

"TRAINS" OF VESSELS ON THE SUEZ CANAL.

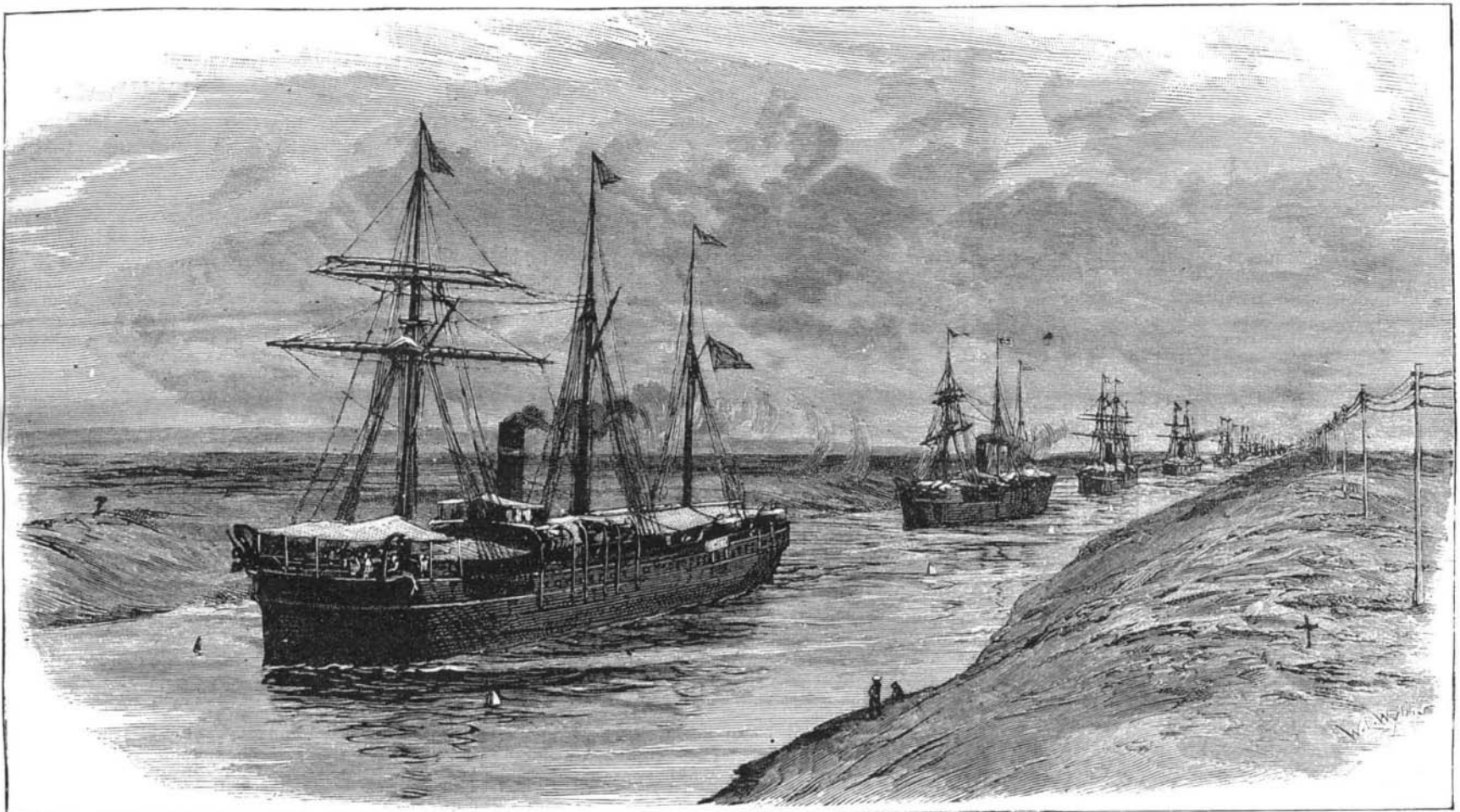
Early in June last, the navigation of the Suez Canal was practically stopped by the sinking of a great dredge. An endeavor was made to open a temporary channel around the obstruction, and a few vessels thus got through, but it was not until the 22d of the month that business was fully resumed, after the wreck had been blown up and the debris removed from the bed of the canal. The illustration herewith, for which we are indebted to the London *Graphic*, gives a good idea of the procession of vessels which then began to stream through the canal. Four days before the reopening of the canal, there were one hundred steamers anchored at Port Said, and a corresponding number at Suez. In order that vessels from each terminus may pass each other, the floor channel of the canal being but seventy-two feet wide, with a depth of twenty-five feet, there are several turnouts, in which steamers may anchor at one side of the channel for those proceeding in another direction to pass by, much as trains of cars on a single track railroad are switched off on sidings. These turnouts have been repeatedly enlarged to meet the increasing demands of commerce, as the numbers of vessels traveling together in the same direction have steadily added to the length of the trains, as it were; as a safe distance must be preserved between the vessels of each train, these trains are sometimes as much as two miles long, and the maximum speed allowed is 5½ knots an hour. To avoid this waiting on sidings,

