

MOVING THE MONTAUK THEATER.

A task of "house moving" on a colossal scale is just now being carried on, with every appearance of success, in the neighborhood of De Kalb and Flatbush Avenues, Brooklyn. When it is stated that the weight of the building is several thousand tons, and that it has to be moved back some 50 feet from one street, slewed around, and moved another 65 feet to another street, and this without causing any settlement or the slightest crack in the massive brick walls, it will be understood just how formidable and delicate a job this is. The old Montauk Theater, which is 153 feet in length by 45 feet across its greatest width, has stood for many years with its façade on Fulton Street. Recently the city decided to construct an extension of Flatbush Avenue; and since the new street line cut diagonally through the center of the building, the theater was purchased by the city, who subsequently sold it to private purchasers, who decided that there were yet many years of useful life in this fine old theater, and made arrangements to shift it bodily to a new site, on that portion of the block which would be left after the Flatbush Avenue extension had been cut through.

The theater is built entirely of brick. The walls are 2 feet 6 inches in thickness at the base, and 65 feet in height around the auditorium, and 95 feet high around the stage. The building is rendered particularly heavy by the fact that it is of fireproof construction, with a brick arch roof and galleries, and other details of construction of unusual weight. By reference to the accompanying diagram, the old and new positions of the theater will be made plain. Briefly stated, the task consisted in moving the theater bodily 47 feet back

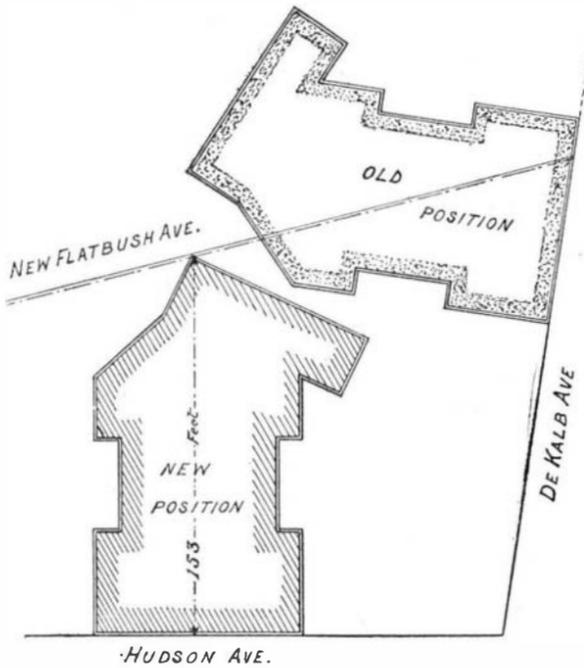


Diagram Showing the Old and New Positions of the Montauk Theater.

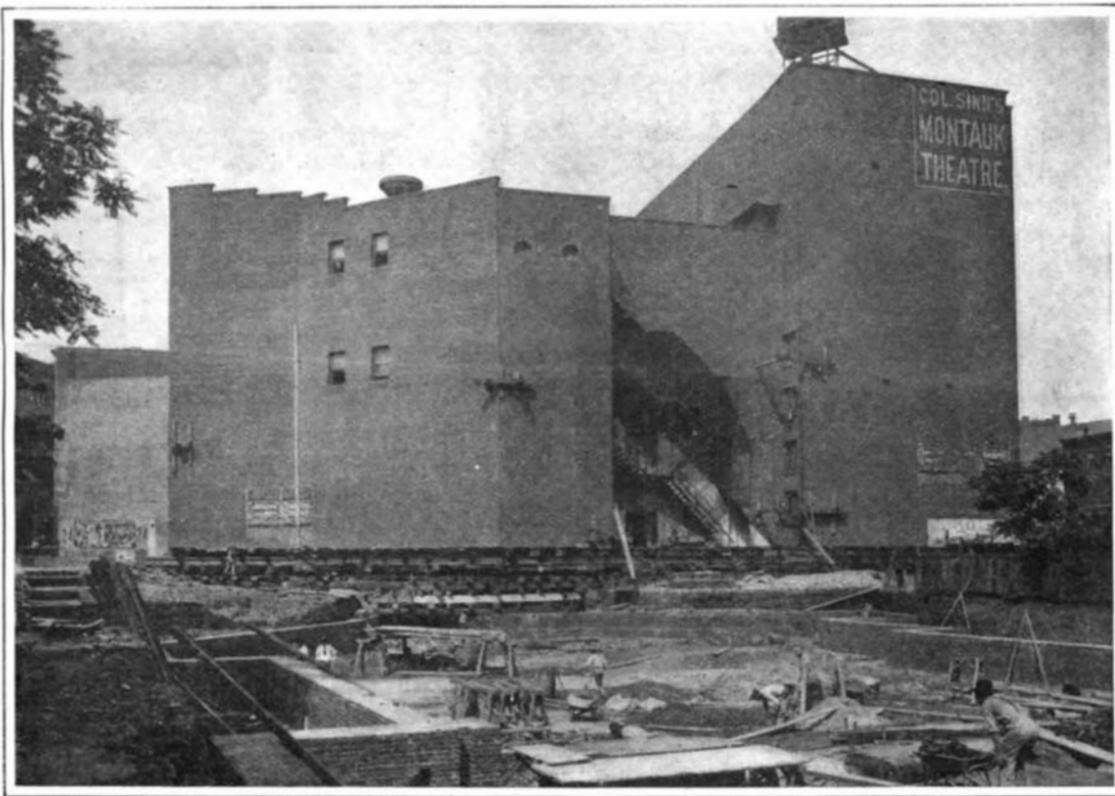
load was transferred largely from the piers to these timbers, and so distributed to the crib work.

