



MUNN & COMPANY, Editors and Proprietors.

PUBLISHED WEEKLY

At No. 37 Park-row (Park Building), New York

O. D. MUNN, S. H. WALES, A. E. BEACH.

TERMS—Two Dollars per annum—One Dollar in advance, and the remainder in six months.
Single copies of the paper are on sale at the office of publication, and at all periodical stores in the United States and Canada.
Sampson Low, Son & Co., the American Booksellers, No. 47 Ludgate Hill, London, England, are the British Agents to receive subscriptions or the SCIENTIFIC AMERICAN.
See Prospectus on last page. No travelling agents employed.

VOL. VI. NO. 13....[NEW SERIES.]....Eighteenth Year.

NEW YORK, SATURDAY, MARCH 29, 1862.

WHAT CAN BE DONE FOR INVENTORS.—ADVICE GRATIS AND ADVICE FOR PAY.

For the information of our new subscribers, we would state that it is the custom, at the office of this paper, to examine models or drawings and descriptions of alleged new inventions, and to give written or verbal advice as to their patentability, without charge. Persons having made what they consider improvements in any branch of machinery, and contemplate securing the same by Letters Patent, are advised to send a sketch or model of it to this office. An examination will be made and an answer returned by early mail. Through our Branch Office, located directly opposite the Patent Office in Washington, we are enabled to make special examinations into the novelty and patentability of inventions. By having the records of the Patent Office to search, and the models and drawings deposited therein to examine, we are enabled to give an inventor most reliable advice as to the probabilities of his obtaining a patent, and also as to the extent of the claim that it is expedient to set up when the papers for an application are prepared. For this special examination at the Patent Office we make a charge of Five Dollars. It is necessary that a model or drawing and a description of the invention should accompany the remittance.

The publishers of this paper have been engaged in procuring patents for the past sixteen years, during which time they have acted as Attorneys for more than FIFTEEN THOUSAND patentees. Nearly all the patents taken by American citizens in FOREIGN countries are procured through the agency of this office.

Pamphlets of instructions as to the best mode of obtaining patents in this and all foreign countries are furnished free on application.

For further particulars as to what can be done for inventors at this office, see advertisement on another page, or address

MUNN & Co.,
No. 37 Park-row, New York.

OUR NAVY—WHO IS TO BLAME?

“What is the use in complaining now of the imbecility of the Navy Department?” is the enquiry which escapes the lips of many loyal citizens. It is now too late to save the old frigates *Cumberland* and *Congress* and their brave defenders—then why complain?

We admit that whatever disasters have now befallen us, cannot be remedied; but unless the people stir up the government to new life and energy in conducting naval affairs, little can be expected. The Commodore wants his big decked ship to strut over in maneuvering, and the naval engineers have their heads crammed full of conceited notions of their own wisdom. The Secretary must constantly hear these officers ventilate in his presence their *bilious* notions and it is not strange therefore that he should think that all knowledge on such subjects is necessarily lodged

with them. In their estimation, every man who presumes to suggest a change in the construction of naval vessels is a wild enthusiast and every patient inventor is in their sublimated wisdom a member of a crazy class who think only in the third heavens, and get only one degree downward in their practical results. John Ericsson, with his “Yankee cheese box,” was, at the Brooklyn Navy Yard, considered about “lunatic” when he brought his nondescript craft along side their old wooden-walled frigates, which could not have stood a fight with him fifteen minutes.

Since writing the foregoing we have read an article on our navy from the *Commercial Bulletin* which closes with these remarks:—“The mechanics upon whom the Secretary of the Navy has relied for advice, have uniformly condemned the construction of iron-clad vessels upon scientific grounds, yet the Secretary must bear the odium of their ignorance. The vessels now in the course of construction, were forced upon the Department by Congress in opposition to the desires of the leading naval architects.”

This confirms all that we have uttered on this subject. Who are these “mechanics” and “leading naval architects,” who have been guilty of such ignorance? Are any of them holding office under government—which we suspect? If so let them be discharged at once—they have done mischief enough, and ought to be turned adrift. Secretary Wells knows them, and if he continues them longer in the public service to curse the nation by their ignorance and conceit, the whole blame will properly fall on his shoulders.

THE UNITED STATES AND CANADIAN RECIPROCIITY.—PATENT LAWS.