during the current year, and the machines necessary for the completion of the works of the canal have already reached the Isthmus, or are in course of construction. In support of this assertion M. De Lesseps quotes a passage from a report received from the director-general of the works to that effect, and which concludes thus: "It therefore follows that, even if we had only commenced the dry excavation work on the Isthmus on 1st January, 1885, and only begun the dredging work on the 1st January, 1886, the canal could be completed on the 1st January, 1888. To be provided against all possible accidents, there is all the dry excavation work executed before the first January, 1885, and all the dredging which was to be done before the 1st January, 1886." M. De Lesseps goes on to say that there is no doubt that half the effort necessary for the cutting of the canal has already been made. M. De Lesseps says: "The regular continuation of the piercing of the Isthmus, and the completion of the canal in 1888, are the best replies that can be opposed to the adversaries of the canal. We will not do our partners in the work—the shareholders—the injury of supposing that they are moved by such maneuvers."

To show the Panama shareholders that they need feel absolutely no alarm, the president of the company relates how, in 1860, the Suez Canal Company was attacked in precisely the same way. At that time the public was warned against taking up the little shares of the Suez Canal Company. The progress of the

35 Europeans; February, 46 deaths, 13 Europeans; March, 49 deaths, 21 Europeans—a total of 1,153, and death rate of 51·7 per thousand.

With regard to the insurrection which took place at Colon and Panama in May, it had not entailed any great loss on the company. At the Culebra, where the most serious incident occurred, the loss fell on the contractor. In that chapter of M. De Lesseps's report which is headed "The Cost of the Canal," he explains that his chief engineer has calculated that, by certain modifications, it would be possible to reduce the total number of cubic meters of soil to be removed to construct the canal from 120 millions, the estimate of the Technical Commission, to 90 or 95 million meters. Nevertheless, M. De Lesseps prefers to take the original estimate as the base of his calculation. The contractors now engaged in cutting the canal have undertaken to remove 62,691,595 cubic meters of soil for a total sum of 219,295,974f. Moreover, contracts have been entered into with two other contractors, who have undertaken to complete the remainder of the works for a sum of 480,000,000f. The total cost of the actual piercing of the Isthmus will, therefore, amount to 700,000,000f.—£28,000,000 sterling. To this sum must, of course, be added the cost of the canal administration and the annual interest paid on capital. The International Congress estimated the expenditure for the creation of the canal at 1,070,000,000f., but the company has purchased the Panama Railway and land



THE BLOCK IN THE SUEZ CANAL.—PROCESSION OF STEAMERS AFTER THE RENEWAL OF TRAFFIC.

and provide for the further increase of the canal business, two different projects have been under discussion for a considerable time back; one was the building of another and separate canal by the side of the first, and the other the simple widening of the present canal. The last plan was finally adopted by the "International Commission" of June, 1884, and, at a meeting of the Suez Canal Company, in Paris, on June 4 last, the directors were authorized to borrow \$20,000,000 to carry forward the proposed improvement.

