Bat the indomitable De Lesseps did not despair, although he saw his encampment of twenty thousand laborers broken up and dispersed in a day, leaving only a quantity of tools and tents behind them as evidences of their having been at work in tracing out his canal. He summoned laborers from Europe, and they came after months of delay; but no sooner had they been organized into a working force than, through English persuasion, the imbecile Sultan issued a firman denying the right of the Viceroy to cede the lands through which the canal was to be dug. This was apparently a fatal obstacle, for Said dared not disobey, and a stoppage of two years in the work took place, while M. de Lesseps vainly sought to enlist influences powerful enough to resist those brought against him.

His patience and energy were crowned with success at last. The French consul who had opposed the enterprise was recalled from Egypt, and instructions given to his successor to favor the project, which was, for the first time, thus taken under French protection; and the French Minister at Constantinople, M. Thouvenel, requested to enlighten the mind of the Sublime Porte as to the views and wishes of France. At a hint from a high quarter. Said Pacha submitted the whole matter in controversy between M. de Lesseps and himself to the French Emperor: and neither Turkey nor England dared to interpose any objection, though both felt themselves checkmated by this adroit move of the diplomatic cutter-of-canals,

The Emperor's decision was given in July, 1864, for this last intervention of his in the affair was five years later than his first, which settled the preliminary points, and was given after the death of Said, who died in January, 1863. He decided that the concession of 1854 was binding, and that Egypt should pay an indemnity of

The steps taken by the Emperor in the earlier stages were simply giving the Suez Canal project the moral aid of the support and sanction of France; and allowing a subscription to be raised in France by popular contribution, under the patronage of the authorities. From the hour of the Emperor's intervention the diplomatic interference of England ceased openly: but no opportunity ever was lost, indirectly, to thwart or cripple the enterprise in all its stages.

And this aid of the Emperor's came in good time, firstly, to save the scheme in infancy from being swamped by England; and secondly, to save it, at a maturer period, from the hostility or indifference of Said's successor, Ismail Pacha. who did not wish to follow in the footsteps of his predecessor in anything; and against whom this appeal to the Emperor was taken, which resulted in his judgment rendered in 1864, above referred to

The plan adopted by M. de Lesseps to frustrate the difficulties raised by the two firmans forbidding the compulsory labors of the Fellahs under the corvee system, and refusing also the cession of the lands on each bank of the canal sufficient for the purpose of the enterprise, was as ingenious as it was successful. He succeeded in substituting steam-power for manual labor in a great measure, supplying what was actually needed by importing foreigners, and tempting voluntary native labor by higher prices and better treatment than they were accustomed to. The latter point was smoothed over, through the aid of the new French Consul-General and the Vicerov, and by the tacit consent of the Porte, under the skilful manipulation of M. Thouvenel. And so, at last, the great work was placed on a firm footing, and from 1859 to the present hour has steadily progressed, until now approaching its successful conclusion.

General View of the Work. Let the reader imagine a vast ditch one hundred miles in length, three handred feet wide at the top, one hundred to one hundred and fifty feet wide at the bottom, with an average depth of twenty-four feet, connecting four natural kes, bisecting a sandy isthmus at its narrowes Doint, and discharging at either end into a large mland sea, and he will have a fair presentment of what the canal is, or rather is intended to be. These lakes are situated at distances ranging from ten to fifteen miles from each other, and form the natural boundaries, so to speak, of the several divisions of the work. The largest and deepest of these, called Lacs Amers, or Bitter Lakes, extend to within fourteen miles of Sucz. The other lakes are called Timsah, Ballah, and Menzalah. The first and smallest of these has long been drying up. To deepen the channel through these lakes: excavate the intervening sections. which, previous to the operations of the company, consisted of arid, saudy, treeless, and almost trackless wastes, with an occasional stratum of calcareous blue clay running through them; and to build the jettles for the protection of the entrance from either sea, and which now form the harbors of Said and Suez, was really

all the company had to do. No locks or other artificial appliances will be required, and steamers of the capacity of those now used by the Peninsular and Griental and Messageries Imperiales Companies will, it is believed, be able to pass through from sea to sea

without difficulty or detention. Mechanical Appliances.

