possible the effects of this competition by reducing the price of gas and by supplying better burners and lamps, etc. than hitherto.

#### THE BRITISH NAVY.

QUITE a sensation was caused lately in England by the circulation of reports from supposed well informed circles regarding the weakness of the English Navy as compared with other Powers. The subject had become a burning one, and among the first political questions of the day.

It is quite evident that England's supremacy is being gradually approached, and although she is still mistress of the sea, her superiority is not such as to enable her to successfully fulfill her large and ever increasing obligations.

The subject is being greatly agitated at present and it is gratifying to know that the Imperial Government are determined to rectify matters as speedily as possible.

We intend later on to take up this matter and give our readers full statistics and both facts and figures.

#### THE GREAT EASTERN.

It appears that this once famous and monster steamship is being thoroughly overhauled, and got ready for another passage across the Atlantic. It is undergoing the necessary repairs at Milford Haven, and will take some months before being ready for sea. It will be used for carrying exhibits from England to the great Exhibition at New Orleans; and when there, will be utilised and fitted up as a floating Hotel moored in the great Mississippi River.

The idea, although not altogether novel, is a good one, and we trust it will prove a success both to the public who may patronize it during the Exhibition and to its owners.

#### THE AUSTRALIAN MAIL SERVICE.

CONSIDERABLE dissatisfaction has arisen lately regarding the time taken to deliver the mails from London, *via*. San Francisco, which ranges from 37 to 39 days. It is asserted that the service could be considerably expedited. We in Canada are highly favoured, compared with our Australian brethren in this respect, and still we complain occasionally.

#### THE WESTINGHOUSE AIR BRAKE.

The Westinghouse air brake, so extensively used both here and abroad, has been brought into special prominence in England lately, where the public are demanding that it shall be applied on all railways, to the exclusion of vacuum and other brakes, which have proved to be less efficient. Since the accident at Penistone, on the Manchester, Sheffield and Lincolnshire railway, last July, in which over 20 persons were killed and as many more injured, the engineering press has been incessant in urging that the Westinghouse or an equally reliable automatic brake be used on all the English railways. The conclusions reached as to the efficiency of many of the railway brakes now in use in England have received further confirmation from the locomotive engineers, who, before all others, are interested to the extent of life and limb in having the best brake under their control. Not long ago one of their number sent a letter to the *London Times*, in which he expressed himself very strongly in favor of the Westinghouse brake, saying that with none of the other systems did he feel the same security, and when using them was always prepared to apply the hand brakes. The prominence which was given to this letter in many of the engineering journals called forth a second letter from a similar source, in which the writer corroborated all the statements of his fellow-engineer. Such strong evidence, upheld by both theory and practice, and bearing common testimony to a danger and the means of avoiding it, would undoubtedly before this have resulted in the desired change had it not been that certain parties largely interested in English railways, as well as in a particular brake, have put forth every endeavour—even, it is said to the extent of tampering with the accident returns—for the purpose of detracting from the merits of the Westinghouse to the advantage of some other brake and their own predilections. Seemingly as a proof of the efficiency of the Westinghouse brake there occurred in England some weeks ago a railroad accident closely resembling the one at Penistone in everything except loss of life, the escape in the second instance having been due to the excellent working of the Westinghouse brake. Despite all opposition, therefore, it is highly probable the demands of the public will soon be acceded to.

A NEW method of sheathing ships has just been tried at Swansea, Wales. The copper or yellow metal plates are attached to the iron by means of an adhesive preparation of rubber. An intermediate rubber sheet insulates the two metals. Before applying, the bottom of the ship is thoroughly cleaned. The results of the trial are awaited with great interest, as the method offers great facility in repairs.