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VIEWS OF THE NEW YORK STATE BARGE CANAL

New York State Waterways Association

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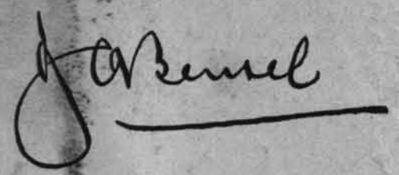
OF THE

New York State Waterways Association
Fifth Annual Convention

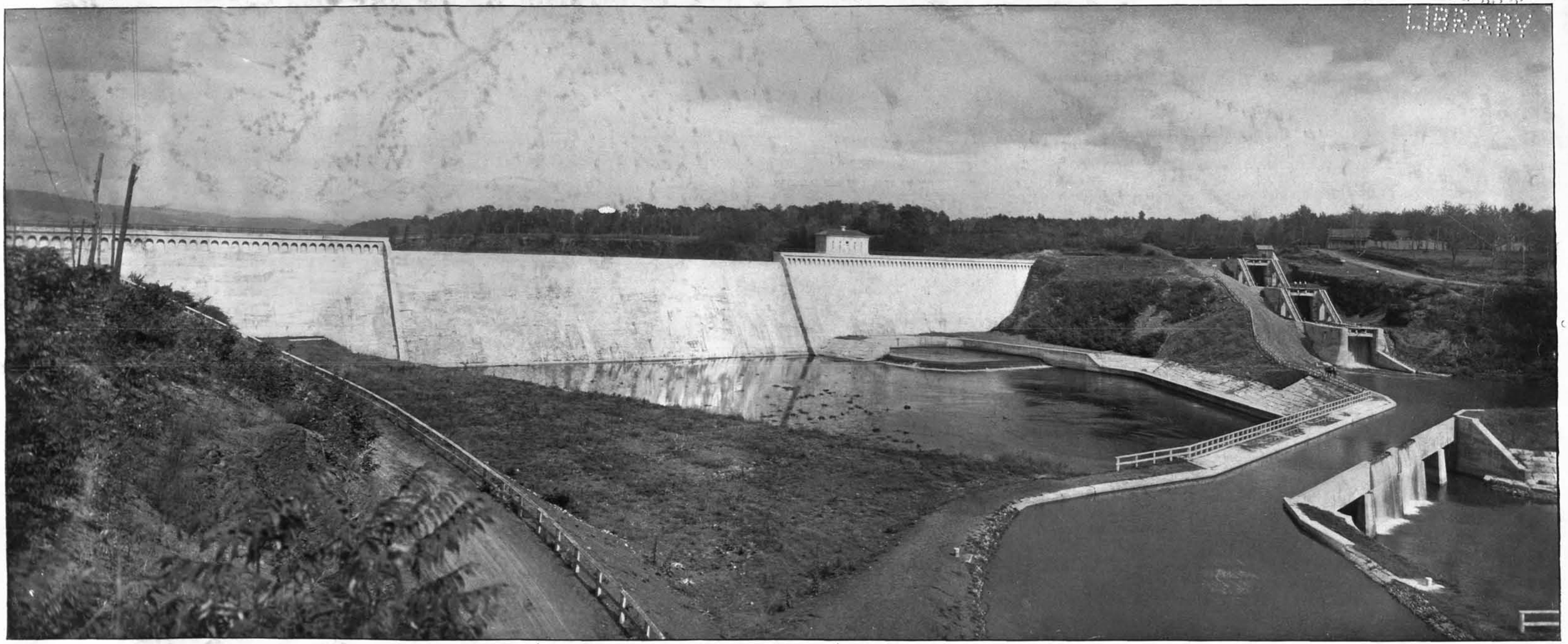