A work of so vast and unique a character, as will readily be conceived, has ealled into requisition appliances for construction of a similarly extensive and original kind. Indeed, the machinery used on this canal forms one of the most interesting features of the work. Nothing like it is to be found elsewhere. From the gigantic drague a couloir, down to the smallest drague (dredge), and from the ponderous elevateur to the smallest drill or hand machine, everything is of the most costly kind and elaborate finish. Two hundred and eighty-five machines, representing a force equal to eighteen thousand horses, and consuming twelve thousand two hundred and nineteen tons of coal per month, work day and night on the canal. These machines are divided into sixteen classes, two of which are worthy of especial mention. These are the large dredges (dragues a long couloir) and the excavaleurs. The former are similar in construction to the machines used for dredging purposes in the British and American scaports and rivers, but they are larger, and have an enormous passage, or spout, attached. By means of a steam pump attached to the lighter on which this apparatus is mounted, water is mixed with the earth brought up by the dredge, and the semi-fluid mass is discharged through this long pipe, or passage (couloir), on to whatever spot may be selected. By means of this machine the sand can be discharged to any distance within two hundred feet beyond the edge of the canal. By this simple contrivance a continuous compact ridge of sand is formed along the entire length of the canal, and this serves to keep out the accumulations of sand which, blown by the frequent storms (Shimaul or Krumseen) from the surrounding desert would otherwise be deposited in the canal, and utterly preclude all efforts to keep it open. The ridge thus formed is in some places fully fifty feet

the northern entrance of the canal, is situated on the eastern shore of the Mediterranean, 194 miles north of Alexandria and twenty miles north of Damietta. Externally its appearance is not unlike that of the majority of mushroom

American towns similarly situated. It is an anomalous sort of place. Bounded northward by the ocean and southward by the desert, it is conally the product of both. Viewed geologically it is the practical result of a struggle between salt water and sand: commercially, possibly it is a compound of modern commerce and aboriginal Arab ignorance and filth. When the works were commenced at Port Said, in 1859, there was only space on the small strip of sand for a few tents for the engineers; the first huts erected there were built on piles; both the dredgings from harbor and channel made the land, and now one thousand acres have been reclaimed for the company's workshops and buildings, and the town of Port Said is as much a creation of M. de Lesseps as the canal. The provisions, and even water, had at first to be brought on camels from Damietta, or by sea, thirty-five miles; but now Ismailia supplies it from its fresh-water canal, a fifty horse-power engine forcing the water through two pipes to the northern extremity of the canal. Now comfort and many of the luxuries of life are easily procurable-at all events in much greater abundance and with more facility than in the ancient town of Damietta.

It contains nearly one thousand houses, and a population which, though like that of Cairo-not the Egyptian, but the American Cairo-largely floating, may be fairly estimated at between 8000 and 10,000. This population is thoroughly cosmopolitan in its character; for small as the town is, it numbers representatives from all parts of the world. Every civilized and uncivilized country apparently sends its delegate to the canal congress. The activity and bustle of the place, heightened as they are by the picturesque effect produced by the motley groups of French, Egyptians, Arabs, English, Americans, Lavantines, Italians, and Greeks working together harmoniously, form its principal attraction. On the occasion of Mr. Hall's visit there in October, 1867, he counted twenty-two large sized vessels in the avant port or basin. Most of them were from North British scaports, and were freighted with coal and other supplies for the company. By far the larger number, fully two-thirds, of the inhabitants are employed directly or indirectly by the Canal Company or by the contractors, Messrs. Boril, Lavalley & Co.

The Jetties. One of the chief difficulties apprehended by the early surveyors and engineers of the canal scheme was the choking up of Port Said by the Nile deposits, and these jetties have been constructed mainly with a view to obviate this difficulty, as well as for purposes of protection to the shipping seeking transit through the canal. They are two in number, known respectively as the East and West Jetty. The length of the latter will be 2700 yards and of the former 2000 yards. The distance between their respective ends will be about four hundred metres (1300 feet), and they will form between them, it is estimated, a basin or harbor 500 acres in extent. completely protected from wind or storm, and spacious enough to accommodate all vessels seeking transit through the canal. These jetties are constructed of what appear to be immense blocks of stone. They are not stone, however, but sand, dredged up from the bottom of the canal, mixed with hydraulic lime (chaux du Thiel), and then put into wooden cases or moulds and allowed to dry. The lime is quarried a few miles down the canal, there ground, and thence transported to the works. Eight mills are kept constantly grinding on this novel, unique, and really interesting process. After sufficient time has been allowed to form and harden them, the wooden casings are removed, and the sun's rays, which in this titude are intensely bot or of making the block. Two or three months suffice to harden them. They weigh twenty tons each, and cost about 1000 francs apiece. When sufficiently dry and ready for use, they are lifted up by a travelling steam crane (grue a vapeur) on to trucks, passed to a tramway, and then pushed by a locomotive down to where the lighters are moored to receive them. They now take a short sea voyage. After being transferred from the truck by another travelling crane, they are deposited in an inclined position, in rows of three, on another lighter, whence they are taken out to the position they are destined to occupy on the jetty, and there sunk. The rate of progress has been from thirty to forty blocks daily. Over 15,000 have been already submerged, and but little remains to be done to complete these magnificent piers. The dimensions of these piers, or jetties, are twenty-six yards at the base, six yards at the

