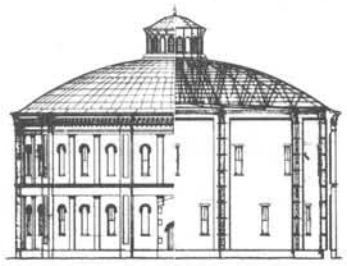

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

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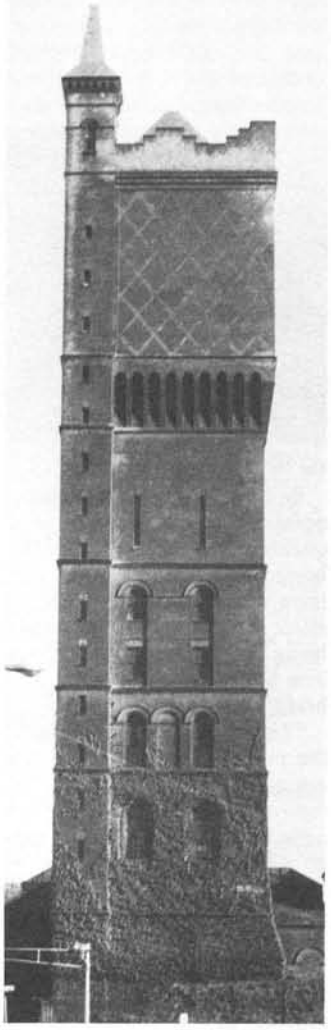
WEEHAWKEN TOWER THREATENED

While the architecturally elaborated standpipe has been a common attribute of large 19thC municipal water-supply systems on the Continent, in Gt. Britain and N. American it has been a rare breed, the head pressure on the mains supplied directly by the pumps if not available from a high reservoir. The most celebrated American tower is, of course, Chicago's, built in 1869, a survivor of both the Great Fire of 1871 and the vagaries of urban progress. Of somewhat less celebrity but quite as elegant is the brick tower erected in 1883 by the Hackensack Water Co. atop the Palisades in Weehawken, N.J., for the supply of that town and Hoboken. It was regarded a monument in its time and has remained so, serving incidently as a navigational landmark for ships on the Hudson.



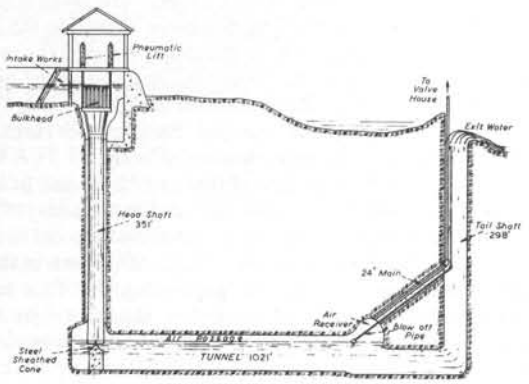
Theodore Conrad photograph.

The tower has been likened to the Palazzo Vecchio in Florence, with a touch of the Moorish in the diagonal patternwork of the tank section, and perhaps even a whisper of Rhenish in the steeple. Whatever its lineage, it is deeply loved by its neighbors, who have risen up in righteous fury over a recent threat to the structure in the guise of a dubious benefit that no one seems to need or want. A private developer proposes a high-rise complex of senior-citizen housing, in which, according to the tower's champions, he is propelled less by feelings of humanity than by the prospects of outrageous returns, guaranteed by the feds.

The local outcry, from all sectors, has been vociferous, and universal in its dismay over demolition of what is seen as a vital element in the community's physical fabric and sense of identity. The preservation campaign, being directed by architectural historian/critic Theodore Conrad [SIA] of Jersey City—recently appointed the city's Historic Commissioner—has centered on an attempt to have the tower placed in the Natl. Register.

THE RAGGED CHUTE HYDRAULIC COMPRESSED-AIR PLANT

In 1903, blasting operations at Cobalt Lake in northern Ontario uncovered a rich silver ore deposit. In the boom which followed, cheap power became the key to extracting large quantities of silver at reasonable cost. At first, steam was used to power most equipment but coal was expensive in the region. Gradually, consumption of electricity grew and in 1909-10 was complemented by the development of an unusual "machineless" compressed-air plant at Ragged Chute on the Montreal River, nine miles SE of Cobalt. This plant, one of a very few to be built on the design principles of C. H. Taylor of Montreal, is the last of its type in operation. It is owned now by Ontario Hydro. Rock fissures several hundred feet below ground have diminished the efficiency and may require its shut down unless a way is found to fix the problem at reasonable cost.



Section through the Ragged Chute compressor. *Ontario Hydro drawing.*

Taylor's plants were colossal versions of the ancient "trompe," in which air was compressed by a water column falling in a closed pipe, the air being entrained at the top and freed in a closed chamber at the bottom. The Cobalt Hydraulic Power Co. built at a point where the river tumbled down over 1000 ft. of short rapids in a total fall of 54 ft. To harness the river a 660-ft. concrete dam diverted the water into a large basin, just below the surface of which two 16-ft. diam. intake heads, consisting of 66 14-in. diam. pipes, admitted water into the 351-ft. vertical shaft. When the rushing water entered these pipes it drew in and became mixed with air bubbles. Its velocity was increased by contracting the diameter of the intakes from sixteen to nine ft. When the water reached the bottom of the shaft it struck two steel sheathed concrete cones which reduced the velociy and liberated most of the air. The water was then diverted into a horizontal, 1,021-ft. tunnel where it lost its momentum and the remainder of the air was set free. This gathered in the dome of the tunnel and was piped, under a pressure of c125

Postscript. The Delaware Aqueduct, whose unfortunate accident was reported last issue, is again whole and receiving traffic, reports owner Albert Kraft [SIA].

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