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THE ZINN BUILDING.

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The Zinn Building is located at the southeast corner of 25th Street and Eleventh Avenue, and is a fine 11-story structure designed for and built by the Simon Zinn Company, manufacturers of fancy metal goods, as well as private offices, requiring, therefore, very heavy floor construction, the floors being designed for 250 pounds live load per square foot. About three-quarters of the basement is on the street level, while the engine room floor was carried down to 11 ft.

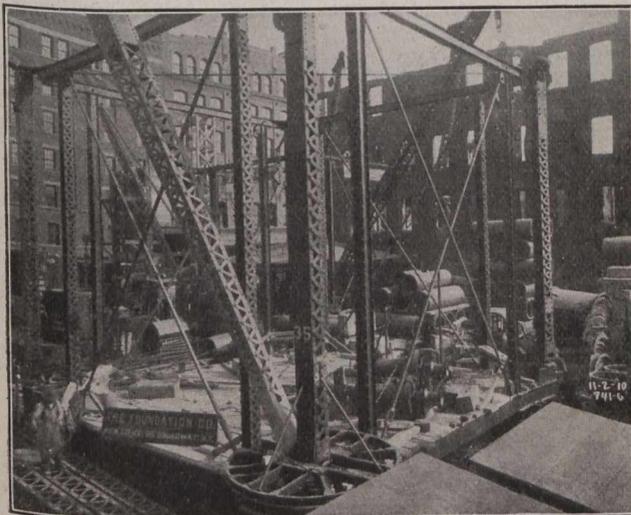


Fig. 1.—Four-Masted Steel Derrick.

2 in., and the boiler room and coal vaults to 15 ft. 2 in., the latter being under the 20-foot side walls on Eleventh Avenue, the lot being about 100 ft. by 100 ft.

This building leads the way for a radical improvement of the buildings in this valuable neighborhood.

In September, 1910, the writer reported to Messrs. Edward I. Shire and Lewis R. Kaufman, the architects for this building, his opinion on the proposed plans for the foundations, having previously received from the architects the results of the wash borings taken by Messrs. Phillips & Worthington. The two following tests give a good idea of the sixteen borings that were made:—

Test No. 2.—Zero equals 2 in. above curb A:

- 0' 0" to 9' 6" Fillings.
- 9' 6" to 31' 0" Sand and gravel.
- 31' 0" to 43' 4" River mud.
- 43' 4" to 45' 4" Sand and gravel to rock.

Test No. 8.—Zero equals 5 in. above curb:

- 0' 0" to 17' 4" Fillings.
- 17' 4" to 33' 8" Sand and gravel.
- 33' 8" to 50' 2" River mud.
- 50' 3" to 67' 10" Medium sand to rock or boulder.

In short, the site was "made ground" over the river silt, or mud, the filling consisting as usual of a little bit of everything, including boulders, sunken timbers, &c., which we afterwards found to be correct.

The "filled in" portion extended from the street level down to from 8½ to 18 feet below the curb, while the borings indicated that the river mud or silt extended from 14 ft. 8 in. to 33 ft. 6 in., or a variation of nearly 17 feet. It is not conceivable that the river silt was originally so much out of level, so the inference is that the sand, &c., sank into the silt, displacing it in places and forcing the adjoining portions to a higher level.

This is the regular Hudson River silt, and is a very much more treacherous material than the so-called New York quicksand which overlies the hardpan in the whole lower portion of Manhattan Island.

Under these circumstances the writer was very strongly of the opinion that the only really reliable foundation for this building would be pneumatic caissons, and the way the caissons acted while being sunk confirmed this opinion most decidedly.



Fig. 2.—Showing Two Four-Masted Steel Derricks. Steel Forms used for Building up Cylinders—Collapsible Steel Shafts Inside of Steel Forms. Wooden Cofferdams, Used where Concrete Stopped Below Ground. Pile of Cast Iron Blocks Marked "B" Used for Weighting Down Caissons. Each Block Weighs 1½ to 2¼ Tons.

In addition to the very treacherous nature of the soil that repeatedly "held a caisson up" and let it drop to the deck without warning, there is the fact that a subway will probably be built up Eleventh Avenue some day, which would tend to lower the water below the tops of any wooden