ROCHESTER, N. Y., OCTOBER 1-2, 1914

Views of the New York State Barge Canal

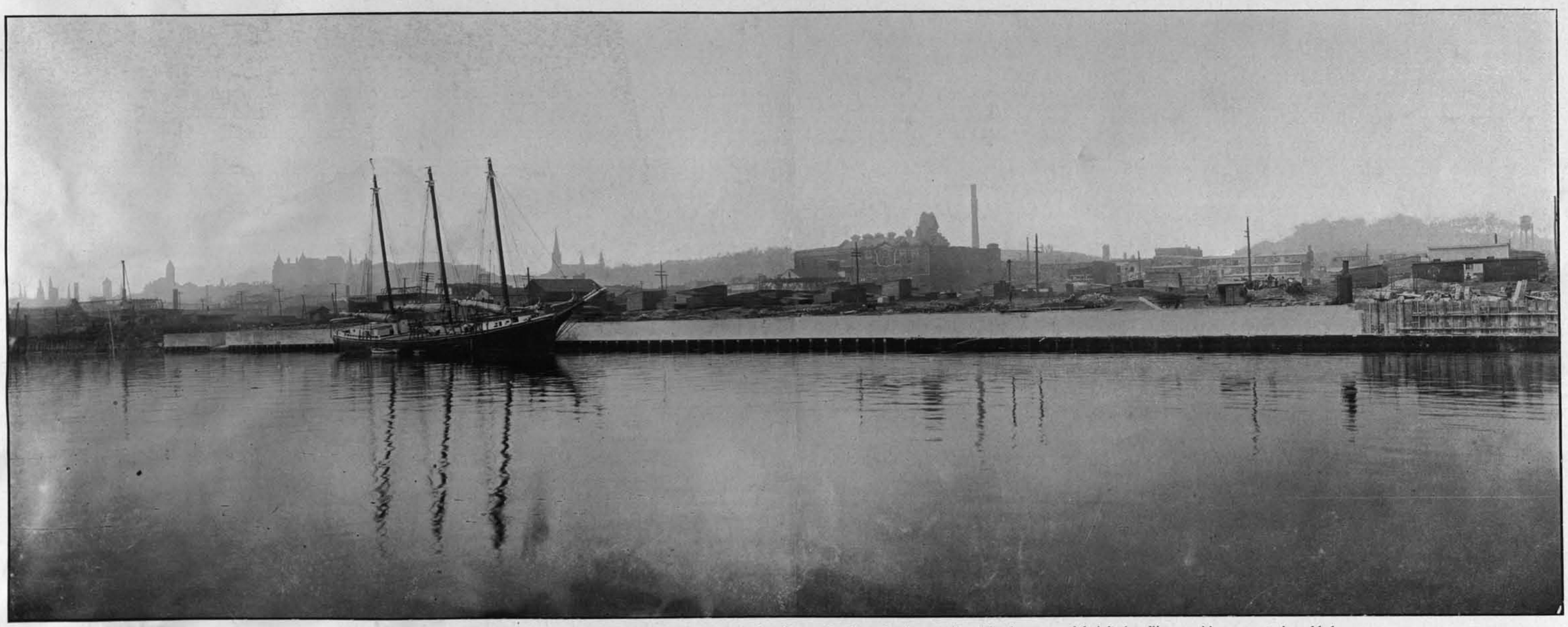
Presented by



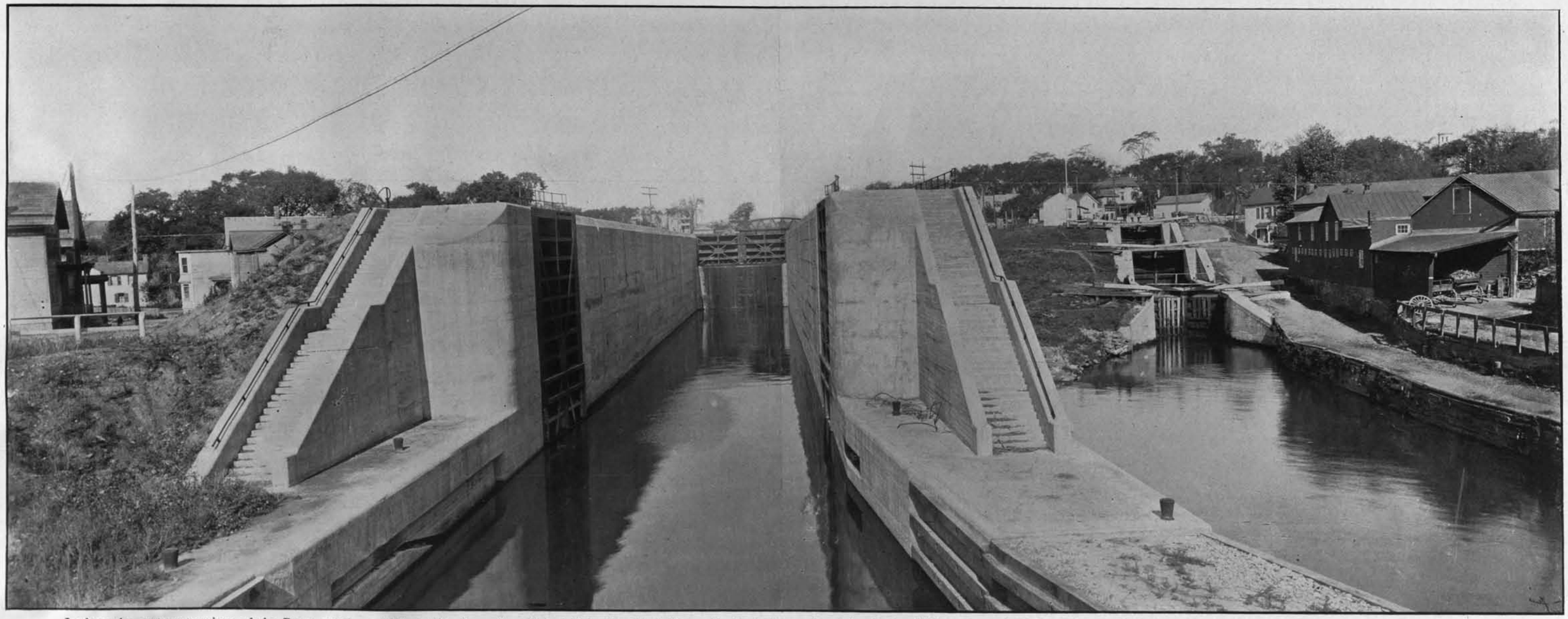
State Engineer and Surveyor



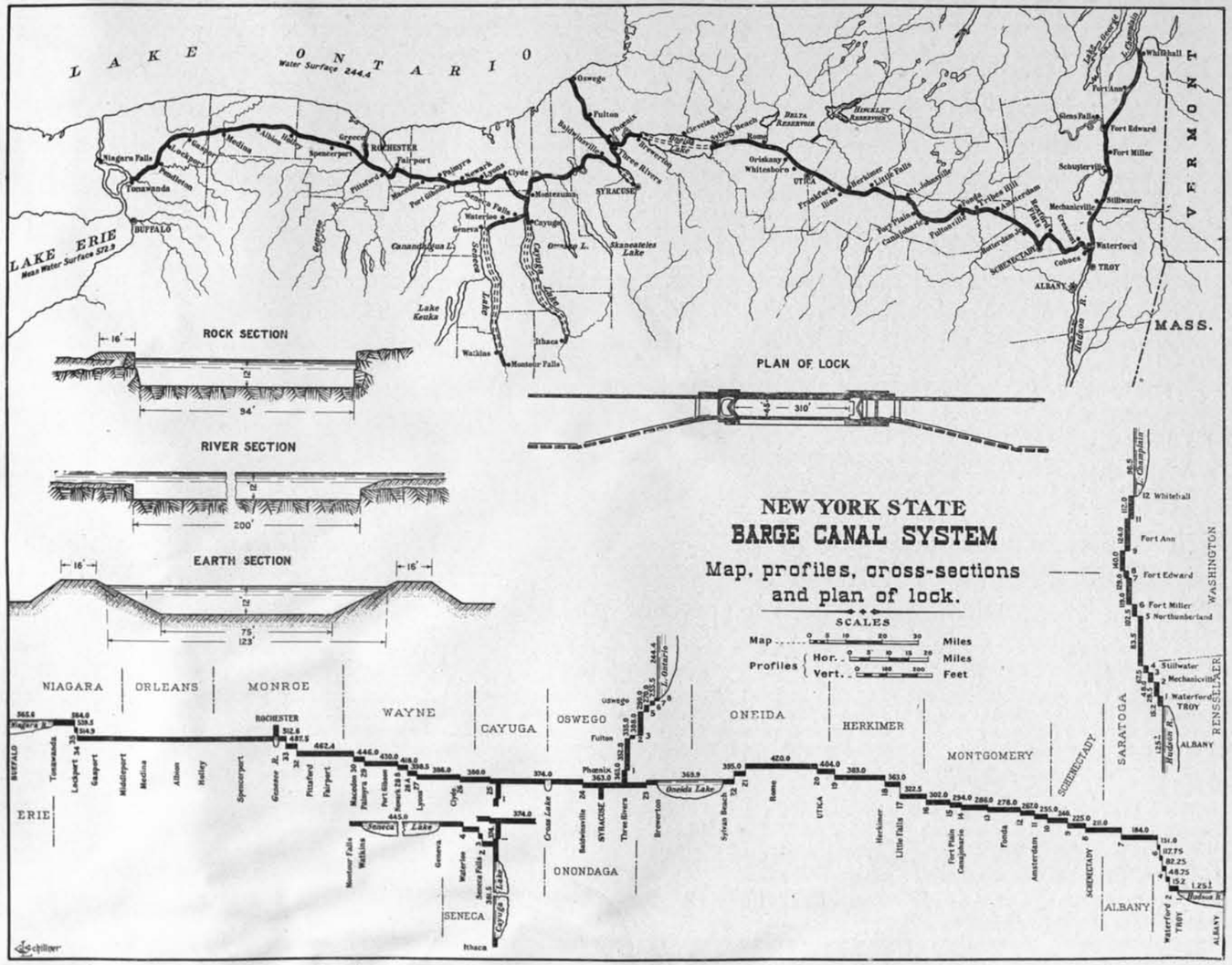
The dam at Delta reservoir. Also the relocated Black River canal, crossing the Mohawk on an aqueduct and ascending the precipitous river bank by a flight of three locks. This dam is 1,100 feetlong and has a maximum height of 100 feet and a masonry content of 90,000 cubic yards. The reservoir is four miles long by two miles wide, having a capacity of 2,750,000,000 cubic feet.



