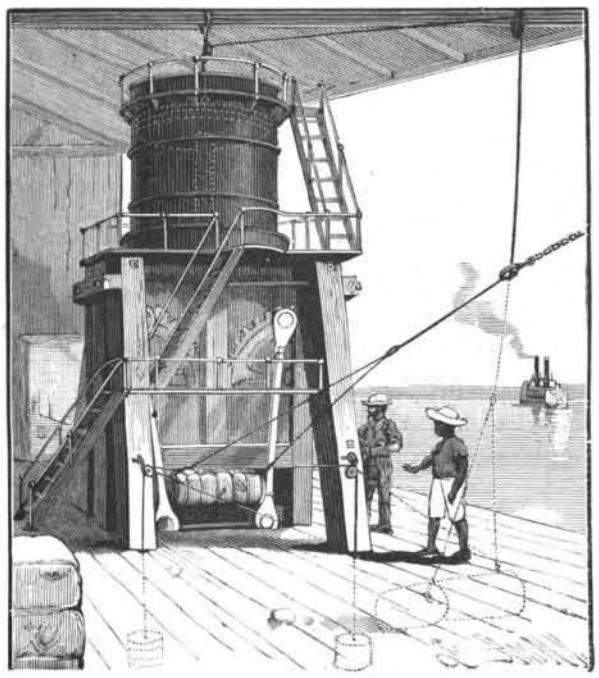
A BALE EJECTING ATTACHMENT FOR PRESSES.

An invention providing means whereby, at the proper time in the operation of the press, the compressed bale will be withdrawn, is illustrated herewith, and has been patented by Mr. George Calder, of Vicksburg, Miss. In the compress shown, the platen rises toward and falls from a stationary head block, while to the moving piston is attached a wire rope, chain, or other suitable connection, extending through blocks or rollers to suitable bale engaging hooks. These hooks are forced into the bale before the piston returns downwardly to withdraw the platen, by which operation the spreading hooked lines with the engaged bale



CALDER'S BALE EJECTOR FOR PRESSES.

are drawn outwardly and upwardly from the press, by which means weighted lines also connected with the bale hooks are likewise drawn up, the hooks being removed from the discharged bale by the weighted line connections. The distance of the withdrawal of the bale from the compress is readily regulated by the arrangement of the blocks or guides, and the length of line, the attachment providing for materially increasing the work of the compress.

THE CITY OF NEW YORK.

On March 15, there was launched, on the Clyde, the splendid twin screw steamship City of New York, the first of the two liners now being built by Messrs. James and George Thomson for the Inman and International Company, plying between New York and Liverpool. The Inman Company is well known to Atlantic travelers as providing in their floating "cities" a safe and comfortable means of transit across the Atlantic, and, next to the Cunard, it is the oldest Atlantic steamship company.

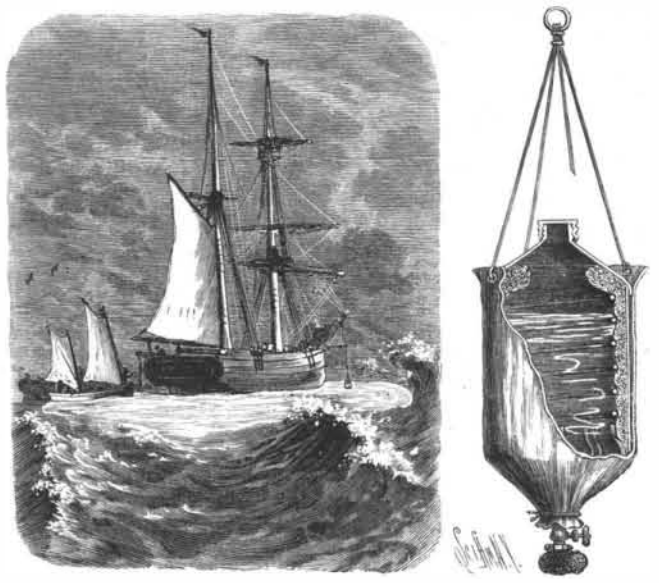
For some years, however, it retired from the struggle for pre-eminence, at least so far as speed is concerned; but now, after the reconstruction of the company, about a year ago, under the title of the Inman and International Company, it is coming to the front again by building two splendid steamers, with the view of trying conclusions with the present "greyhounds" of the Atlantic. It is expected that the speed of these vessels will be at least as great as the fastest liners now afloat, but at the same time speed is by no means the first consideration which the directors of the company have kept before them, the two paramount considerations being the safety and comfort of the traveling public.

