

sile tests for those whose outfit, in addition to that already enumerated, contains machines and appliances for such work.

It may seem superfluous to go all over this well-trodden ground, but experience teaches that simple truths need frequent reiteration as well as abstruse facts, in order to keep them in the minds of those interested.

UNITED STATES WAR SHIPS.

We have heard a great deal lately of the success of recent efforts of the ship-builders of the United States. It seems, however, that there are still some few points in which British builders might instruct them. It has been found impossible to dock the new United States battle-ship "Texas," as she began to go to pieces as soon as the water got low in the dry-dock. Just how far the smash-up would have gone it is impossible to say, for at the first appearance of rending plates and cracking cement the water was returned to the dock. There is a good deal of discussion as to whom to blame for the break-up. The plans of the ship were the result of a competition for a prize of \$15,000, and were prepared by a British draughtsman. They were amended by the United States naval authorities before construction was begun, however, so that no blame for the failure can attach to the original draughtsman. It has been more than hinted in American papers that faulty work was purposely put in to throw discredit on the author of the plans, but of course no evidence of this has yet been brought forward. The chief thing that the United States naval authorities have to learn is to build ships, and the first chapter in the lesson is that when they have accepted a plan it should be carried out to the most minute details; the second is that when they are carrying out a plan they should do it honestly and put good work into every inch of it.

AMERICAN VS. ENGLISH HEATING APPARATUS.

The merits of American methods of house heating, and the opportunities for Americans to extend their business in England by making a careful study of British requirements, are ably discussed by W. M. Watson, Dundas street, Toronto, in a letter which appears in a recent number of the *Leeds (Eng.) Mercury*. The great point to be observed is that soft coal is the general fuel, and an apparatus which is constructed for consuming anthracite is soon clogged with tar and soot when soft coal is burnt. For this reason the ranges sent to England have in many cases failed to give satisfaction. One point which should appeal strongly to our trans-Atlantic neighbors is the economy of following our methods. An ordinary grate fire, which will heat a good-sized room, will consume enough coal to heat a nine-roomed house if burnt in a modern furnace. The most suitable heater for the English trade is the hot-water heater, as the cold there is never very great, and what is desired is a mild and equable temperature, which is easily regulated. Hot water is also more suited for use with soft coal, as the fire may be let down, and the radiators remain warm for a long time, which is not the case with either steam or hot air. The English heaters are much more cumbersome than the American, and 3 or 4 inch pipes are often employed as radiators. Much more heat could be obtained from the same fuel if smaller pipes were employed, as is customary here. Mr. Watson thinks that if the English dealers do not

pay more attention to developments on this side of the water, they will have cause to regret it.

MERRY CHRISTMAS AND A HAPPY NEW YEAR.

Into all the different homes where *THE ENGINEER* comes this Christmas, we wish that all good cheer and happiness may enter too; that all bearings may be true and the wheels of business life run without heating. We hope that all our readers may build many more successful years into the arch of Time before the key-stone is set and the workmen are laid off.

THE MOTO-CYCLE RACE IN CANADA.

The suggestion made in *THE CANADIAN ENGINEER* last month to organize a public exhibition of horseless vehicles in Canada next summer has been approved of by the *Toronto World*, *Hamilton Spectator*, and other papers, and private offers of assistance have already been made by enterprising individuals to the publishers. Subscribers writing from Hamilton advocate holding the exhibition in that city, instead of Toronto, as steps are now being taken to organize a company to make the moto-cycle there. It matters nothing to *THE ENGINEER* whether the exhibition be held in Toronto or Hamilton, so long as it is taken up with spirit, and we are sure there will be no jealousy on this score between the two cities. If a good strong committee is formed in either city, it will be a great success. In view of the attention given to horse-racing on the Queen's Birthday, a moto-cycle race would probably draw a larger crowd if held on Dominion Day. *THE CANADIAN ENGINEER* will be glad to hear from anyone in Hamilton, Toronto and elsewhere who is willing to serve on an organizing committee.

Our readers will be interested in knowing that the Mr. Pennington whose remarkable new motor is described by Mr. Killey in this issue, is the same gentleman who has been experimenting on machinery for navigating the air. Though the application of the Kane-Pennington motor has been on machines traveling on land, the extraordinary power developed by the invention may actually lead to the accomplishment of what Mr. Pennington and so many other inventors have been vainly striving at—air navigation. The achievement will probably be as great a surprise to Mr. Pennington as to the rest of the world, but from tests reported in the *American Machinist* it really seems that this highest accomplishment of mechanical genius will soon be the gift of mankind. The principle of this new motor is so far a secret, and mechanical men, of all others with whom the writer has discussed the matter, have been most skeptical. Yet the tests made and the details given upon so good an authority, leave little doubt that the new motor is all that is claimed for it.

THE Dominion Government has to be complimented on the selection it has made of commissioners to sit with the American commissioners on the subject of the Deep Waterways of Canada and the United States. Mr. Howland is not only a clever, painstaking and industrious man, but he brings great enthusiasm into his work. As to Messrs. Keefer and Monro, the engineering experts of the commission, no two men could be selected having a wider grasp of the subject or capable of making clearer deductions from the mass of facts and statistics with which they will be called upon to deal. A biographical sketch and portrait of Mr. Monro appeared in our April number, and a sketch of Messrs. Keefer and Howland appears in this issue,