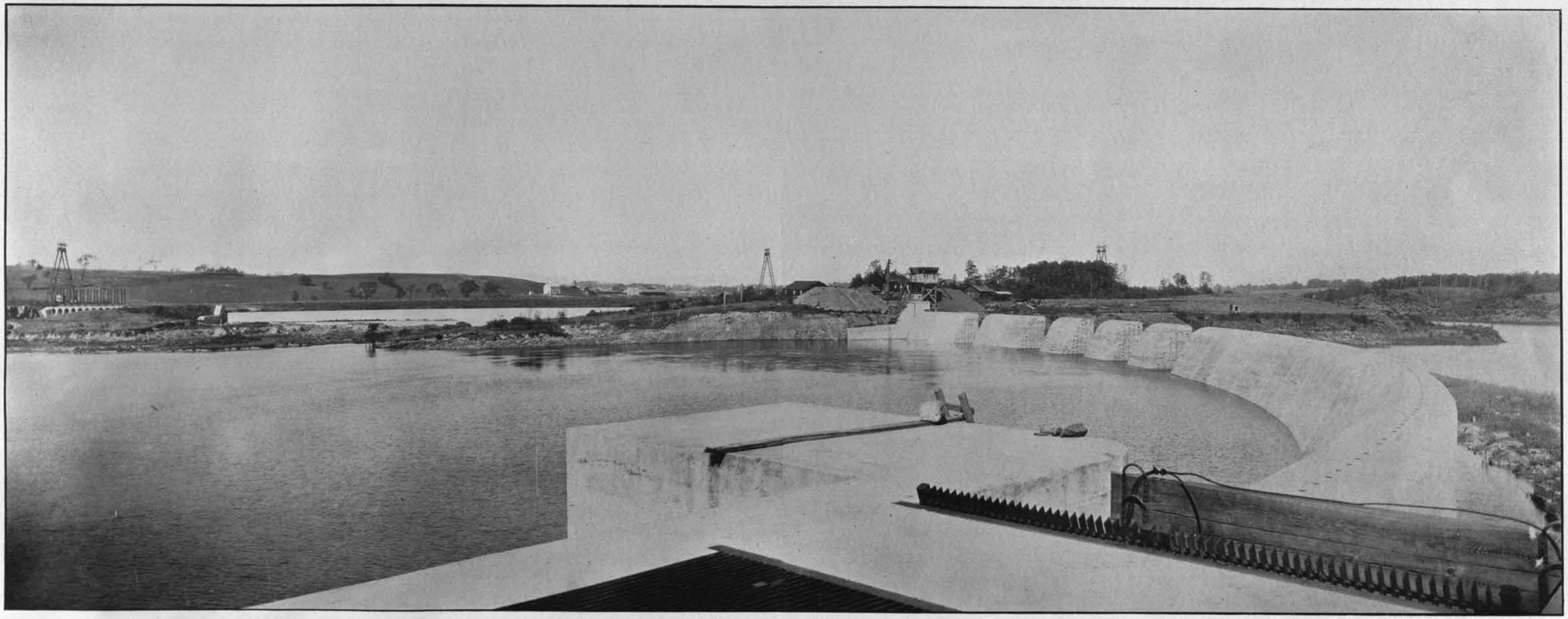
Barge canal terminal at Albany, situated on the west bank of the Hudson river. A dockwall 1,510 feet long has been built. Warehouses, and freight handling machinery are to be added.



