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ANOTHER COLLISION BETWEEN OCEAN STEAMERS.

On the 10th inst., at noon, a collision took place near Sandy Hook, the entrance to New York harbor, between the large Cunard steamer Umbria, outward bound, and the Iberia, a smaller trading steamer, inward bound. The accident took place at noon, during a fog. The Umbria struck and completely cut off the stern part of the Iberia; but the latter continued to float for nearly thirty hours, and then sank. No effort appears to have been made to tow the wreck into port, although there was ample time to do so. No lives were lost. The blame is charged upon the Umbria, owing to her dangerous speed at the time—17 knots per hour.

Accidents of this kind are of frequent occurrence. They seem to emphasize the importance of adopting proper means for their prevention. These means exist, and their employment should be made compulsory by law, if owners will not voluntarily put them into use.

In our paper for Sept. 14, 1886, we gave illustrations of the steamer Florence, then as now engaged in navigation in this harbor. The boat is provided with the marine brake, a device consisting of a couple of extra rudders hinged so as to fold under the stern, but capable of instantaneous action, and opening by the mere pull of a trigger in the pilot house. These brakes have a most powerful effect. In the trials made by the government engineers, they certified that the boat when running at full speed was stopped in 22 seconds, and in a space of less than her length. When the engine was backed at the same time the brakes were sprung, the vessel was stopped within a distance of 35 feet, and made to move back, all within the time of 12 seconds.

In view of remarkable facts like this, it would seem to be manifestly to the public interest that thorough trials of these devices should be made on some of our war vessels. We hope the matter will receive attention when Congress meets, and that a suitable appropriation will be made. The subject is one of great importance. Hardly a collision can be named but might have been prevented had the apparatus been in use. A glance at the engraving on our present first page shows what every steamer is liable to, by collision, which ordinarily sends them to the bottom.

TORPEDO AND OTHER FAST SHIPS.

In the SCIENTIFIC AMERICAN of November 3 last we gave illustrations of the new American torpedo boat Vesuvius, which carries the novel pneumatic guns and discharges torpedoes loaded with nitro-glycerine. We learn that on a recent trial trip the Vesuvius attained a speed of 27 miles per hour. If this is so, our navy department is at last to be congratulated in soon possessing one vessel, small though it is, capable of steaming about as fast as any other in the world. A new torpedo boat, called the Empong, built in England, has lately been delivered to the Dutch government. 1,200 h. p. Speed on trial trip, 27 1/2 miles per hour. Built by Yarrow & Co., and provided with Yarrow's water-tight ash pan arrangement, which may be briefly described as follows:

In torpedo boats, owing to their narrowness of beam in order to secure speed, it is essential that all the weights be kept as low as possible to insure stability, and for this reason the grate must of necessity be very close to the bottom of the hull; consequently a very small amount of water entering the stokehole, from damage through shot or accident, is enough to extinguish the fire, thus leaving the boat helpless. By the above system the entire fire box and furnace is inclosed, as it were, in a complete envelope or casing, the upper part of which extends well above the water line, and all the air required for combustion has to pass over the top edges of this casing before finding access to the furnace. It will be evident that, if the water gain access to the boiler compartment, and if the pumping arrangements fail, or are not sufficiently powerful to keep it under, it will rise inside the boat to the same level as the surrounding water, but in spite of this the air supply to the furnace will be free, and the fire can be maintained burning. It has been found by actual experiment that in such a contingency, and after the firemen have been driven out of the stokehole, the boat will maintain its steaming powers for a run of four hours, at an eleven knot speed, which might enable it either to reach a port or elude capture by the enemy.

Our new ships of war now in process of construction are being built, for the most part, after English plans and drawings, not of the most recent date. Their speed will be considerably less than some of the latest German and French vessels. This is to be regretted, as it is now generally admitted in naval circles that high speed, the highest attainable, is the first requisite for the modern man-of-war. The ship must be equal in speed to anything that can be brought against her, otherwise the adversary has a striking advantage.

