

THE STEAMSHIP "MASSACHUSETTS" ON AND OFF THE ROCKS.

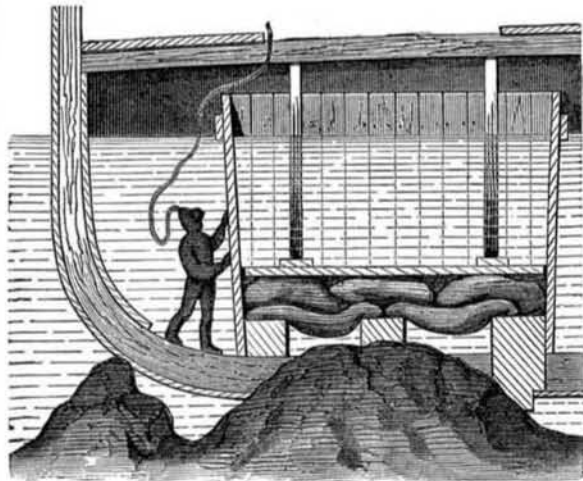
The Massachusetts, a new steamer plying on Long Island Sound between New York and Providence, recently ran upon a rocky beach, and was rescued from her perilous position by the exercise of good judgment and considerable engineering skill. The casualty referred to occurred near Rocky Point, L. I., at midnight on October 5th, when, owing to a strong current in shore during a heavy rain storm, the Massachusetts drifted broadside on the beach, which was strewn with large boulders, and became fixed in a position parallel with her course, her starboard side being towards the shore. The passengers were at once landed without accident. Captain Jones of the steamer and Captain Babcock, the President of the Providence and Stonington Steamship Company, Mr. Henry Steers, the shipbuilder, and Captain Merritt with his crew, of the Coast Wrecking Company, removed the cargo, and by the aid of divers located the leaks. The most serious injury was on the bottom, 48 feet from the stern post, a little towards the starboard side, where the planking, main keelson, and frames were injured and a hole averaging four feet in diameter was made. The stern was also damaged. Two or three leaks were stopped with mattresses and blankets, but the larger aperture required other expedients in order to expel the water and close the opening. Fig. 1 shows the position and nature of this opening, and also of the scratches and indentations on the planking.

Mattresses were forced into the hole, and a wooden cofferdam was built around it in the following manner: By means of adjustable templates, divers took the angles of the hull and keelsons, and the ends of boards 1 1/2 inch thick were shaped to correspond with the angles obtained. It was then comparatively easy work to build the cofferdam, which is represented at Fig. 2.

As the ends of the different boards were properly shaped they were placed in position and secured to the keelsons, until the cofferdam assumed much the shape represented. At the top it was of a trapezoidal figure; 11 feet high, 8 feet wide aft, and 10 feet forward. A flooring was then put in at the bottom of this cofferdam over the inserted mattresses, and held down by shores. The cofferdam consisted of boards 1 1/2 inch thick, covered with canvas and another course of boards placed outside, so as to break joints, the whole held together by upper and lower framework. This completed, and the smaller leaks stopped, a gang of men started the wrecking pumps. Holes were made on the main deck opposite the passenger gangway and cargo hatchways, and the suction pipes inserted. There were nine steam pumps in all; five pumps placed forward and four aft. The ship was relieved in three hours and floated at high water.

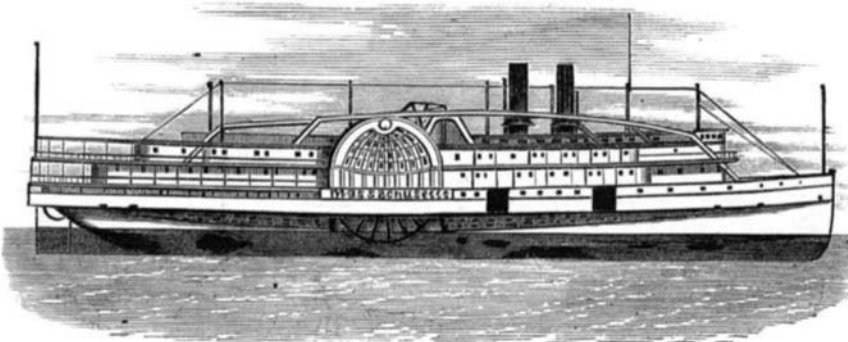
Two pontoons, about 15 feet long and 10 feet wide, were placed on the port side abaft the paddlewheel and under the guard, in order to straighten her up and ease the list. Two steamers then hauled her off. While the ship was being cleared of water, steam was got up in two boilers, which enabled the Massachusetts to leave her rocky bed and to proceed to the New York floating dry dock under her own steam, where, at the time of writing, she is, and where the damage done has been fully ascertained and examined, and the necessary repairs are being made. The illustration represents the Massachusetts in this dry dock, and ship-carpenters repairing the extensive break already described. As a