The general appearance of the ships is well indicated by the illustration which we are enabled to give at the foot of this page, and which shows to advantage their smart, yacht-like form, with three masts and three funnels, which will before long be well known to seamen on the Atlantic. The length of the City of New York is 560 feet, the breadth 63¼ feet, and the depth to upper deck 43¼ feet. Above this upper deck, however, is a promenade deck, supported on stanchions, and affording a promenade which is uninterrupted for the whole length of the ship. The most important structural feature in these ships is the thoroughness of the system of water tight subdivision which has been adopted. There are fifteen main water tight compartments separated by steel bulkheads extending from the keel to the upper deck, or to a height of 16 feet above the water line. Two of these compartments could be knocked into one and flooded by the sea without rendering the vessel unseaworthy. Of these fifteen compartments three are devoted to the boilers, which are thus separated into three independent groups. Two other compartments are occupied by the two sets of triple expansion engines, which are also entirely independent, so that if any breakdown were to occur at any time to either of the engines or screw shafts, the ship could still proceed at about three-quarters full speed. The advantages of this duplication of the machinery are so obvious that it is surprising it has not been adopted before this in any of our large Atlantic liners, and there can be little doubt that the Inman and International Company will reap the reward of their enterprise in being the first to provide the additional security of twin screws.

The main saloon is constructed on a principle patented by the builders, which was first carried out in the National liner America, recently sold to the Italian government. The central part of the saloon is of a dome-like shape, and rises in a graceful arch to a height of 22 feet above the floor, thus giving an air of spaciousness which has never before been attained on shipboard. The drawing room and library are also spacious apartments, and will be fitted in a style of luxurious comfort. An important feature in these ships is the hydraulic system, which is being fitted by Messrs. Brown & Brothers, of Edinburgh, and which entirely takes the place of steam for such duties as steering, warping, heaving the anchors, loading and unloading cargo, hoisting ashes, etc. The rudder and steering gear is specially designed to be entirely below the water, so as to be efficiently protected in the event of the ships being employed as armed cruisers. The cargo will be worked by 12 hydraulic derricks, which will discharge and take in cargo with great dispatch and an absence of noise, and which will be appreciated by both passengers and officers. From the foregoing description it will be seen that the launch of the City of New York marks an important step in the continuous effort to overcome the dangers and discomforts of the stormy Atlantic voyage, and the performances of this new "greyhound" will no doubt create considerable interest during the coming season among all classes of the shipping community.—*Industries.*

A DEVICE FOR QUIETING WAVES IN STORMS.