The first task was to cut a series of holes through the base of the theater walls, spaced 3 feet center to center, and introduce through each hole two 15-inch I-

beams. At their ends these I-beams rested upon two parallel lines of crib work, one on each side of each wall. The crib work was built up as follows: Upon the ground were first laid 12-inch by 12-inch timbers in courses of varying depth to compensate for the irregularity of the ground, and upon these were laid parallel lines of 60-pound steel rail, the rails being laid in groups of four, there being one such group directly below each point at which the wall of the building was pierced for the supporting I-beams. Immediately below the I-beams which supported the walls, longitudinal lines of 15-inch I-beams were laid in pairs parallel with the walls, and between the bottom of these last-named beams and the top of the steel rails, were introduced the nests of 2-inch turned-steel rollers, upon which the building was to make its journey. The next step was to provide an abutment for the horizontal jacks to bed against, when the actual moving of the building took place. For this purpose, 12-inch by 12-inch timbers were laid parallel with the De Kalb Avenue wall of the building, and anchored by chains to the supporting crib work below the building. Twenty-five jacks manned by twenty-five men were then placed at regular intervals between the 12-inch abutment timbers and the longitudinal 15-inch I-beams—twenty on the outer wall and five on the inner wall. The wall of the building between the needle-beam supports having been cut away, and the building slightly raised on 1,200 jacks, everything was now ready for the horizontal moving. The screwing up of the jacks was done by signal, each man taking a half turn when the whistle sounded. The work proceeded without any hitch, and in the course of a week the huge mass had been moved back 47 feet from De Kalb Avenue.

In slewing the building around, a center will be taken within the building, and the turned-steel rollers will be laid radially from this center. The jacks will be applied tangentially at the corners of the supporting framework, and the huge mass will rotate exactly as does a bridge on its turntable. When it has been turned through 85 degrees, it will be pushed forward until the wall which fronted on De Kalb Avenue is fronting on Hudson Avenue. Here it will be lowered upon a new foundation which has been already built in place.

In the history books in use in English grammar schools about a quarter of a century ago, the pupils were led down centuries of kings or of wars—normal English history in those days took cognizance of little else—until in due course they reached the reign of George III., of happy memory, and the "South Sea Bubble." This curious name is given to a period when England went speculation mad, and people ruined themselves by financing the most hare-brained schemes. To return to the history book: As an example of the fantastic ideas to which people were willing to subscribe two are quoted—a plan "for importing live jackasses from Spain to improve the quality of the domestic breed," and one for "casting sawdust into perfect boards without knots or flaws." More than a century ago these ideas commanded capital, and thirty years ago they were quoted as wildly fantastic. But many Spanish asses have been imported to the United States—though not exactly to "improve the local breed"—and the idea of using sawdust has long been turned to practical use.



Montauk Theater Cut From its Foundations, and Being Moved on Steel Rollers to Its New Foundations.

from De Kalb Avenue, slewing it around through an angle of 85 degrees, and then moving it forward between 60 and 70 feet until it fronted on Hudson Avenue.

The first step taken by the contractors, Iversen & Gustavsen, in moving this vast shell of a building, which has no interior division walls to bind the outer walls together, was to provide a system of struts and tie-rods which would serve to keep the whole structure in true vertical position and prevent distortion of any kind, either in a vertical or horizontal plane. Therefore, the floor of the auditorium was cut away, and horizontal lines of 12-inch by 12-inch timber struts were run across the building at the level of the floor, and heavy 1½-inch tie-rods provided with turnbuckles were carried through the walls, in the line of the timber struts, and attached to large wooden beams on the outside of the walls. By driving wedges between the abutting ends of the 12-inch by 12-inch struts and screwing up the turnbuckles on the tie-rods, the walls were securely held in their exact relation at the plane of the auditorium floor. Other sets of tie-rods were run across the building at the level of the balcony. Particular attention was paid to the proscenium arch, which is of 35 feet opening and spanned by a steel girder. The load of the wall above this girder is carried upon two brick piers, formed by thickening the walls on either side of the arch. In order to relieve these piers of their concentrated load and distribute the weight more evenly upon the supporting crib work below, ten 12-inch by 12-inch vertical timber posts were placed across the opening, extending from the under side of the arch to a bearing upon 12-inch by 14-inch timbers laid upon the crib work beneath it. By wedging these vertical supports, the arch



View Inside Theater, Showing the Crib Work, the Tie Rods, and the Vertical Posts for Bracing the Proscenium Arch.

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