Official Report on the Panama Canal.

The report which M. De Lesseps read at the annual general meeting of shareholders, in July last, is of length and of interest. M. De Lesseps admits that modifications of detail, necessitated by circumstances, have been introduced into the original programme of the work, but the leading principles of that programme have not been altered. That programme consisted, first, in the cutting of a canal from Panama to Colon, 9 meters deep below the average height of the waters in the two oceans; second, the width of the canal was to be 22 meters at the bottom; third, the canal between the two oceans was not to comprise any tunnel, but to be an open cutting in its entire length; fourth, at Panama a lock was to be established, to prevent the tide creating a swift current in the canal; fifth, in the middle of the course of the canal a long station, or siding, 5 kilometers in extent, was to be created; sixth, at Ha Gamboa an immense dam was to be constructed, so as to intercept the waters of the Rio Chagres, and to give them another course. The execution of this programme has been proceeded with

works was described as such as to show the impracticability of the enterprise. "It is," says M. De Lesseps, "in precisely similar terms that the Panama Canal is now sometimes spoken of. The little shares of the Suez Canal, issued at 500f., have become big shares of 2,200f. The Egyptian Bosphorus has been created. The little shares and obligations of the Panama Canal will have the same destiny; for the American Bosphorus will be completed, as was its predecessor." Referring to the little mishaps which have occurred, M. De Lesseps says it would have been puerile to imagine that the gigantic work of piercing the Isthmus could be accomplished without any such accidents, and that the execution of each portion of the works could be regulated like clockwork. The number of cubic meters of soil removed every month is steadily increasing. In January, 1885—quoting the report—it was 550,000 cubic meters; in February, 590,000 cubic meters; in March, 627,000; in April, 775,000; in May, 795,000. In April, 1885, there was 17,881 persons occupied on the works; but in October there were 20,368 persons employed on them. Since that time the number of men employed has been maintained at about that figure. The deaths on the works continue very high. The official returns of the deaths that have occurred on the works during the year ending March last are as follows: 1884—April, 59 deaths, of which 9 were Europeans; May, 41 deaths, 3 Europeans; June, 60 deaths, 12 Europeans; July, 87 deaths, 26 Europeans; August, 119 deaths, 35 Europeans; September, 132 deaths, 25 Europeans; October, 163 deaths, 42 Europeans; November, 154 deaths, 48 Europeans; December, 142 deaths, 59 Europeans. 1885—January, 91 deaths,

in the vicinity of Colon and Panama. Evidently the company will require an extension of its borrowing powers to cover these expenses, which were not included in the original estimate. At the end of his report, M. De Lesseps says he has demanded of the French Government authority to borrow 600,000,000f., by the issue of bonds with annual prize drawings. Having obtained the approbation of the shareholders, he will take the necessary steps to obtain that authorization.

Durability of Slate when Exposed.

In the Granary Burying Ground, in Boston, there is a stone of slate erected to the memory of Captain William Condy, who died August the 25th, 1685. The style of lettering, position, etc., all indicate that it was put there soon after the burial. Yet every letter is clear and sharp, even the guiding lines, scratched with the chisel, being perfectly distinct. In fact, the stone seems to have suffered no change whatever. There are many others near it in the same unimpaired condition, and of nearly equal age. These slabs, probably, were brought from Quincy. ARTHUR C. KIMBER.
July 15, 1885.

Small Electric Lamps, Etc.

In consequence of the enlargement of business the Stout-Meadowcroft Company has become incorporated, with Mr. Henry V. Parsell as president, a gentleman of well known means and business ability. We have heretofore referred to the excellence and reliability of the electric lights, electric fans, batteries, and other apparatus furnished by this company.