summit, and twelve yards in height. Division of Port Said (Lake Menzalah). This division is fourteen and a half miles long, extending from Port Said to Kilometre Twentythree, and includes the heavy work on the jettles already described, and the deepening of the canal which lies through the middle of Lake Menzalah, which is itself only separated from the Mediterranean by a low, narrow ridge of sand. The labor performed in this division has been immense. Fears were entertained by many that the sand thrown up by the dredges to form the banks of the canal would be too weak to withstand the combined action of the wind and waves in the lake, and the canal would in consequence be liable to frequent interruption. Fortunately, these fears have proved groundless, and all cause for such apprehension is now removed. In this division 364,367 enbic metres were excavated during the month ending October 15, 1868, which, added to the previous excavation of 6.072.723 metres, left a then total of 2,766,049 metres yet to be taken out.

Division of El-tinisr. This is the longest division of the canal, and includes all lying between Kilometre Twentythree and Ismailia, a distance of thirty-five miles. The appearance of the canal, as far as Kantara, is like that on the first division, being as straight-to use a homely metaphor-as a

South of Kantara the work is very heavy, especially at El-Guisr. Here are the deepest cuttings, extending a distance of five miles to Lake Ballah. Out of a total of 29,859,044 cubic metres, upwards of 9,770,037 yet remain to be excavated to reach the maximum depth of the canal. Twenty-five dredges and an immense force of laborers are engaged upon this division, and they are taking out about 600,000 cubic metres per month. In some parts of this division, when the canal is excavated to its full extent, the perpendicular depth will be upwards of one hun-

Kantara.

The second point of importance on the canal is situated at the southern extremity of Lake Menzalah. It occupies the site of Mijdol, famous in the history of the Exodus, and has long been an important crossing for the Syrian cameltrains. It is the principal town in this division,

is twenty-eight miles from Port Said, and is | left, high in the heavens, rises the hoary head of | tion. It must be remembered that all the cut- | gers as visitors for the inauguration, will be per usually reached by the mail boats in about five hours. In this and in each other division of the work, a basin has been formed in the lake, where the surplus sand and earth are dumped by light-

Lake Ballah. Eight miles south of Kantara, the canal enters Lake Ballah, and, soon after passing the little Arab village El-Ferdane, we reach El-Guist. The plateau upon which this village (El-Guisr) stands is the most elevated point, and the cuttings the deepest upon the whole canal. The labor of twenty thousand Arab fellahs was required for two years in cutting a channel deep enough to float the steam dredges from the Mediterranean to this point, and in filling the shallow basin of Timsah, formerly fed by the overflowings of the Nile only. At El-Guisr Mr. Hall found excavators hard at work widening the canal, with construction trains and locomo tives drawn up on the bank for removing the earth more rapidly than it could be done by lighters in the canal. There is yet more to be done in this division before it is fit for the passage of large vessels. Ismailia-Lake Timeah.

Ismallia, next to Port Said, is the most important point on the canal. It is not only the official headquarters of the company, but the residence of the principal officials. Until within a recent period, the offices of the contractors, MM. Boril and Lavalley, were also located here, but these have been removed to Port Said. The town is pleasantly situated near the northern shore of Lake Timsah, and is named after the reigning Viceroy, Ismail Pacha, who succeeded his uncle, Said Pacha, in January, 1863. Though, like Port Said, it owes its origin and growth entirely to the canal, the contrast between the two towns is very marked. The fresh-water canal, from the Damietta branch of the Nile, originally extended as far as a town called Zagazig, about fifty miles to the westward of Ismailia, which was then looked upon as the limit of civilization and habitable villages towards the east. All beyond was sand, desert, and desolation, with wandering tribes of Bedonins to make the desolation dangerous. One of the first operations of the company was to continue the fresh water canal to the east, and from a point two or three miles west from the present town, then a howling wilderness, its fertilizing waters now flow through the desert to the sea. It has played an essential part in the construction of the ship, canal. Indeed without it the latter could hardly have been built. Before it was finished, three thousand camels and donkeys were required to transport the Nile water necessary for the sustenance of the laborers. When finished, the Egyptian Government purchased it for two million dollars. It runs nearly at right angles to the Maritime Canal. Its width is twenty-six feet, and its average depth about four feet.

