## Scientific American.

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Composition of the Oxide.-By H. N. MORSE and W. M. BURTON. -A full account of methods and manipulations for this determination, remarkable for their simplicity and accuracy.-3 illustra-

nect the Crimean Peninsula with the main portions of Russia..... The Improvement of New York Harbor.-An account of the dredging operations now in progress, and the probable outcome of

- DERSON, M.D.-A detailed account of the mummies recently found in the Sierra Madre Mountains, California, and of their relations
- igneous rocks considered.-Lava and trap, and the agencies of their formation.-8 illustrations 10547 Mineral Resources of the United States-Calendar Year 1887.-A summary of the work of the U.S. Dept. of the Interior, including a review of the geological wealth and production of this country

SOME NEW FRENCH TORPEDO BOATS. In the construction of the new French torpedo boats less vibration, though, of course, there must always be struggles of his own ship. a deal of this where powerful engines are worked within A court of inquiry will be held, and efforts will be 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 ship against which they may be advancing.

The Coureur, recently tried at Cherbourg, was conthat her engines are not yet worn smooth by attrition, been averted. 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 ender, having only to reverse her engines after deliver- and accessible. ing 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 Boulognesur-Mer.

## COLLISION BETWEEN OCEAN STEAMERS.

Since the collision between the Celtic and Britannic. wife, without the least injury to her carpets. TABLE OF CONTENTS OF which was described at the time in these columns, no The Temperature of Our Food and Drinks. marine disaster has occurred of equal importance to SCIENTIFIC AMERICAN SUPPLEMENT that which we are now called upon to chronicle. Early in the morning of August 14, off Sable Island near No. 660. Newfoundland, two steamers of the Thingvalla line plying between New York, Stettin, Christiania, and is a national habit, and ice cream is a national dish, For the Week Ending August 25, 1888. Copenhagen, collided. One had left New York three Price 10 cents. For sale by all newsdealers days before, the other was bound to the same port. PAGE The story of the occurrence recalls the Celtic-Britannic 1. CHEMISTRY .- The Atomic Weight of Zinc as Determined by the 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 . 10545 tions ..... both steered to starboard, they might have escaped. II. CIVIL ENGINEERING .- Perekop Canal.-The new work to con-.. 10542 But they seemed to have put their helius in opposite proportion to the rigidity of their science and the directions, and the effect was that the Thingvalla head-: seriousness of their inquiries. ed for the Geiser. 'The engines were backed on both ! the work.-5 illustrations ...... 10540 ships, but they could not check the headway which of by Von Spath and Kostjurin a year ago (Munche-III. ETHNOLOGY.-The Californian Mummies.--By WINSLOW AND brought them together. The Thingvalla struck the by Uffelmann, of Rostock (Ibid., 1887, p. 999). Geiser almost amidships, cutting deeply into her side, to existing races. .. 10548 and crushing in her own bow. As she backed away, the IV. GEOLOGY.-Geology.-By ARCHIBALD GEIKIE.-The subject of it and crushed some of the men about it. In about laid down are: V. MECHANICAL ENGINEERING .- New Post Office Building, Paris.—The system of elevators used in the new post office in Paris illustrated and described, with elevation of the building.—2 were lost. For nurslings such temperature is essential. The Thingvalla, whose boats had saved the few surillustrations... 10542 The Prall System of Distributing Heat and Power from Central Stations.-By E. D. MEIER.-A system of distribution of hot water under high pressure, and its practical test and operation in Bos ton. Warnes' Hay and Straw Press,-A steel framed screw press of the steamer Wieland answered the signals and took off can nation. great power and simplicity of construction.--1 illustration...... 10542 about five hundred people, bringing them along with: VI. MISCELLANEOUS-Preparation for Speech Making-A most graphic and practical paper advocating preparation for oratorical efforts, with accounts of great speakers and their methods...... 10544 VII. NAVAL ENGINEERING AND TACTICS.-The Defeat of the harbor. Armada in 1588.—A vivid account of the naval battle just cele brated in England, with personal notes, and accounts of the ships. –3 illustrations ..... The French Mediterranean Squadron.—One of the phases of the . 10536 recent maneuvers described and illustrated, fighting with machine guns in the main top of a man of war.-1 illustration...... 10536 the water. The escape of the second officer was a reto 120° F. VIII. ORDNANCE AND FORTIFICATION.-French Disappearing -The newsystem of fortification, offering almost absolute markable one. He was in his berth at the time, and

