Scientific American.

ESTABLISHED 1845

MUNN & CO., - - EDITORS AND PROPRIETORS. PUBLISHED WEEKLY AT

No. 361 BROADWAY, - NEW YORK.

TERMS TO SUBSCRIBERS
One copy, one year, for the United States, Canada, or Mexico,
THE SCIENTIFIC AMERICAN PUBLICATIONS.
Scientific American (Established 1845)
The combined subscription rates and rates to foreign countries will be furnished upon application. Remit by postal or express money order, or by bank draft or check.

MUNN & CO., 361 Broadway, corner Franklin Street, New York.

NEW YORK, SATURDAY, JULY 20, 1901.

The Editor is always glad to receive for examination illustrated articles on subjects of timely interest. If the photographs are *sharp*, the articles *short*, and the facts *authentw*, the contributions will receive special attention. Accepted articles will be paid for at regular space rates.

A NEW SCHEME OF TRADE MARK BLACKMAIL. An extraordinary and unusual form of enterprise has recently developed in Cuba owing to the fact that the old Spanish practice as regards Trade Mark registration still exists in that island. In Cuba, as in most of the Spanish-speaking countries, the first registrant of a trade mark becomes the legitimate owner in the eyes of the law, even though he may have appropriated the name or mark from some other source. In the United States it is well known that the rightful owner of a trade mark must be the first originator of the mark, while in most foreign countries the ownership of said mark depends upon the formal act of registration alone and the question as to who is the first originator of the mark is not inquired into. It is possible, however, for merchants who have registered their trade marks in the United States to extend their rights over the foreign possessions of the United States, including Cuba, by simply registering in those countries certified copies of the United States certificate and complying with other formalities, and this may be done for a trifling fee. It is astonishing, however, how very lax our manufacturers and merchants are in regard to this matter and what penalties they have to pay for their ignorance or neglect. It appears that there is in Cuba a small gang of clever "gentlemen" who have determined to profit by the carelessness of American merchants and who make it a practice to register such marks as they think are likely to be extensively used in trade in that country. Several instances have recently come to our notice in which an ounce of prevention would have saved a world of trouble and annoyance. The American merchant has no redress, and when he places his goods on the Cuban market he is politely informed that he is infringing Mr. John Doe's trade mark and is notified to discontinue. He is naturally half amused and nonplussed at Mr. Doe's temerity, but when the Cuban Certificate of Registration is produced showing a facsimile of his mark, the serious nature of his position begins to dawn upon him. What is to be done? He has been guilty of laches and must pay the penalty.

A firm of wholesale drug merchants registered in this country several years ago a trade mark on a particular drug, which has since attained an enormous popularity. No registration was made, however, in the colonial possessions, and one of these "gentlemen" in Cuba, above referred to, foreseeing that this drug would have a large sale in that country, applied for registration of the trade mark under his own name. Before his application was granted, however, the firm in question had applied for registration of its mark, but the application was refused on the ground of anticipation and the registration was granted to the first applicant. As a sequel to this, the firm has been obliged to buy out the successful applicant, paying something between eight hundred and a thousand dollars for the certificate thus fraudulently obtained.

We have repeatedly pointed out in these columns the

remind it of the earlier contests for the "America cup." when the club was accustomed to bring a whole fleet of its yachts to the starting line, and select that yacht which was best suited to the particular kind of weather which was encountered on the morning of the race. For it is a fact that the races thus far sailed between the old champion, "Columbia," and the new boat, "Constitution," have shown that in light winds of from four to five knots strength the "Constitution" is unquestionably superior, while in winds of from seven or eight knots strength and upward the "Columbia" is the faster vessel. In the first race between the two boats, sailed in a good topsail breeze, the "Columbia" beat the "Constitution" by 2 minutes and 10 seconds over a windward and leeward course of 30 miles. In the next race "Constitution" turned the tables by beating "Columbia" by 9 minutes and 49 seconds in a five-knot breeze over a similar course. Then, in a still lighter and very fluky wind, she beat "Columbia" over a triangular course of $3 {\blacksquare}$ miles by 29 minutes and 35 seconds. Three days later, in a seven to ten knot breeze, and over a windward and leeward course of 30 miles, "Columbia" wins by $\mathbf{4}$ minutes and 35 seconds; and on the following day she wins her third race from "Constitution," this time in a strong breeze and over a triangular course, by 1 minute and 40 seconds. Judging from these races it must be admitted that, in the average winds that are encountered over the Sandy Hook course during the month of September, the "Columbia" seems to be a more likely defender than the "Constitution" in her present form. It must be remembered, however, that there are yet two months of tuning-up in store for the new boat, and it is quite possible that the experience which will be gained in the many races and informal trials which she will pass through may bring her up to the point at which she can defeat "Columbia" in any kind of weather.