Otvision of Ismailia. From Ismailia, southward, we enter upon the third grand division of the canal. This extends through Lake Timsah and the Bitter Lakes to Kilometre One Hundred and Fifteen The northern end of the Bitter Lakes is sixty miles from Port Said. The lakes themselves are twenty-three and one-half miles long. Up to within a few months past the navigation of the maritime canal did not extend beyond Ismailia; but, on the 18th of March last, the waters of the Mediterranean were admitted into the Bitter Lakes, and there is now uninterrupted navigation to the head of these lakes, and within fifteen miles of Suez, for vessels of ordinary tonnage. The cuttings at Toussoum and Scrapeum, passed between Lake Timsah and the Bitter Lakes, are deep, and, next to those already seen at El-Guisr, the most difficult on the whole length of the canal.

The Bitter Lakes constitute the most interesting feature of this division. They are estimated te contain nine hundred million tons of water, and it is expected, from their size and situation, they will obviate the necessity of locks to break the current, which would otherwise exist in the canal between the two seas. Through these lakes the canal flows, between banks of the entire width of three hundred and twenty-eight feet, until it enters the last cutting, about five miles from Chalouf, whence it follows the course of the ancient canal to Seuz. Division of Suez.

This division is twenty-eight miles in length. The principal points are Chalouf (El-Terraba) and Little Chalouf, or "Eighty-three," on the Fresh-water Canal, where there is a ferry established for the transit of the caravans and trains to and from Mecca.

The number of dredges at work on this division is small compared with that engaged upon the preceding sections, the nature of the work requiring a preponderance of hand-labor. Upwards of thirteen thousand men and one thousand donkeys are engaged upon this division. The majority of this large force are native Arabs (fellahs), and they work hard. In close and curious contrast to these simple carriers the Titanic engines toll and puff as they drag their ponderous claws along through this vast ditch. Nowhere perhaps in the world is the contrast between steam and man-power more vividly presented than on this great work.

Suez. situate at the head of the gulf of the same name, which is a prolongation of the Red Sea, and Scripturally famous as the scene of the journey of the Israelitish hosts, has come prominently into notice of late years in connection with the overland route to India and China, and more recently as the southern terminus of the ship canal. It is likewise the place of embarkation for the Mohammedan pilgrims from Egypt, and the countries of Northern Africa, on their way to the holy cities. The town is built on a low, sandy tract of land.

The works at Sucz are not on so large a scale as on the Mediterranean side, as no new Venice had to be made there on mud or sand instead of piles, Suez having long been used as the Red Sea port of the "P. and O." steamers, and the flect of their steamers always anchoring a short distance below it.

Still a sea-wall had to be built there, to protect the mouth of the canal, as at Port Said, though on a smaller scale, and great workshops erected.

From a small Arab village in the time of Mesemet All, Sucz had grown into a town of three thousand inhabitants, chiefly Arabs, six or seven years ago, under the influence of the "P. and O." transit. But it has been galvanized into new life by the new canal works, and numbers now twenty-five thousand inhabitants, being quite a husy and flourishing place, with brighter prospects for the future.

Of the present population, more than four thousand are Europeans. From the new palace of the Viceroy to the north of the town, the eye embraces a magnificent series of panoramic

At the feet of the gazer lie stretched out the town of Suez, the port, and the roadstead. On his right hand tower up the lofty mountains of Attaka, which frown on the Red Sea. To the | captain attributed'

Mount Sinal, between sea and desert. In front, far as the eye can reach, toss and sparkle the bright blue waves of the sea-more azure in hue than those of the Mediterranean. Turning from this refreshing prospect, and looking behind him, he sees stretched in all its sombre simplicity, in great sandy waves, the bare, bleak expanse of the desert, without tree, shrub, or blade of grass to break its barren and dreary monotony.

The roadstead of Suez and its port are very large and very secure. More than five hundred vessels can find place there at a time. Much of M. de Lesseps' work had already been done here for him by his rivals of the "P. and O." Company. A magnificent dry-dock has been constructed and the most extensive dredging and jetty-making operations are in progress. The dry-dock is upward of 400 feet in length, and nearly 100 feet broad, while commodious basins, for the secure anchorage of ships and steamers, are being formed in front of it. The new piers are being connected with the railway to Calro and the town of Suez by branch lines of railway. The Egyptian government, shamed into activity by the gigantic works carried on by the canal company, is constructing piers and basins of its own at Suez, and what was twelve years ago one of the filthiest and most indolent of Eastern cities is now all life and energy.