matter of course the copper has all been removed from her bottom, and she is receiving a thorough overhauling. The scratched and indented planking has been cut out, new planking and extra pinning put in, new frames of the strongest description have been added, and she will be recaulked and recoppered from stem to stern.



THE COFFER DAM.—Fig. 2.

The injuries to the ship are not so serious as was at first supposed and stated. With the exception of the rent at the stern, the damage was confined to the planking and the rubbing away of some of the forward frames. These will be thoroughly renovated. Four of the six boilers were shifted from their settings, and the main copper steam pipe was cracked for a length of 24 inches on both sides, but the engine itself is in excellent condition. The repairs to the hull



THE STEAMER MASSACHUSETTS.—Fig. 3.

will probably not exceed \$30,000. The Massachusetts is undoubtedly a very strong and substantial vessel, otherwise her position on the beach, where she rested and chafed for two weeks, would have strained if not broken her.

The dimensions of the vessel are as follows: Length, water line, 325 feet; beam, 46 feet; beam, over all, 76 feet; depth of hold, 16 feet 4 inches.

Progress of the East River Bridge.

Twenty strands of the main cables are now finished and in position. Work on the approaches is going forward rapidly. On the Brooklyn side the second pier has been completed, and in a few days the men will have finished

pier No. 4. On the New York side, one block of buildings on Pearl street between Cliff street and the Harper building, has been demolished, while the interior of the buildings on the opposite side have met with the same fate. As the outer walls of these buildings will not be in the way for some time, they have been left standing.

The Danger of Old Tobacco Pipes.