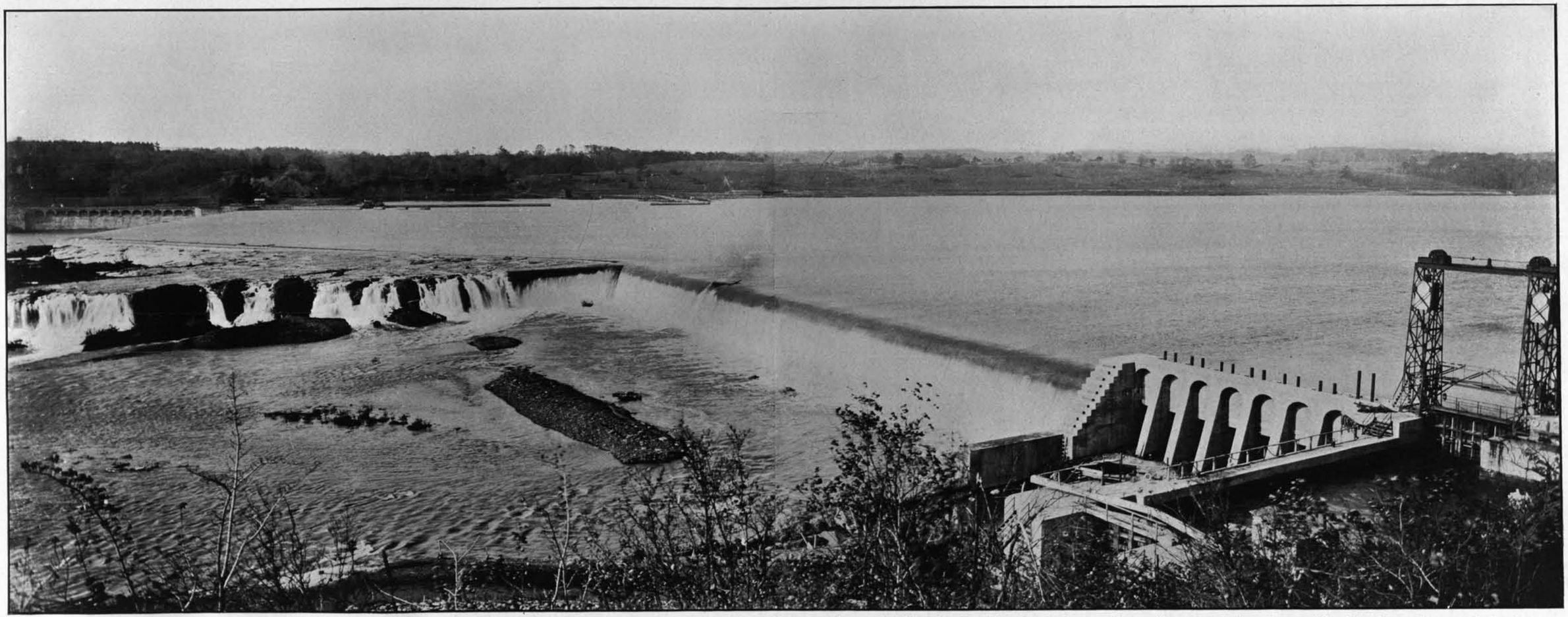
Lock at the eastern terminus of the Barge canal — 34½ feet lift, side walls 50½ feet high above lock floor — the first of a series of five locks which are located within a distance of about a mile and a half and constitute the greatest flight of high lift locks in the world, having an aggregate lift of 169 feet. Comparative dimensions are well illustrated by a flight of three old locks at the right.