Practical Results. During 1868 2088 vessels, aggregating 674,048 tons burden, arrived at Port Said, and 270,000 tickets were issued by the Transit Service. According to the estimates of M. de Lesseps this amount will be increased to 3,000,000 tons per annum the first year after the completion of the canal, and that, during succeeding years, this amount will be doubled. But these estimates are based upon the successful completion of the canal and the navigation of it by steamers drawing from sixteen to twenty-two feet of water. The full purpose of the ship canal will not be attained until the largest vessels are able to pass through it from end to end, so that steamers from Liverpool, London, Southampton, Marseilles, Trieste, or Brindisi may proceed, without transshipment of cargo or delay in Egypt, through the Red Sta to Bombay, Point de Galle, Calcutta, Hong Kong, Shanghae, or Yokohama. as may be desired. Freights to Port Said from British or French ports are no higher than to Alexandria; but if unloading is to be gone through with at the former port, the heavy tolls through the canal, and the reshipment at Suez for the East, will outweigh the cost of transport by the present route round the Cape and practically render the canal a financial failure. Whether it will ever pay its constructors as a commercial speculation when fully dug out for the passage of large vessels remains to be seen. M. de Lesseps and the French engineers, backed by French capital, have constructed the work. British commerce in the East must furnish the tolls and help to make it pay.

An Experimental Trip. An American correspondent who visited the Suez Canal in the beginning of this year, thus sketches his impressions of that division of the works which extends from Ismailia to Port Said: Ten miles rapid steaming due east, a sharp turn to the left, and we entered the grand cana so suddenly that we had hardly time to take a last look at Timsah and Ismailia, the beauties of the desert, ere the sand hills shut them from our sight. Where the canal enters Timsah from the north the cuttings are deep, and the great heaps of sand lie on either side sixty or seventy feet high. The channel through which the water runs is not one hundred feet wide, and the depth not over twelve feet. Hydraulic engines of enormous power were at work dredging up and pouring out immense volumes of mud and sand. Hundreds of men, mostly Arabs, with barrow, pick and shovel, were moving the huge heaps, or, waist-deep in the water, turning from our path their uncouth boats; for much traffic is even now done upon the canal, and besides the boat. loads of stores and provisions belonging to the company, we saw many a cargo that reminded

us of the satlers' stores in the "Army of the The Timsah cutting extends for perhaps half mile, and then the desert is scarcely above the level of the water, and, in fact, in many places it is below it, so that the water covers many hundreds of acres, and the course of the canal is buoyed out sometimes for nearly a mile. As we left the hills of Timsah, the wind struck us sharply, and ever and anon a quantity of the light sand of the desert would be caught up by it and sent whirling into the water; and look ing closely, we could see where it had drifted little capes and promontories into the canal, Let us repeat what our captain said upon this

subject, being asked:-"Yes, monsieur, this drifting in of the sand certainly seems to be one of our greatest difficulties, for the wind blows across the canal all the year round-six months one way, six months back. One ounce of sand per square yard amounts to five hundred tons for the whole canal. If it came in at that rate it would be a long time before the company would pay any dividend. But we do not intend to let it come in; and this is how we prevent it. This sand extends only to the depth of from 9 to 12 feet; below this is a stratum of blue mud, mixed with a sort of clay, in which, by the way, we find great quantities of beautiful shells and fossil fish. Well, then, do you see those two huge engines which approaching-one an hydraulic dredger in the ddle of the canal, the other an iron shule (it looked like the walking-beam of an immense steamer), near the edge? Do you see how the vast masses of sand, mud, and water come up from the dredger, are poured out into the shute, and thence on the ground sixty or eighty feet from the edge of the canal? Do you see how quickly the great heaps rise, and how they extend, almost without a break, all along? Well, monsieur, you would find these heaps almost immediately baked hard by the sun, and as they are firm enough to bear the rallroad which we intend putting upon them the better to expedite the mails from India, so we hope they will be high enough to keep out the sanddrifts from the canal."