The Committee on Commerce of the House of Representatives has made an important report on the resolutions passed by the New York Legislature in relation to the treaty, made in 1854, between the United States and Great Britain, commonly known as the Reciprocity Treaty. This report deservedly presents the conduct of Canada in a most unfavorable light. This treaty was formed with the government of Great Britain for the mutual benefit of Canada and the United States, and it went into effect in 1855. Its objects were reciprocal trade between the two countries, and the United States has sacredly maintained its engagements. Canada, however, has not been faithful to the understood objects of that treaty, for since it was formed she has greatly increased her tariff upon most American manufactures. The duties now levied in Canada upon boots and shoes, saddlery, wearing apparel, &c., are a hundred per cent heavier than when the treaty was signed, and on nearly all other American manufactures, such as woolen and cotton goods, hats, household furniture, glass, agricultural implements, tools, firearms, carriages, hardware, india rubber articles, &c., it has been increased to 62½ per cent. In 1860 no less than \$20,365,829 worth of Canadian products were admitted, duty free, into the United States, while only \$7,069,689 worth of American products were admitted duty free into Canada. The Reciprocity Treaty is now a misnomer. Its benefits are nearly all on one side, and no wonder petitions have been pouring in upon Congress for its repeal. No complaints, perhaps, would ever have been made had the benefits of the treaty been even greater than they are in favor of Canada, if she had maintained a sacred compliance with the understood obligations involved in the treaty, but instead of doing this she has raised her tariff almost to a prohibitory standard, and thus she precludes American manufacturers from enjoying benefits in Canada similar to those which the producers of that province enjoy in the United States.

The report states that the one-sided tariff laws of Canada have been enacted against the will of a large majority of the Upper Province, by the influence of Canada East, for the purpose of diverting the trade of the upper lakes through the St. Lawrence instead of the waters of New York. It is justly irritating to American citizens on the border to witness the chief products of Canada admitted duty free under the name of reciprocity into all the ports of the United States, while American manufactures are almost forbidden to enter into Canada.

We have another subject of complaint against Canadian injustice in her patent laws. The subjects of Great Britain can obtain patents in the United States

upon the same terms and conditions required of American citizens, but Canada specifically prohibits the granting of patents to any others than resident subjects who must be the inventors of the articles for which patents are sought. This effectually cuts off American citizens from securing their just rights in Canada.

This policy appears to be based upon the dishonorable idea that Canadian speculators, manufacturers and others may benefit the province by prowling through the United States Patent Office, our machine shops and manufactories, and carry off all the improvements they can find, without paying inventors for their use. And the mean selfishness of this policy is not confined in its action to citizens of the United States, but to Englishmen and Scotchmen residing in the mother country. The Canadian patent law prohibits the granting of patents to inventors who have patented their improvements in Great Britain and America. There is certainly a far higher sense of honor and reciprocal friendship existing between the people of the United States and Great Britain respecting justice to and encouragement of their inventors, than exists between those of Canada and England, although the former is a province of Great Britain. We know there are a number of noble minds in Canada, who lament such selfishness in her legislation, and they have strenuously endeavored to obtain a reform of the patent system in that province, but hitherto they have not been able to control the policy which has prevailed. True reciprocity between the two countries would be alike beneficial to both, but that kind of reciprocity which has prevailed in Canada for the past four years, cannot be practiced upon the United States much longer; and for any retaliatory policy which may be inaugurated, Canada will have herself to blame.

JEALOUSY BETWEEN THE ARMY AND NAVY.

In the remarks of Capt. Ericsson before the New York Chamber of Commerce, in relation to the fight of the *Merrimac* with the *Monitor*, which are published on another page, will be found the statement that the *Monitor* had 50 wrought-iron shot on board, but these were not used because Commander Dahlgren had issued strict orders that the guns should not be loaded with them. Capt. Ericsson expresses the opinion that with these projectiles it would have been easy to sink the *Merrimac*, and probably most engineers will concur in this opinion. There could have been but one ground for prohibiting the use of these shot, and that was the danger of bursting the guns. The guns were cast after the plans of Commander Dahlgren, of the Ordnance Department of the Navy; they were cast solid and then bored. Now, Capt. Rodman, of the Ordnance Department of the Army, has demonstrated, by a series of costly experiments conducted at the national expense, that heavy cannon are far stronger if cast hollow and cooled from the inside by a stream of water passing through the core. Why are not the large guns in the navy cast in this way?

We have heard it frequently asserted that there is a jealousy between the ordnance departments of the army and navy which prevents improvements originating in one service from being adopted in the other, but we have never believed the statements. That the able and accomplished gentlemen who are at the heads of these departments should be influenced by such a boyish spirit is incredible. It is the boast of our people that we are above that prejudice, so common in the world, which prevents one nation from adopting the improvements of another, and we believe this boast has been more common in the army and navy than anywhere else. It cannot be that our officers have sufficient magnanimity or common sense to be ready to introduce any good feature from foreign armies, and yet are guilty of the exceeding littleness of being jealous of each other.

We have no doubt, therefore, that the Ordnance officers, both of the army and navy, are always ready to adopt anything which is a real improvement, from whatever source it may come, and that the reasons why the large cannon for the navy are cast solid are to be sought in the properties of matter and the circumstances of the case; and not in any small jealousies in the hearts of the officers. We have been studying all the reports to learn whether the prohibition extended to the use of solid cast-iron balls as well as wrought.