Scientific American.

ESTABLISHED 1845.

MUNN & CO., Editors and Proprietors.

PUBLISHED WEEKLY AT

No. 361 BROADWAY, NEW YORK.

O. D. MUNN. A. E. BEACH.

TERMS FOR THE SCIENTIFIC AMERICAN.

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The Scientific American Supplement

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

NEW YORK, SATURDAY, AUGUST 25, 1888.

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SCIENTIFIC AMERICAN SUPPLEMENT

No. 660.

For the Week Ending August 25, 1888.

Price 10 cents. For sale by all newsdealers.

SOME NEW FRENCH TORPEDO BOATS.

In the construction of the new French torpedo boats the principal faults of the earlier types seem to have been corrected in large degree. They have stability as well as speed, and are said to be of much simpler design, having more room below for the crew, more air, and less vibration, though, of course, there must always be a deal of this where powerful engines are worked within a light shell. L'Agile and l'Audacieux, fitted at La Seyne, near Toulon, under Admiral Krantz, have been maneuvering in the Channel, in rough water, too, and gave a fine account of themselves, making twenty knots an hour on an average of four hours' work under unfavorable as well as favorable conditions; running with and against the current, the wind being fairly abeam for the most part, and consequently a disadvantage. Each is 42 meters in extreme length, and good sized boats, intended, as may be guessed, for service on the open sea, outside roads and harbors; fitted each with three torpedoes, to be fired from submarine chambers at close range. Each has a battery of machine guns, with protective shields, thus enabling the crew to return the fire from the deck and tops of an enemy's ship against which they may be advancing.

The Coureur, recently tried at Cherbourg, was constructed in England after French designs and for the French navy. Under conditions not particularly favorable she made 26 knots an hour, and, remembering that her engines are not yet worn smooth by attrition, this must be regarded as an astonishing rate. The Coureur has two lance torpedoes to be fired in the subcurrent when the ship is brought up close aboard an enemy. The torpedo cruiser Wattignies, named after the great Carnot and now fairly complete, will soon be tried; great things being expected of her. With engines of 4,000 H. P., she is looked to to surpass all previous records of sea-going torpedo boats. She is built on the same lines as the Condor, being of 1,273 tons displacement, and is expected to keep out into the open sea; guarding the approaches to a port or intercepting an enemy even before he makes the land. She has light sides but heavily protected bows and deck to enable her to resist a stray shot as she comes up to deliver her torpedo—a formidable cigar-shaped torpedo; it is as sharp as an arrow, capable of carrying a large explosive force, and having a second and even a third one in reserve should the first not give the enemy his *coup de grace*. As may have been supposed, the Wattignies is a double-ender, having only to reverse her engines after delivering her blow. At the port of Lorient, two torpedo dispatch boats are being built, after much modified plans of the Bombe, which is of 321 tons, and, as will be remembered, capable of excellent work as a torpedo catcher, as was shown in last year's trials at Boulogne-sur-Mer.

COLLISION BETWEEN OCEAN STEAMERS.

Since the collision between the Celtic and Britannic, which was described at the time in these columns, no marine disaster has occurred of equal importance to that which we are now called upon to chronicle. Early in the morning of August 14, off Sable Island near Newfoundland, two steamers of the Thingvalla line plying between New York, Stettin, Christiania, and Copenhagen, collided. One had left New York three days before, the other was bound to the same port. The story of the occurrence recalls the Celtic-Britannic collision. Both ships were of the same line. Neither steamer saw the other until they were close together. Had they continued on a straight course, or had they both steered to starboard, they might have escaped. But they seemed to have put their helms in opposite directions, and the effect was that the Thingvalla headed for the Geiser. The engines were backed on both ships, but they could not check the headway which brought them together. The Thingvalla struck the Geiser almost amidships, cutting deeply into her side, and crushing in her own bow. As she backed away, the Geiser's crew made frantic efforts to lower the boats and set free a life raft. The boat capsized or drifted away, and the mast falling on the life raft destroyed it and crushed some of the men about it. In about five minutes the Geiser sank. A few of her passengers and crew were rescued, but about one hundred souls were lost.

The Thingvalla, whose boats had saved the few survivors, remained afloat. Her forward bulkhead kept out the water. She was far from secure, and her captain signaled for help. Some hours after the disaster the steamer Wieland answered the signals and took off about five hundred people, bringing them along with the news of the disaster to this port. The Thingvalla in charge of a small crew was headed to the west, and will probably make Halifax or St. Johns, N. F., as a harbor.