side, almost touching him. Her anchor chain, as her bow entered his stateroom, swung near him. With the principal faults of the earlier types seem to have extraordinary presence of mind he grasped its links, been corrected in large degree. They have stability as and as the Thingvalla backed away she carried him well as speed, and are said to be of much simpler design, with her through the Geiser's side. He climbed up the having more room below for the crew, more air, and chain to her deck, and from that point saw the last

a light shell. L'Agile and l'Audacieux, fitted at La made to determine the reasons of the occurrence, and Seyne, near Toulon, under Admiral Krantz, have been to fix the blame where it belongs. But little good will maneuvering in the Channel, in rough water, too, and 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 to return the fire from the deck and tops of an enemy's 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 bestructed in England after French designs and for the fore the accident were fruitless. Had the ships been French navy. Under conditions not particularly fav-: supplied with marine brakes their progress would have orable she made 26 knots an hour, and, remembering | been so quickly arrested that the disaster might have

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 enemy. The torpedo cruiser Wattignies, named after devices, in improved signaling, and in aids to navigathe great Carnot and now fairly complete, will tion. The question of expense should be secondary. soon be tried; great things being expected of The interruption to business and the injury to reputaher. With engines of 4,000 H. P., she is looked tion that follow these disasters represent a loss that to to surpass all previous records of sea-going insurance does not cover. It seems as if due efforts in torpedo boats. She is built on the same lines as the direction of insuring safety at sea had not been the Condor, being of 1,273 tons displacement, and is made in the present instance, when the appliances of expected to keep out into the open sea; guarding the thesinking ship did nothing worthy of mention to save approaches to a port or intercepting an enemy even the life of her crew and passengers. The efforts of inbefore he makes the land. She has light sides but ventors to cover this ground should receive more than heavily protected bows and deck to enable her to resist the usual encouragement. It is a question of saving a stray shot as she comes up to deliver her torpedo-a life as well as property, and philanthropy and business formidable cigar-shaped torpedo; it is as sharp as an in this are hand in hand. A ship should be able to dearrow, capable of carrying a large explosive force, and fine her course and rate of progress: she should be able having a second and even a third one in reserve should to stop before a mile of water has been covered. Unthe first not give the enemy his coupde grace. As sinkable and indestructible rafts should be on her may have been supposed, the Wattignies is a double- deck, and life preservers should be easily adjustable

## 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 arsenie 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 house-

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 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

The temperature of our food and drinks was treated ner Medic. Wochenschr., 1886, p. 533), and more recently

Professor Uffelmann reviews the work of his prede-Geiser's crew made frantic efforts to lower the boats cessors, and draws his conclusions partly from this and and set free a life raft. The boat capsized or drifted partly from his own experiments. They bear first upon away, and the mast falling on the life raft destroyed the temperature of ingesta in health, and the rules five minutes the Geiser sank A few of her passengers 1. That, in general, a temperature of food and drink and crew were rescued, but about one hundred sculs which approaches that of the blood is most healthful. 2. For quenching the thirst, the best temperature is vivors, remained afloat. Her forward bulkhead kept from 50° F. to 68° F. The favorite American temperaout the water. She was far from secure, and her cap- ture is, as is well known, 32° F., and an issue is raised tain signaled for help. Some hours after the disaster at once between Professor Uffelmann and the Ameri-3. The ingestion of very hot or very cold food or the news of the disaster to this port. The Thingvalla | drink in health has a damaging effect, which is inin charge of a small erew was headed to the west, and creased just in proportion to the rapidity with which will probably make Halifax or St. Johns, N. F., as a the hot or cold substance is taken. Hence the gulping down of ice water or hot coffee, etc., means eventually, The scene on board of the Geiser is described as according to the light we are quoting, a mere ventral dreadful. A great hole was made in her deck, and the damnation. If a person takes a drink for the purpose frightened passengers came rushing forward with such of warming himself, as in cold weather, he can accomimpetuosity that some of them plunged through it into plish this by having the drink at a temperature of 116° 4. The use of very hot and cold substances, follow-

security to the occupants, how the plates are tempered, and the full description of the mechanical arrangements.-2 illustrations.. 10537

the bow of the Thingvalla crushed through the ship's ing or alternating, is injurious to the teeth. But the