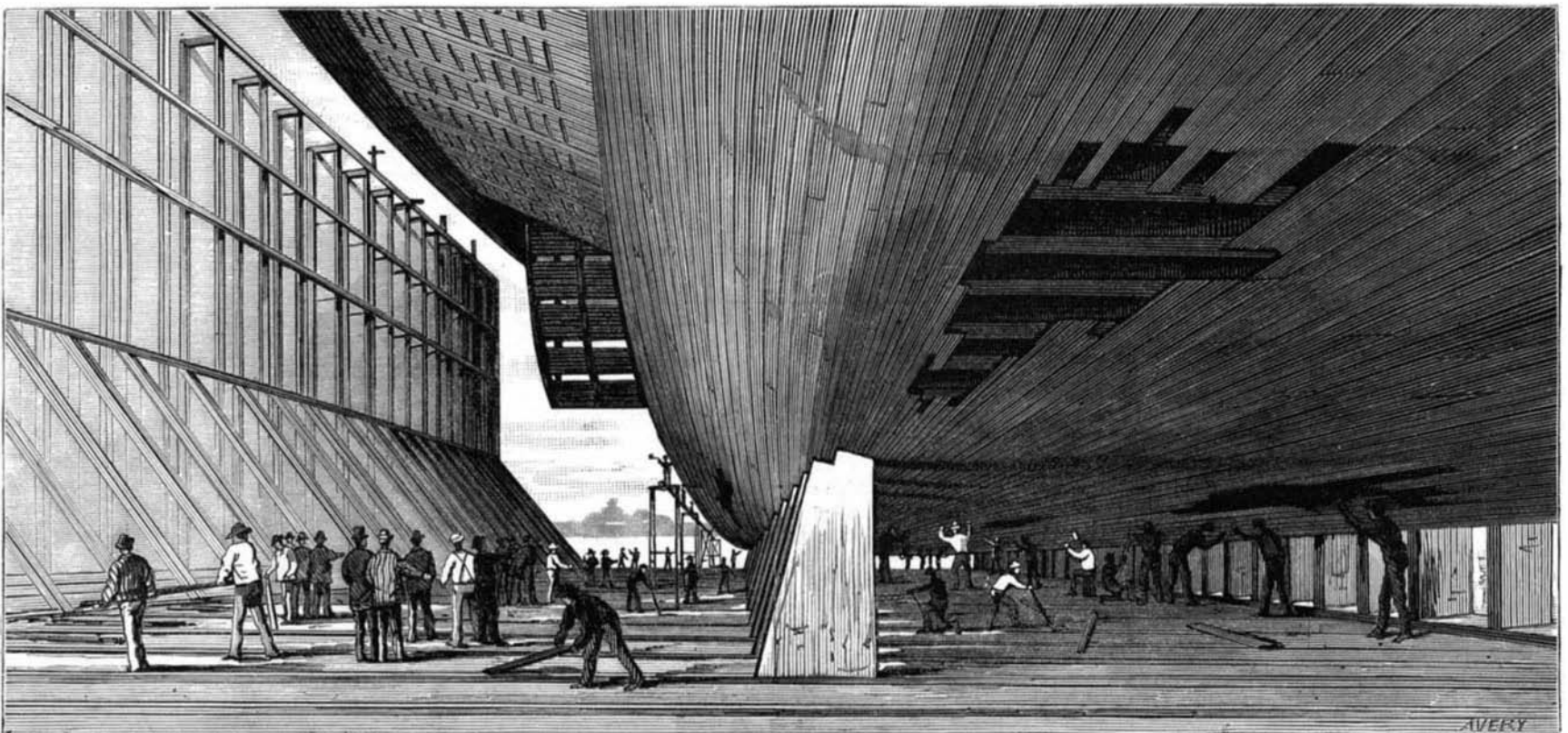
A case of so-called "nicotine" poisoning has recently happened in England which is attracting considerable attention. A child of about seven years of age amused himself by blowing soap bubbles in an old wooden pipe which had become foul by long usage. Shortly after, vomiting and convulsions ensued and the child died. The circumstance was put down as a case of "nicotine poisoning," but the *Chemist and Druggist* very cogently points out the impossibility of such being true, inasmuch as nicotine only exists in the unburnt leaf or juice, and the heat of combustion splits it up into other compounds. The cause of the death is therefore rather to be sought for in these compounds.

At the last meeting of the British Medical Association Professor McKendrick of Glasgow read a paper "on the physiological action of the Chrysoline and Pyridine Series of Compounds," detailing very extended researches and especially stating that these alkaloids seem to destroy life either by exhaustive convulsions, or by gradual paralysis of the respiratory nerves, thus causing asphyxia. According to the researches of Vohl and Eulenberg, alkaloids of the pyridine series are all then mobile and colorless liquids with a peculiar odor, and the same authorities consider that the stupefying effects of opium when smoked in a pipe are due not so much to the opium alkaloids "as to certain members of the pyridine series which are formed during its combustion." The physiological effects noted by Vohl and Eulenberg are contraction of the pupil, difficulty of breathing, general convulsions and congestion of the lungs, death taking place from asphyxia. These effects accord with those noted by McKendrick and likewise those observed in the case of the child previously referred to. Hence it is probable that death resulted from poisoning, not by nicotine but by the pyridine, picoline, etc., produced by dry distillation and existing in the old pipe.

Rank pipes it appears therefore are almost as dangerous as loaded pistols to leave about a house where there are young children. At the same time, they seem to offer not only the most disagreeable but the most deleterious method of smoking, as the user is sure to swallow some proportion of the poisonous alkaloids with which they are charged, and consequently to risk serious injury to the health, especially of those who have not become habituated to them.

Effects of Poison on Animals.

A French doctor has recently called attention to the fact that hemlock seed is eaten by mice without apparently producing fatal effects on them. He has recently succeeded in supporting two mice for eight days on hemlock seed. They ate it at first with repugnance, and even appeared to suffer from this diet. At the end of the eight days one of the mice seemed very ill, and next day he found the sick mouse half eaten by the other. The animals had eaten hemlock seed in quantities which would have been fatal to a man.



THE MASSACHUSETTS IN THE DRY DOCK.—Fig. 1.