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Frederic Graff Jr. Scrapbook, 1854-1857**

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On the fifth of March, 1856, the new Italian Opera, Covent Garden, was re-built, after the destruction of a former one, erected more than a century previous by the famous Rich, of "Beggars Opera" celebrity, was unhappily destroyed by fire at the close of a *bal masque*; and now, after a lengthened period of litigation, which has prevented earlier movements, we find an entirely new and most splendid edifice rising with fairy-like rapidity from its foundations, and promised to be open to the public in the middle of May, little more than six months from its commencement.

Your correspondent has, by the kindness and under the escort of the well-known, talented and most indefatigable treasurer, M. Poteaux, been enabled to make a thorough examination of the building, and been permitted also to inspect the plans and drawings of the different parts, interior as well as exterior, so that I may venture to give some description of what is and is to be, for the satisfaction of your transatlantic readers.

The intended theatre is perfectly new, the ruins of the old one having been cleared away to their very foundations; and to the untutored eye the immense walls of brick and mortar, rising to the height of nearly a hundred feet above the street, present little more than a chaos of building materials, that might almost vie in magnitude with the pyramids of the Pharaohs. Enough, however, may be discerned, after the first explanations have been given, to enable one to form some general conception of the design, though even at this late period all presents such an appearance of dust, bustle and confusion that, were we not assured that all the carpentry work, upholstery, interior fittings, scenery and stage decorations, were in a forward state of preparation elsewhere, any prospect of the theatre being complete and ready for an audience in six brief weeks would be purely fabulous. Mr. Gye, however, has ere now rubbed Aladdin's lamp to some purpose in his caterings for the public; and when we recollect the all but insuperable difficulties that he has already surmounted, and that he has the invaluable aid of Sir Charles Barry as an architect, and the enterprising Messrs. Lucas as contractors for the building, we entertain little doubt that all will be ready for the opening day; and our only hope is that the public will, by their liberal patronage, duly reward Mr. Gye for so noble, so mighty an enterprise.

The edifice, which, unlike its predecessor, stands east and west—that is with the stage in the latter direction—is about 240 feet in external length, being about 122 feet broad between the external walls, and just 100 feet high from the floor of the pit to the roof outside. These external measurements, however, give no idea of the space of the interior: for the entrance hall, passages, staircases and corridors, all separated by substantial brick walls from the main body of the house, necessarily occupy much space, so that the internal dimensions are 50 feet in height from the centre of the domelike ceiling to the lowest part of the pit flooring, the breadth at the proscenium being 68 feet, and the length from the front of the stage to the back of the centre box 75 feet. In short, as regards altitude, it will be almost thirty feet higher than that recently burned down, and twenty-five higher than that of her Majesty's in the Haymarket; being thus, except in width of stage, as large as La Scala, the celebrated theatre at Milan. Ample amends, however, will be made by the depth of stage, which extends 130 feet from the orchestra to the back walls, thus giving "ample room and verge enough" for the gorgeous pageants and processions required in our grander operas.

Unlike almost all other opera houses, however, the new *salle* of Covent Garden will be of semicircular shape, ending in straight lines towards the stage, and not of the re-curved horse shoe form, which unavoidably precludes several boxes on either side from a fair view of the performance. In another particular, again, the new theatre will be distinguished; for, instead of there being some half dozen tiers of inconveniently small boxes, or rather pigeon holes, here will be three noble tiers only of spacious boxes, nine feet high, and with ample room for the accommodation of the occupants, who hitherto have certainly had ample ground of complaint in this matter. The grand tier is to comprise thirty-two boxes, averaging about twelve feet in width; and there will be about ninety more, including the smaller boxes, on a level with the amphitheatre just above the three principal tiers. It may be estimated, therefore, that the boxes will hold comfortably about 1,200 persons, which assuredly are as many as can gain a view of the stage and hear properly the vocal efforts of the *artistes* thereon. We may add, that the Queen's box is to be on the right of the house and to have handsome retiring rooms, with a separate entrance and staircase in Hart street, on the same principle as in the late building designed by Albano.

As regards the pit, about three-fifths of it will be laid out in stalls, with ample room for passing to and fro without inconvenience; and as there are to be eleven rows of rather more than two feet each in breadth, these will accommodate about three hundred persons; added to which there are to be ten rows of open pit seats behind, calculated to hold about four hundred more; so that the entire pit, with its passages, will not contain above eight hundred spectators. It will be seen, therefore, that the enterprising Mr. Gye, heavy as his stake is in the success of the concern, is resolved that no consideration of gain shall interfere with a just regard for the personal comfort of those who give him their patronage. The same remarks will apply to the amphitheatre above the boxes, which is to be separated into spacious stalls, all enjoying a perfect view both of the stage and house. Above and behind this again, is to be a deep gallery with twelve rows of seats, all commanding a good view. The two together are to accommodate six hundred persons; and thus the entire house, magnificent as it is to be, will not during the regular opera season accommodate more than 2,000 spectators, or about as many as her Majesty's, in the Haymarket; but then the elegance, the comfort, the drawing room ease which is to attend the new arrangement will make a visit to the opera a very different affair altogether to what it has been hitherto. It should be added, moreover, that a saloon or crush-room of noble dimensions is to be constructed, eighty feet long by

thirty broad, with corresponding height, that will communicate by corridors and staircases with all the boxes; besides which there will be access for the visitors to promenade in the illuminated floral conservatory contiguous to the theatre, and intended to form a new portion of Covent Garden Market. On no score, then, is any room left for complaint as regards the amplexness of accommodation provided: for when all that is planned has been realized, there will be liberality even to profusion.