"And what are your other great difficulties, mon capitaine?" "Well, monsieur, at Chalouf, near Scrapeum, we have struck a peculiar hard stone at the depth of twelve feet, and are obliged to biast to clear it out (it is axolite). Then the deposit of the Nile mud near Port Said will always keep us dredging. But what we fear most is the Red Sea. For a long distance from Suez it is extremely shallow: then, lower down, it is very rocky; and while this is nothing to steamers which can easily keep the narrow channel, yet with the wind blowing six months one way and six months the other, it will not be easy for a heavily-laden clipper to keep the ground. Yet these things will all be set right, for trade will take the shortest route, and the Suez Canal will

be a success, although no nation now believes it except France and" (with a bow) "America." The only stopping place from Ismailia to Port Sald is Kantara, which means The Bridge. swinging boat answers the purpose now, but the abutments are being built for a more substantial We reached Kantara about three structure. o'clock. Here is a little clump of houses thirtyone miles from Port Said, and the canal Is alme perfected thus far: that is to say, although the dredges are still at work, yet for this distance the canal is one hundred yards wide and of an average depth of twenty-six feet; and these are to be the dimensions for its entire length. A curious feature, which is visible along the narrow parts of the canal, is a current flow-ing in from the north at the rate of one and a half knots per hour. is many months sin a the water attained its level, yet this: 1724 still continues. Our pration and absorp-

tings have been from the Mediterranean towards Suez, and that the main body of the men ployed, numbering eighty-five hundred, are working at the head of the canal, which is now advanced as far as Serapeum. Here it is necessary to cut through a number of sand-hills to the Bitter Lakes, which are a series of depressions in the desert, in the lowest parts of which are marshy ponds. They are twenty-five miles in extent, and it is expected that when the water is let in an area of one hundred and forty thousand acres will be covered. (This has since been done.) Then comes the Chalouf cutting to Suez, sixteen miles, and the seas After leaving Kantara, for many the water overflowed the desert on sixteen miles, and the seas meet for many miles side, and we passed along as through an immense lake. The channel was buoved, and as an evidence of the shallowness of the overflow, flamin goes, pelicans, and a kind of large curiew waded about, intent on fish and regardless of us, while myriads of snipe and sandpipers gaze1 at us from the little islands which in every direction appeared above the water. After leaving Kantara we did not pass a boat nor see a human being until we reached Port Said. The eye fairly ached with reaching over the desert dis-tance—miles upon miles of sand, and, after we being until we reached Port Said. left the overflowed land, one long silver thread of water. Not a tree, not a shrub, not even i good-sized stone, to relieve the intense mono tony of the landscape. So when the captain handed us his glass and said that he could see the shipping at Port Said, we were well satisfied that our voyage through the desert was drawing to a close.

Ferdinand de Lesseps. "J'ai pour principe de commencer par avoir la

conflance," said M. de Lesseps recently to an English engineer, who was complimenting him on the almost insuperable difficulties he had overcome in the prosecution of his great enterprise, which is to be completed on the 1st of October, 1869.

"My principle, from the commencement, was to have confidence," truly says M. de Lesseps: for unless he had been animated by an unconquerable enthusiasm, and belief in himself and his project, it would have been abandoned during the first five weary years which intervened between his obtaining the concession from Said Pacha, Viceroy of Egypt, in November, 1854, until 1859, when the company was constituted, and the work actually commenced.

Ferdinand de Lesseps is the son of Jean Baptiste Barthelemi, Baron de Lesseps. who was born at Cette, a French port in the Gulf of Lyons, in the year 1765. His father was, for five years, French vice-consul at St. Petersburg. In 1785 he accompanied La Perouse on his voyage to Kamtchatka, whence he brought, by land, the papers containing a description of the expedition. In 1788 he was consul at Kronstadt and St. Petersburg. From St. Petersburg he was called by the Emperor Napoleon I, in the year 1812, to Moscow, and appointed intendant of the latter city. In 1814 he proceeded to Lisbon, and was stationed there as consul until 1823. He died in Paris, May 6, 1834. His son Ferdinand, the subject of our sketch, was born at Versailles, in 1805, and is, consequently, in his sixty-fourth year, though his appearance is that of a man little past middle age. In 1825 he was attache to the French consulate at Lisbon. Two years subsequently found him engaged in the commerical department of the ministry of foreign affairs. During the latter part of 1828 he was attache to the Consul-General at Tunis, and in 1831 was despatched by his Government as Consul to Alexandria in Egypt. Rare work and rapid promotion this for our jeune diplomat; but the most eventful period of his long and active career was vet before him. Seven years subsequent to his appointment at Alexandria. and when he was in his thirty-fifth year, he was sent as consul to Rotterdam. From this place he proceeded to Malaga, in 1839, to negotiate with the Spanish Government in behalf of French commerce. In the latter part of the same year he was transferred to the consulate at Barcelona, where, during that and the two following years, he was especially active, and signally distinguished himself against

