

		1911.			
" 12	"	January	3rd	"	-59.3 "
" 29	"	"	3rd	"	-64.4 "
" 4	"	"	5th	"	-57. "
" 5	"	"	6th	"	-59.9 "
" 6	"	"	10th	"	-62.7 "
" 22	"	"	13th	"	-64.1 "
" 23	"	"	15th	"	-60.3 "

The only remarkable or unique feature of this job was the number of times the caissons ran away—or got beyond control and sank in the silt up to the deck. This happened so often that whenever a caisson was undermined, ready for sinking, the entire gang came out instead of staying in the air chamber as usual. Otherwise there would have been much loss of life.

This resulted in a loss of about 8 or 10 hours each time, as it, of course, took time to send a man down the shaft with a pail to clear away enough material to make room for the bucket and gang.

The following are the caissons that ran away:—

Caisson No. 33	—Dec. 1st, 1910		
" " 34	" 6th		
" " 34	" 9th		
" " 34	" 10th	(Broke 35 ft. above C.E.)	
" " 26	" 15th		
" " 34	" 15th		
" " 10	" 15th		
" " 24	" 17th		
" " 30	" 27th	Full of water.	
" " 28	" 28th		
" " 11	" 28th		
" " 28	" 30th	Dropped five feet.	
" " 29	—Jan. 3rd, 1911.	Dropped five feet.	
" " 12	" 3rd	Dropped five feet.	
" " 4	" 5th	Dropped five feet.	



Fig. 5. On December 21, 1911, showing grillage concrete in place.

Caisson No. 34 on December 10th sank suddenly while an inclined timber brace was in position. This brace toed against Caisson No. 30 and was acting against the top of No. 34. The result was that No. 34 was broken in two about 8 feet below the ground, or 35 feet above the cutting edge, requiring the removal and rebuilding of the upper portion which was, of course, then as good as the original; the cost of the accident being borne by the contractor, as a matter of course.

A new method of filling the working chamber was proposed and adopted by the writer in view of his experience in removing caissons already sunk where he had found that concrete "benched" and therefore put in rather dry was very poor, and concrete put in very wet was apt to shrink

from one-half to one inch leaving a space between the deck and concrete.

This shrinkage appears to go on for 12 to 18 hours while the concrete is setting and drying, so on the Zinn Building he had the concrete placed in the working chamber as wet as possible up to about 10 inches of the deck and then allowed to set under air pressure for about 15 hours, when the

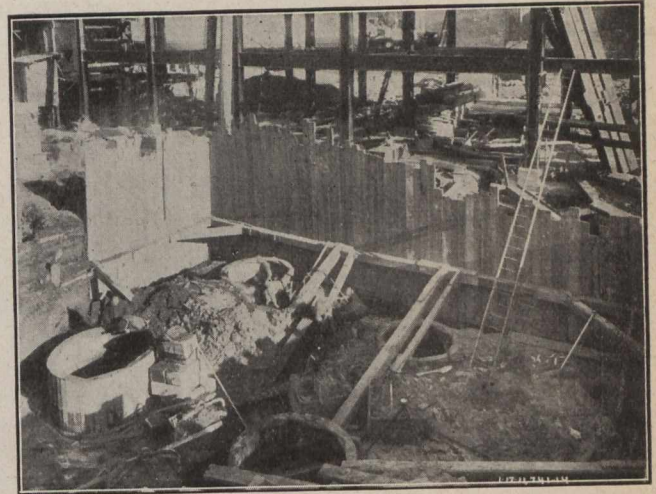


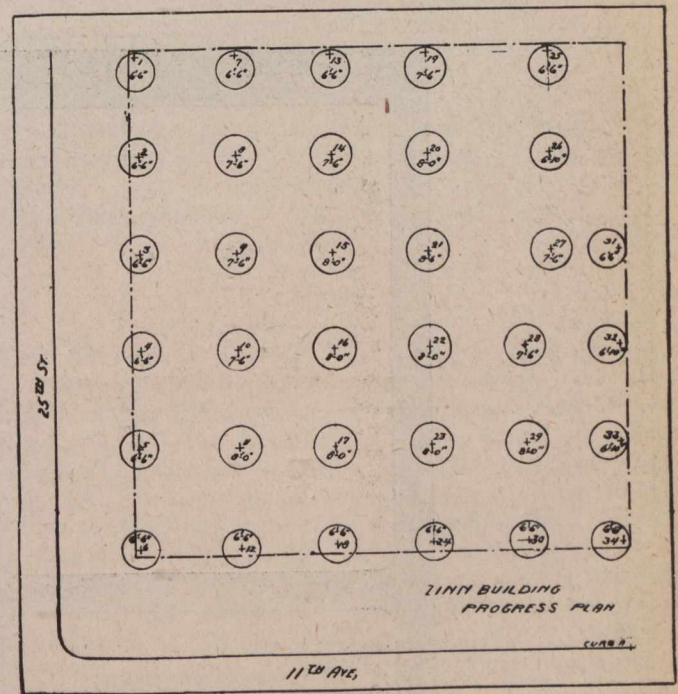
Fig. 6. Showing Wooden Cofferdams on Caissons on southwest corner.

lock was taken off and wet grout dumped from the top of the shaft, followed rapidly by very wet concrete.

This is the cheapest and best way of filling the working chamber—the only care required is to see that there are pipes or other means of escape for the air under the deck.

The compressed air should be left on for at least 18 hours and the concrete pushed as rapidly as possible after taking the air off.

As already intimated, the building was built by and for the Simon Zinn Company, whose architects are Messrs. Edward I. Shire and Lewis R. Kaufman.



Progress Plan.

The Hay Foundry Company erected the steel work, and the Foundation Company the caisson and foundation work, and Jacob Zimmerman was the general contractor; the writer being the Consulting Engineer to the owners on the foundation work.