As an example, take the armored turret cruiser Maine, the construction of which has been commenced at the Navy Yard in Brooklyn. This ship is to be of 6,650 tons, 310 ft. long, 57 ft. beam, 8,750 horse power, calculated speed 19 1/2 miles per hour. How slow and old-fashioned this boat is likely to be will be under-

stood in view of the fact that the Germans already have afloat such vessels as the armored cruiser Greif, 2,000 tons, 5,400 horse power, speed 23 knots, or almost 27 miles per hour.

Domestic Animals as Vehicles of Infection.

It is reported from Chicago that a by no means inconsiderable local outbreak of scarlatina has been brought about by a cat, which acted as the means of conveying the infection. It has long been known that almost anything which can serve as a vehicle for carrying the desquamating epithelium of scarlatina patients may act as an intermediary between sick and healthy; and although recent study of the specific fevers tends to show that the period in which these diseases are most likely to be communicated is the acute stage rather than that of convalescence, it must be admitted that some of these diseases can be conveyed by such methods as the reception and subsequent discharge of infectious material from the coat of a cat nursed by patients. But that anything like an outbreak of scarlatina should be directly brought about by such a cause is contrary to experience, which goes to show that this disease is not often communicated from one person to another through the agency of a third party who is free from the disease; and it is far more probable that any extension of scarlatina in the case referred to was due to infection contracted directly from the first person to whom the disease was conveyed. But our main object in referring to the incident is to draw attention to the fact that the domestic animals do constitute a distinct danger to man, in so far as some of the specific infectious fevers are concerned. As yet we know nothing about any disease in the cat which can lead to scarlatina in the human subject. But it is probably highly different as regards diphtheria, for a number of instances have been placed on record in which, while diphtheria has been prevalent in the human subject, a similar if not the same disease has been ascertained to exist among cats, and it is certain that in some prevalences there has been close association between the human sick and the affected animals.

We are at present only just on the borderland of a wide subject—namely, that of the relationship of diseases of the lower animals to diseases in man; and we may possibly learn hereafter that, apart from the origin of infective diseases in the lower animals, the latter may serve as media for communicating infections to an extent as yet not understood. Certain it is that the manner in which dogs, cats, and other domestic animals are at times fondled by those to whom they belong, and to whom they become attached, is not free from risk.—Lancet.

The New War Ship Maine.

At the Navy Yard, Brooklyn, N. Y., work has been commenced on the construction of the twin-screw armored turret cruiser Maine, and immense amounts of material and plant have been delivered. This vessel, the largest ever built at the Brooklyn yard, will be of 6 650 tons, and in general appearance will resemble the Brazilian cruiser Riachuelo, but will be larger and more fully equipped. The ship was designed by Commodore T. D. Wilson, Chief of the Bureau of Construction and Repair, and his plans were accepted after considerable discussion and investigation. The Maine will be 310 ft. long between perpendiculars, 57 ft. beam, 21 1/2 ft. draught, built of steel, with cast steel stem, stern, post and rudder frame. There will be 174 water-tight compartments, and even should the extremities above the under-water steel protective deck be shot through and through, the remaining buoyancy would be sufficient to insure floating and fighting capability. The armor belt will be 11 in. thick. The main battery will consist of four 10 in. guns, throwing 500 lb. projectiles, mounted in pairs, in turrets 10 1/2 in. thick, also six 6 in. rifled guns. The guns can be fired directly ahead and astern, and the latest appliances for handling them will be fitted. The secondary battery consists of twenty-one Hotchkiss rapid-firing and revolving guns and four Gatling guns, grouped to secure a heavy concentrated fire. There are also to be four torpedo launching tubes above water and three below, but the type of torpedo is not yet determined upon. The engines will be of 8,750 horse power, capable of driving her at seventeen knots an hour, and she will have great coal-carrying capacity. She will be bark-rigged, with armored tops, and will carry a complement of 30 officers and 444 men.

Naval Volunteer Defense.

A public meeting was lately held at Brighton, presided over by the mayor, in support of the Naval Volunteer Defense Association. Earl Cowper, as president of the association, gave an address, in which he explained its objects in detail. He said it was started three years ago, when there were grave fears of the possibility of a war with Russia, and their object was to organize and encourage local volunteer efforts in the defense of the coasts. If in the time of war privateering were to be again introduced, the consequence would be most serious. The best means of defense was to have quick-firing guns on fast steamers.