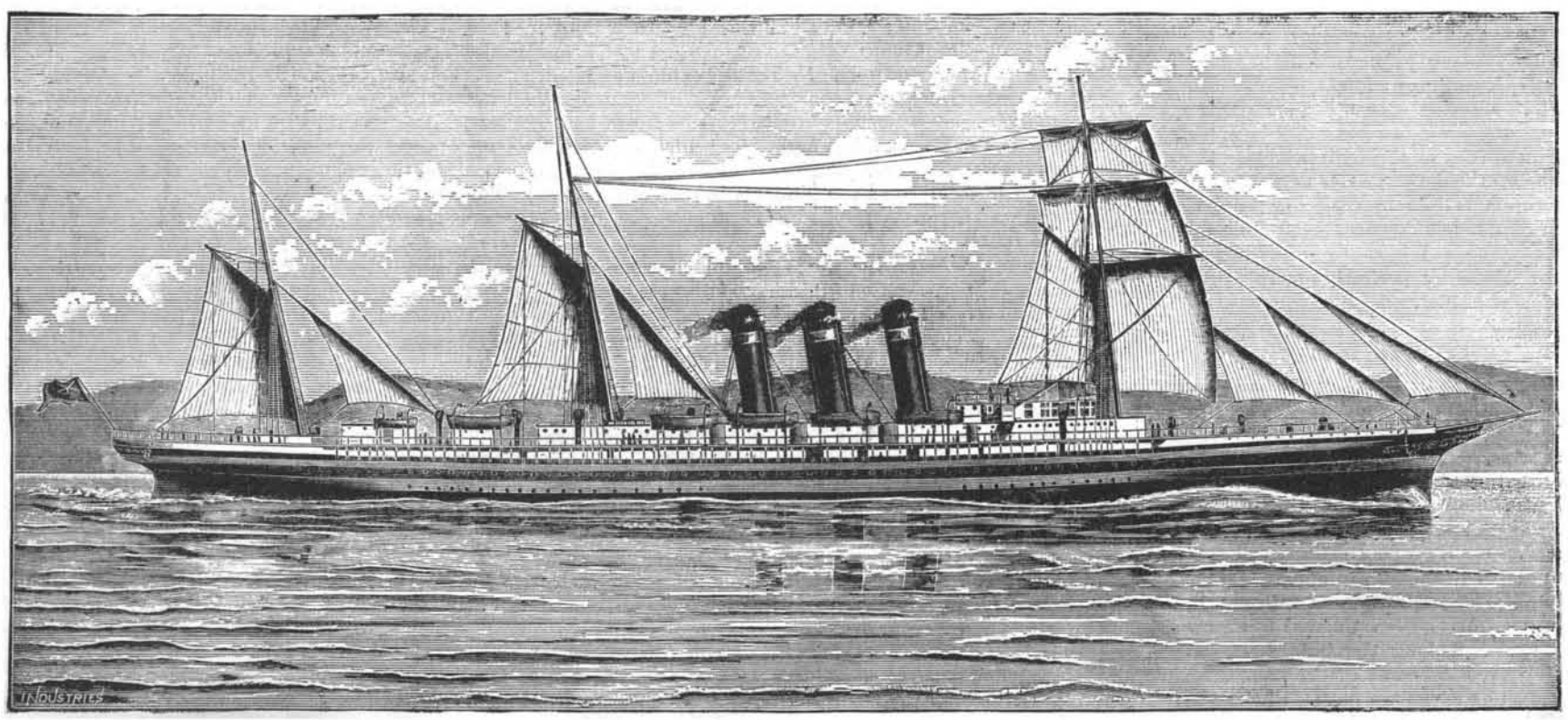
An oil distributing device for seagoing vessels, whereby the waves may be quieted by the distribution of oil in or on the surface of the water, is illustrated herewith, and has been patented by Mr. Jonathan I. Hazard, of Georgetown, S. C. It consists of a can to be suitably suspended by cords, the can being clothed externally with a protecting canvas or flexible wrapper, and having internally a body lining supported by a coiled wire, in connection with a suitable soft and absorbent material, for the retention of the oil and as a protection to the can. Passing through a diaphragm near the lower end of the can, and out through the bottom, is a pipe fitted with a valve, for regulating the amount of oil to be discharged, there being at the outer end of the pipe a strainer or sieve, to make the distribution of oil more general or diffused, although this strainer may be swung back and a small extension pipe screwed into the valvular nozzle to distribute the oil in a more or less fine stream.



HAZARD'S OIL DISTRIBUTING DEVICE FOR VESSELS.

The Manufacture of Steel.

A well known engineer says, in one of our contemporaries, that: "In the manufacture of steel, nothing very new has come to the surface during the last year. Two establishments have fitted themselves up for using the basic process—one at Pottstown, Pa., the other at Homestead, Pa. The Pottstown establishment uses the Bessemer process, while at Homestead open hearth furnaces are used. The developments have not gone far enough to announce results. Great progress has been made in the manufacture of steel castings. The process under which all successful makers now work was developed at Terre-noire, France, some ten years ago. American manufacturers have applied their usual ingenuity, and now we may say we can produce as good steel castings as Europe. Rolls weighing nearly 50,000 pounds and anvil block weighing 66,000 pounds, at Cleveland, Ohio, show what can be done in entire blocks."



THE NEW STEAMSHIP CITY OF NEW YORK—10,500 TONS, 560 FEET LENGTH.