In the first two races of the Newport series the conditions of wind and sea were the worst possible for a yacht with the flat floor and long overhangs which characterize the "Independence"; and she practically did not figure in the finish of these two trials. In the third race, however, the sea was smoother and the wind had more heart in it, with the result that she turned the outer mark ahead of the "Constitution" and was only beaten 2 minutes and 15 seconds by that yacht over the whole course. In the fourth race she had the misfortune to carry away her topmast, and thus lost the opportunity to show what she could accomplish under the conditions which are supposed to be most favorable for a yacht of her kind. The performance of the "Independence" in the last races shows that she may yet prove herself to be a match for the Herreshoff boats in a strong and steady wind, and on any occasion when the three yachts may meet during the coming season there will be the liveliest kind of interest in the result.

Concurrently with the defeat of the new American Cup defender by the old champion comes the information that, in the course of the sailing trials which are now taking place between the two "Shamrocks," the new boat is beginning to show a decided superiority over the old one, her best performance being a gain of five minutes over "Shamrock I." during a thrash to windward of seven miles in a good topsail breeze. She now seems to be unmistakably superior to windward and a trifle faster down the wind. The significance of these trials depends, of course, upon the question as to whether "Shamrock I." is sailing faster or slower than when she met "Columbia" off Sandy Hook. We are informed by those who are connected with "Shamrock" that her mast has been stepped two feet further forward than it was during the last Cup contests, and that changes have been made in her keel. both modifications having in view the improvement of her windward qualities. As the result of these changes, and the admittedly excellent work which "Shamrock I." has been doing this year, she is estimated to be from 5 to 10 minutes faster over a 30-mile course than she was two years ago. As this is about the time by which she was beaten by "Columbia," it would look as though the new "Shamrock" were going

sufficient number of commissioned officers to command the new ships building. The need for more officers of high standing was never so apparent, and no relief can come from Congress until next winter. Thirty-five vessels of the torpedo-boat and torpedo-boat destroyer types will be ready to be placed in commission this summer, and there are practically no officers available to command them. Secretary Long has the power to make use of officers of the navy on the retired list, but very few of these are serviceable for active duties, and little relief can be expected from that quarter. The attempt to put young naval cadets in command of costly and delicate torpedo-boats might produce serious results. Yet to lay these new boats aside until Congress finds the time and pleasure to provide adequate officers for them means vexatious interference with the navy's contemplated plan of establishing a coast service of torpedo-boat stations.

Before the end of the summer the navy will have a numerous torpedo flotilla, and the board of officers appointed to decide upon a scheme of coast protection with boats of this class has practically determined upon establishing a series of torpedo-boat stations extending from Portland, Me., to Pensacola, Fla. The three main stations will first be established at New London, Conn., Port Royal, S. C., and Pensacola, Fla., with sub-stations between these points. These substations would be selected for the purpose of affording the torpedo-boats good harbors from which they could operate. But until Congress makes definite provision for increasing the commissioned personnel of the navy commensurate with its expansion in ships, it will be impossible to carry these plans into action.