Such is a general view of the house and its prospective capabilities. As regards the appearance of the interior there can be no doubt that it will be most splendid. The dome-shaped roof, with gilded trellised openings for ventilation, supported apparently by four magnificent pilasters, dividing the

smiling; Mr. Hope, the chairman, appears animated; prospects of dividends brighten the faces of a few of the largest shareholders; Trotman's face beams with a refulgent smile, as they make the good ship fast to his unyielding anchors; Howlett has taken his last magnificent photograph on board the ship, with a portrait of the chairman of the company in the foreground; Hobbs is as happy as though he had picked the most intricate lock in Christendom; there is a general shaking of hands all round, and thanks to that able commissariat officer, Trotman, a leviathan round of beef and the contents of a well assorted hamper afford a grateful and welcome opportunity of making the first meal in the big ship, which, rough though it be, is not beneath the notice of the Marquis of Stafford, Lord Dufferin, Mr. C. E. Stewart, of the London and North Western Railway, and other persons of note, whose interest in the undertaking has attracted them to Millwall.

The ship now lies at her moorings, just her own length from the spot on which she was built, in 19 feet of low water, although she draws at present only 14 feet by the bows, and 16 feet 6 inches by the stern.

The Leviahan will probably remain at her moorings for three months, while completing her interior and other fittings, and during a portion of this time it is expected the public will be admitted, under certain regulations, to view her.

SUNDAY, APRIL 25, 1858.

boxes into three separate sections—a front and two sides—the dead white and richly burnished gold decorations in front of the boxes, with statues, bas-reliefs, frescoes, &c., all in perfect harmony with the general design, will produce unquestionably a most striking effect, which will be further heightened by the rose colored hangings and upholstery that characterizes the boxes throughout. As yet, however, all such matters are merely speculative. It is of more importance that strength of material, security from fire, and perfect facility for rapid egress should be provided; and there is no deficiency in any of these respects. The main walls destined to support the roof are constructed on the cellular principle; that is, one within another, united by cross walls at short intervals, running all the way up; so that although the inner and outer be not more than five feet thick, they, by this arrangement, have a strength equal to twenty-four feet, and amply sufficient to bear a far heavier weight of roof than what it is here intended to support—consisting of nine girders, each weighing eighteen tons and ninety feet in length, so as, without any other aid, to sustain the entire covering of the fabric. To see these girders dangling in mid air is of itself painfully interesting, but admiration for the mind that planned them, and confidence in their security guaranteed by his skill, are unavoidably the sentiments of those who have once seen them placed in position and beginning to assume the all important duties they are destined to perform. There can be little danger, therefore, with walls so substantial, and a roof, which though not itself, slating, ventilators, &c., as well, weighs little more than 250 tons, and yet is able to bear a strain of 3,000. It will be remembered, however, that there are to be workshops and storerooms supported by these girders above the artificial ceiling of the *salle*, but assuredly there is ample provision for every possible contingency. The walls, again, are fireproof throughout, and provisions made for isolating fire, where it occurs, by total separation from the rest of the building; the staircases are to be most solid and capacious, to allow easy egress without any possibility of accident; and, in short, every plan and appliance that constructive skill can suggest is to be brought into play, in order to make the new Opera House perfect *sui generis*, rising from its ashes like the phoenix of antiquity, but with a splendor never paralleled before in this country.

The above very brief and necessarily imperfect description of an edifice as yet only in embryo, will, at all events, show that Mr. Gye and his able coad-

A CARD.—Having noticed in the *Sunday Dispatch* of this day, my name published as one of the Directors of the Bank of Pennsylvania, I consider it a duty I owe to myself to contradict the report. It is true that on the 27th of February, 1857, I was elected a Director in that unfortunate institution, but immediately after receiving an official notice of my being elected, I sent in a resignation, a copy of which is here annexed. I hope the Editors of the *Sunday Dispatch* will, in their next number, correct their mistake.

Philadelphia, November 1st, 1857.