the reign of Espartero. In 1854 he received a commission from the Societe d'Etudes du Canal de Suez, at Paris, to negotiate with Said Pacha for the construction of the canal, first projected in 1816. Accordingly, towards the close of that year, we again find him on the Isthmus, preparing for his great work. This time he came to conquer. His mission was crowned with success, and the necessary concession was made in November of that year. A palace and retinue of servants were assigned to his use, and he was treated, as guest of the Viceroy, with the utmost respect. Great opposition followed, especially from England, and it was not till January, 1856, that the second and fuller concession was granted by Said Pacha, and the "International Company"

fully organized in 1858 M. de Lesseps succeededlin raising two hundred millions of francs in France alone, and in 1859 he proceeded to Egypt, and planted in the harbor of the ancient Pelusium, where Port Said now stands, the Egyptian flag. Laying, at the same time, the foundation-stone for a lighthouse, he proudly proclaimed the work commenced. Fresh difficulties, chiefly of a political nature, interposed; but the indefatigable Lesseps never despaired. In 1859 he had the satisfaction of seeing his company and work placed upon a firm footing, though the final decision of the French Emperor was not given till July, 1864, and, from that time to the present hour, the canal has steadily progressed.

The personal appearance of M de Lesseps is very striking. Though long past middle age, he has a fresh and even youthful appearance. Both face and figure are well preserved; his slightly curling grey hair setting off in pleasing contrast his bronzed, yet clear complexion, his bright eye, and genial smile. He is somewhat over the medium stature, is possessed of a compact and well-knit frame, carries his head erect, and moves about with a buoyancy and animation perfectly marvellous in one of his years and experience. His address is that of the well-bred and well-educated French gentleman he is; his manners are winning, his voice clear and under most excellent control, as those who listened to his admirable lectures on the canal at the late Paris Exposition cannot fail to remember. What is, perhaps, the most remarkable in a man so bred and constituted is, that with great gentleness of speech and snavity of manner he combines a strength of will and steadfastness of purpose worthy of Napoleon or Casar himself. Though beset by difficulties and scoffed and jeered at alike by friend and foe, he has never for one moment swerved from his purpose or relaxed his efforts to accomplish it.

The Formal Opening. M. de Lesseps, in an official letter, says:-"The opening of the Suez Canal has been

officially fixed for the 17th November next, the canal, the length of which is 162 kilometres (98 1-10 miles), will then through the whole distance have eight metres (26 feet) depth of water, the width on the line of the water will be 100 metres (825 feet), with the exception of three passages. where this will be found to be 60 metres (195

"I may further mention that all shipping, whether mercantile or naval, conveying passen- the pilotage dues.

mitted to pass through the canal free from any payment of canal dues. It will be necessary, however, for such vessels to be at Port Said not later than the 16th November, in order to be ready to go through the canal, from Port Said to Lake Timsah, on the 17th, remaining the 18th before the town of Ismailla, where his Highness the Vicercy of Egypt will give an entertainment. The following day the Bitter Lakes will be traversed and the Red Sea reached, viz., on the 19th November."

The arrangements for the opening of the canal on the 17th of November are fully developed. The Viceroy of Egypt proposes to entertain his guests with unprecedented magnificence. On the bank of the canal are being erected lodges, constructed, fitted, and decorated so as to be representatives of the characteristics of the several countries to which the guests belong. Public amusements, theatres, circuses, balls, and feles are to be provided for the recreation of the assemblage, which promises to be as brilliant as varied in its character. A first-class Italian opera company has been organized, and placed under the management of E. Muzio. It will open the new theatre of Cairo with a season of even months, extending from October 15 to May 15, giving twenty-five operas and six grand ballets.

The crowned heads of Europe will either attend in person or be represented by some royal relative, in order to give fitting eclat to the ceremonies. The Emperor Francis Joseph of Austria, the Empress Eugenie, the Sultan Abdul Azis, the King of Greece, the Prince of Wales, and Prince Humbert, the Italian Crown Prince. will all be present. The French, Austrian, and Turkish fleets accompany the sovereigns in their visit to the Isthmus. The French Emperor has had manufactured at Lyons a tent woven of silk and worsted, which will cost \$30,000, to be erected for the Empress. This tent will be taken to Paris after the ceremonies and sold at public auction, the proceeds to be distributed among the poor. America will also be represented at these festivities. In addition to her enterprising travellers who will attend, representatives will be present from the commercial boards of New York, Boston, and other leading cities.

Official Regulations.