Even the summer course of study at the War College at Newport and at the torpedo stations will be seriously handicapped this season by the lack of officers. The War College and summer course of instruction opened in June, and the need of instructing more officers in the handling of torpedoes and in electricity is urgently felt. This summer at the torpedo stations the officers will be given, moreover, a thorough course in the principles of wireless telegraphy. The rapid improvement in wireless telegraphy, and its adoption by several of the European countries on their naval ships, makes it advisable that our officers should become thoroughly familiar with the system. The summer experiments with torpedoes and torpedo-craft have always been among the most interesting and instructive that the navy has undertaken, and the coming summer maneuvers would prove of special importance because of the larger flotilla ready for service, provided sufficient commissioned officers could be mustered into the service to command the new vessels.

The construction of all types of war ships now in the course of building has progressed so far that the need of more officers will steadily increase during the next year. The sixteen torpedo-boat destroyers are all more than 50 per cent completed, and the majority are nearly ready for their final trial, while eleven of the fourteen torpedo-boats are practically ready to be placed in commission. The seven submarine torpedo boats are also progressing. Of the battleships building, the "Illinois" is 92 per cent completed, the "Maine" 50 per cent, the "Ohio" 42 per cent, and the "Missouri" 32 per cent. The new protected cruisers are also being rapidly completed, with the "Denver" about 45 per cent, the "Chattanooga" 29 per cent, the "Des Moines" 28 per cent, the "Galveston" 22 per cent, and the "Tacoma" 18 per cent completed. Most of the new monitors are more than half finished. The "Nevada" is 86 per cent completed, the "Wyoming" 73 per cent, the "Florida" 65 per cent, and the "Arkansas" 54 per cent. The armored cruisers "Pennsylvania," "West Virginia," "California," "Colorado," "Maryland," and "South Dakota," with a speed of twenty-two knots, have not yet been begun. Neither have the new battleships, the "Virginia," "Nebraska," "Georgia," "New Jersey," and "Rhode Island." nor the recently authorized protected cruisers "St. Louis," "Milwaukee," and "Charleston." Nevertheless, there is a sufficient fleet of new ships soon to be commissioned to make the demand upon the Department for more officers so great that relief must come from some quarter before long. This problem handicaps the Navy Department to-day quite seriously, and even threatens the efficiency of the Naval Academy. The superintendent of this institution has complained of the lack of sufficient officers for duty there to supervise the drills, technical instruction, and general discipline of the cadets, and the Navy Department has recognized the justness of the complaint: but it is unable to afford much relief. Thus it is that Congress must at its reassembling in the fall make provision for more officers if it expects to reap the full rewards of its recent movement to extend the power and usefulness of the United States navy. While crews for new vessels may soon be recruited from practically raw material, competent officers cannot be manufactured in a few months but must be educated and trained through a series of years.

necessity of attending to these formal details which are so important in protecting trade rights in most foreign countries, and the foreign commerce of the United States is becoming so extensive that these matters should not be neglected or forgotten. We are happy to say that many of the great commercial houses are fully awake to the importance of protecting their interests in this matter, and the danger of neglect is being happily more and more understood.

THE STRUGGLE OF THE CUP CHAMPIONS.

The races which have already been sailed between the "Columbia," the "Constitution" and the "Independence" have given a very clear line on the respective merits of the yachts. As far as the two Herreshoff boats are concerned (the "Independence," unfortunately, being at the present writing not a candidate for cup defending honors), the New York Yacht Club is confronted by a dilemma, which must forcibly to prove a very active competitor for the Cup. Until "Constitution" has shown her undoubted superiority to "Columbia" under any possible conditions of weather, it is probable that not even the New York Yacht Club itself will look upon the America Cup as being, in the current phraseology of the day, "safe." It is probable, however, that as the season advances there will be a steady improvement in the new yacht, and that when the final Cup trials are sailed she will prove to be a winner by margins which will depend merely upon the weather conditions under which the course is sailed.

_____**___**

A NAVAL PROBLEM.

The rapid growth of our navy has naturally created many new problems, which the Department has solved with more or less success; but probably the most pressing question for solution in the immediate future is that of obtaining a

Likewise the need of more well trained engineers and officers in the engine-room is pressing hard for solution. The present situation in this respect is so