H. MESSCHERT.
Philadelphia, February 5th, 1857.
To the President, Cashier and Directors of the Bank of Pennsylvania, Philadelphia:—

GENTLEMEN:—Having received an official communication announcing my election as Director of the Bank of Pennsylvania, I think it proper to express the gratification I feel at this *unsought for compliment* and *unlooked for honor*. At the same time, I am obliged, from a conscientious sense of what is correct, to place in your hands this note, as my resignation, believing that no man has a right to accept an appointment of any kind, unless it is in his power faithfully to perform the duties of his post, and at present my own affairs require all my attention, which would prevent my doing so. With my best wishes for the prosperity of the Bank, accept, gentlemen, the assurance of my sincere regard, with which I have the honor to be, most respectfully,

Your friend and obedient servant,
(Signed,) H. MESSCHERT.

The largest Pumping Engines in the United States, and, with few exceptions, in the world, are those in course of construction for the Brooklyn Water Works. Each of the two engines will lift 10,000,000 gallons to an average height of 165 feet per day of sixteen hours, through a tube 36 inches in diameter and about 3,300 feet long.

Messrs. Welles & Co., the contractors for the entire works, issued proposals some twelve months since, inviting bids for plans. The result was that some seventeen plans of engines were submitted, involving distinct principles of action, or variety of form. There were single acting, double acting, and direct acting cylinders; beam engines, steep engines, inclined engines, and horizontal engines; some traveling 700 feet per minute, others at 120 feet, with all kinds of pump forms and motions. It became evident, however, before long, from the character of his drawings and numerous examples of work executed, that the plans of Mr. William Wright, Superintending Engineer of the Woodruff & Beach Iron Works, at Hartford, were the most suitable, and Messrs. Welles, after a thorough examination of the various proposals, as well as of the principal engines in the country, decided to accept Mr. Wright's plan.

The conduit of the Brooklyn Water Department is situated some 130 feet below the great Distributing Reservoir, and powerful engines will have to be employed to raise the water. The two machines now in course of construction are double-acting fly-wheel engines of 10 feet stroke and 80 in. bore, each working two pumps of 54 in. bore and 36 in effective stroke, by spiral cams. This is a modification of the Hartford pumping engine, built by Messrs. Woodruff & Beach. Three fly-wheel shaft gears, with two pump-shafts, each driving two pumps and reducing their speed to one third that of the fly-wheel shaft. The four pumps are each fitted with double pistons, worked by the cams, alternately toward and from each other, with a lap on the upper and lower centers, so that the water is lifted without changing its direction, as in other double-acting pumps. In the Brooklyn engines, only one pair of pumps will be used for each, the piston of one working its charge through the other, the effective stroke of each being 36 in. with 42 in. travel, and the cams being connected directly to the fly-wheel shaft. Double-beat valves are also to be used.

The duty established as a test of these engines is 600,000 pounds of water raised one foot, with one pound of coal; the water being measured by actual discharge into the Ridgewood Reservoir. The trials of the Hartford engine, gave, in one case, 620,000, and in another, 690,000 pounds duty.

An important improvement has also been adopted for the large air chambers attached to the engines, and which will be serviceable in controlling the action of the force-tube column. The boiler power will consist of three "drop-return flue" boilers for each engine, each set containing about 4,800 feet square of surface. These, with the steam-pipes, cylinders, &c., will be carefully protected from radiation. The building inclosing the engine and boiler rooms will be 110 feet long by 80 feet wide, with a chimney of 4 feet flue and 100 feet in height.

Notwithstanding the late panic, the other portions of the water-works have made rapid progress, and a full complement of hands has been continually employed. The conduit line of masonry is already completed, and the back-filling and furnishing stone and brick will be pushed through this Winter. Section eight of the conduit, which section is contiguous to the engine-house, is, perhaps, the worst portion of work on the line. Much of the grade is full ten feet below the water-flow of the country, and it is only by means of steam-pumps, necessitating an immense expenditure, that operations can be continued. The sub-contractors on this section, Messrs. Farwells and Potter, now think they have surmounted the principal part of their difficulties, and that they will be ready with their portion of the work next season. Three of the storing reservoirs are progressing rapidly, and operations will be continued upon them throughout the Winter. The grand distributing reservoir at Ridgewood has now taken form and shape; the eastern section of this immense basin is so near completion, that it will be ready for water this Fall, while only one-third the remaining section remains to be finished.

Upward of 9,000 tons of castings have already been delivered to the contractors, and over 100 tons per diem are being manufactured in various foundries throughout the country. Several cargoes of pipe are now on their way from Scotland, and nearly all the hydrants, stopcocks and special castings are ready. Large bodies of men have been laying pipe in the streets of the city for several weeks past, and some twelve miles of tubing are already down.

The Water Commissioners have not, as yet, put the canal line into the hands of contractors. It would much alleviate the present suffering condition of the laboring classes if this portion of the works could be immediately set a going, as the Messrs. Welles state that they would forthwith find employment for from 500 to 700 men upon it. No decrease in the number of men employed has occurred upon the entire line of works during the hard times, and between 800 and 900 laborers are now steadily engaged. This force will be continued throughout the Winter, if the Brooklyn Common Council consent to pay the contractors in cash, during the next few months, instead of in the now much depreciated bonds of the city.