The following are the official regulations for the navigation of the Sucz Canal, as published by M. de Lessens:-

First. Navigation on the Suez Maritime Canal s permitted to all vessels, whatevertheir nationality, provided they do not draw more than seven metres and a half of water, the canal being eight metres deep. Steam vessels may navigate by means of their own steam power. Sailing vessels above fifty tons burden must be towed by the service establishment for this purpose by the company. Steamers requiring to be towed will arrange by special contract. Each vessel towed will provide its own tow-line.

Second. The maximum speed of vessels on the canal is provisionally fixed at ten kilometres per hour.

Third. Every ship exceeding one hundred tons burden must take a pilot employed by the company, who is bound to furnish every information as to the route to be followed; the captain remaining responsible for the conduct and handling of the vessel.

Fourth. When a vessel requiring to pass the canal has taken up her moorings at Port Said, or at Suez, the captain is to enter his vessel at the office and pay the passage dues, as well as the pilotage fees, towing and harboring fees, when due. A receipt will be given him, which will be available in case of need. He will be bound to furnish the following particulars:-Name and nationality of the vessel: name of the captain; names of the owners and charterers; port whence sailed and destination: draft of water: number of passengers; tonnage of the according to legal measurement, certified by official documents.

Fifth. In the formation of trains, the captain furnished with a number according to his receipt, serving as a way bill; and after having received the pilot on board, will take up the position assigned to him. Sixth. Every vessel about to enter the canal

to have her yards braced topped. They must have two anchors-one forward and one aft-to allow of anchoring at the first order of the pilot.

Seventh (1.) Every vessel must have, during the passage of the canal, a boat in tow with a hawser ready, in order, in case of need, to carry out his hawser to one of the mooring piles placed along the two banks of the canal. (2.) The captain is bound to keep watches on deck both night and day, to be ready to cast off or cut the tow lines at the first order. (3.) During the night, vessels will keep lights burning according to regulations, and a lookout forward. (4.) Every steam-tug or other steamer will whistle at the passage of the corners, at the approach of vessels which are to be passed or crossed, and at the approach of dredging or other engines which they may meet. (5.) When two vessels proceeding in opposite directions come to sight, they are to slacken speed, each keeping the starkoard bank, or stop, according to the order of the pilot. (6) When a vessel requires to pass another going in the same direcion, warning must be given by signal. The vessel going at the least speed is to keep close to the starboard bank, and to slacken speed as much as possible.

Eighth. (1.) Vessels which for any cause whatever are obliged to stop in the canal, are as soon as possible to place themselves on the windward bank, and move fore and aft. (2.) In all cases of necessary stoppage, and when it is impossi-ble to reach a siding, which is always to be done, if possible, the captain must immediately give notice by signals by day and by lamps by night, fore and aft. (3.) In case of grounding the agents of the company will have the right to direct the means of getting the vessel off, and, if necessary, of unloading the whole at the expense of whoever may have caused the ground-

Ninth. Captains are forbidden (1) to anchor in the canal, except in case of absolute necessity, and without the pilot's consent; (2) to throw into the canal earth, ashes, cinders, or any other materials: (3) in case of anything falling into the canal a declaration is to be made to the pilot, who is bound to transmit it to the agent it the nearest station: (4) the captain is forbidden to fish up anything fallen into the canal except under the direction of the company's agents: (5) the salvage of all objects fallen into the canal is at the expense of the captain, to whom they will be restored on payment of those

Tenth. Captains will bind themselves, on receiving a copy of these regulations, to obey every order for the purpose of earrying them

Eleventh. The dues to be paid are calculated. on the actual tonnage of the vessel, both as to the transit dues and the towing and harbor dues. This tonnage is determined (until further orders) by the official papers on board. The transit due from one sea to the other is 10 francs per ton burden, and 10 francs per passenger, payable at the entrance at Port Said or Suez; the towage dues are fixed at 2 francs per the harbor dues for anchoring at Port Said, at Ismailia, and before the platform at Sucz. after remaining for twenty-four hours, for twenty days at the utmost, 5 centimes per ton per day, at the place assigned by the captain of

The pilotage dues for the passage of the canal are fixed according to the draft of water, as follows:-Up to 3 metres, 5 francs per decimetre: from 3 to 414 metres, 10 francs; from 414 to 6 metres, 15 francs; from 6 to 734 metres, 36 francs. Every decimetre to be paid for propor metres, 20 tionally according to the category to which the vessel belongs.

The pilot kept on board in case of anchorage will be paid 20 francs per day. Vessels towe will be entitled to a reduction of 25 percent