The scene on board of the Geiser is described as dreadful. A great hole was made in her deck, and the frightened passengers came rushing forward with such impetuosity that some of them plunged through it into the water. The escape of the second officer was a remarkable one. He was in his berth at the time, and the bow of the Thingvalla crushed through the ship's side, almost touching him. Her anchor chain, as her bow entered his stateroom, swung near him. With extraordinary presence of mind he grasped its links, and as the Thingvalla backed away she carried him with her through the Geiser's side. He climbed up the chain to her deck, and from that point saw the last struggles of his own ship.

A court of inquiry will be held, and efforts will be made to determine the reasons of the occurrence, and to fix the blame where it belongs. But little good will be done by this. The lesson of the disaster is one that has often been given, and as often has been practically unheeded. With such proved liability to collision, the ocean liners should be provided with more efficient apparatus, as well for the prevention of accidents as for the saving of life when the inevitable collision or sinking occurs.

Common boats proved, as they repeatedly have before, of little use. The one life raft of which mention was made was destroyed. The life preservers, of which it is said there were three for every soul on board, proved useless, as the panic-stricken passengers rushed on deck without them. The reversal of the engines of the ships was also useless, as their headway was practically unchecked. The few signals that were sounded before the accident were fruitless. Had the ships been supplied with marine brakes their progress would have been so quickly arrested that the disaster might have been averted.

As regards ocean traffic, the need of the day is evident. The management of the transatlantic lines have every motive to adopt improvements in life-saving devices, in improved signaling, and in aids to navigation. The question of expense should be secondary. The interruption to business and the injury to reputation that follow these disasters represent a loss that insurance does not cover. It seems as if due efforts in the direction of insuring safety at sea had not been made in the present instance, when the appliances of the sinking ship did nothing worthy of mention to save the life of her crew and passengers. The efforts of inventors to cover this ground should receive more than the usual encouragement. It is a question of saving life as well as property, and philanthropy and business in this are hand in hand. A ship should be able to define her course and rate of progress: she should be able to stop before a mile of water has been covered. Unsinkable and indestructible rafts should be on her deck, and life preservers should be easily adjustable and accessible.

SURE DEATH TO BUFFALO MOTHS.

A lady correspondent sends us the following: Take strips of red or blue flannel (as these colors are particularly attractive to them), dip in liquid arsenic and lay around the edges of carpets, or wherever the pests are troublesome. They will soon eat a desired amount and collapse, to the entire satisfaction of the housewife, without the least injury to her carpets.

The Temperature of Our Food and Drinks.

Of all nations, the American is the most in the habit of taking his food and drink at a temperature as remote as possible from that of the body. Ice-water drinking is a national habit, and ice cream is a national dish, predilection for which runs through all classes of society, and becomes a binding force in social and, we might add, scientific and religious gatherings. Americans should, therefore, take an interest in the experimental researches on the temperature of our food and drink made by certain foreign savants whose names are, as is usual, hyperplasic with consonants just in proportion to the rigidity of their science and the seriousness of their inquiries.

The temperature of our food and drinks was treated of by Von Spath and Kostjurin a year ago (*Munchener Medic. Wochenschr.*, 1886, p. 533), and more recently by Uffelmann, of Rostock (*Ibid.*, 1887, p. 999).

Professor Uffelmann reviews the work of his predecessors, and draws his conclusions partly from this and partly from his own experiments. They bear first upon the temperature of ingesta in health, and the rules laid down are:

1. That, in general, a temperature of food and drink which approaches that of the blood is most healthful. For nurslings such temperature is essential.

2. For quenching the thirst, the best temperature is from 50° F. to 68° F. The favorite American temperature is, as is well known, 32° F., and an issue is raised at once between Professor Uffelmann and the American nation.

3. The ingestion of very hot or very cold food or drink in health has a damaging effect, which is increased just in proportion to the rapidity with which the hot or cold substance is taken. Hence the gulping down of ice water or hot coffee, etc., means eventually, according to the light we are quoting, a mere ventral damnation. If a person takes a drink for the purpose of warming himself, as in cold weather, he can accomplish this by having the drink at a temperature of 116° to 120° F.

4. The use of very hot and cold substances, following or alternating, is injurious to the teeth. But the