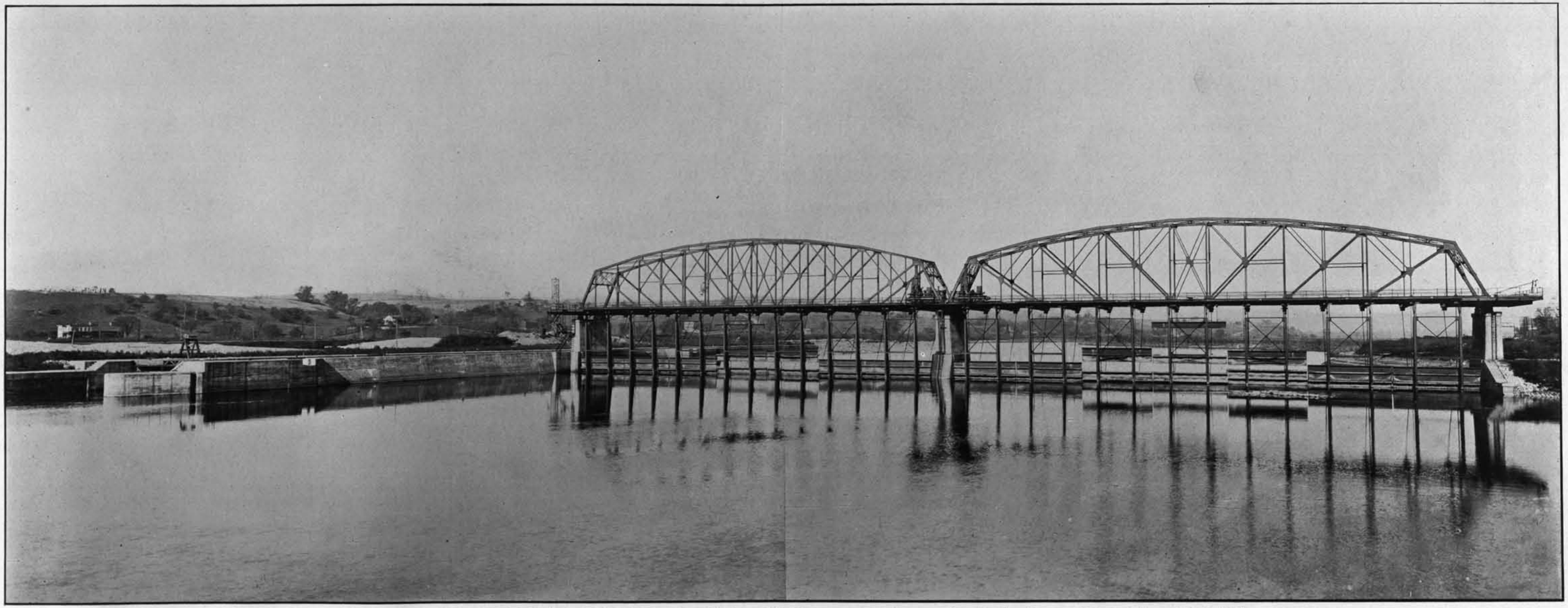
Completed section of the Barge canal in Waterford, just above the eastern terminus. In the distance are seen the D. & H. R. R. bridge and the second of the Waterford flight of locks.



Crescent dam, at the foot of Mohawk river navigation — completed except for five openings left for flow of river while work above is being prosecuted. Length, 1,922 feet; crest, 39 feet above apron; width on base, 42 feet; width on top, 11 feet 5 inches; width of apron, 40 feet. View from the power-house platform, showing the whole sweep of the dam, with the head-gates at the extreme left.

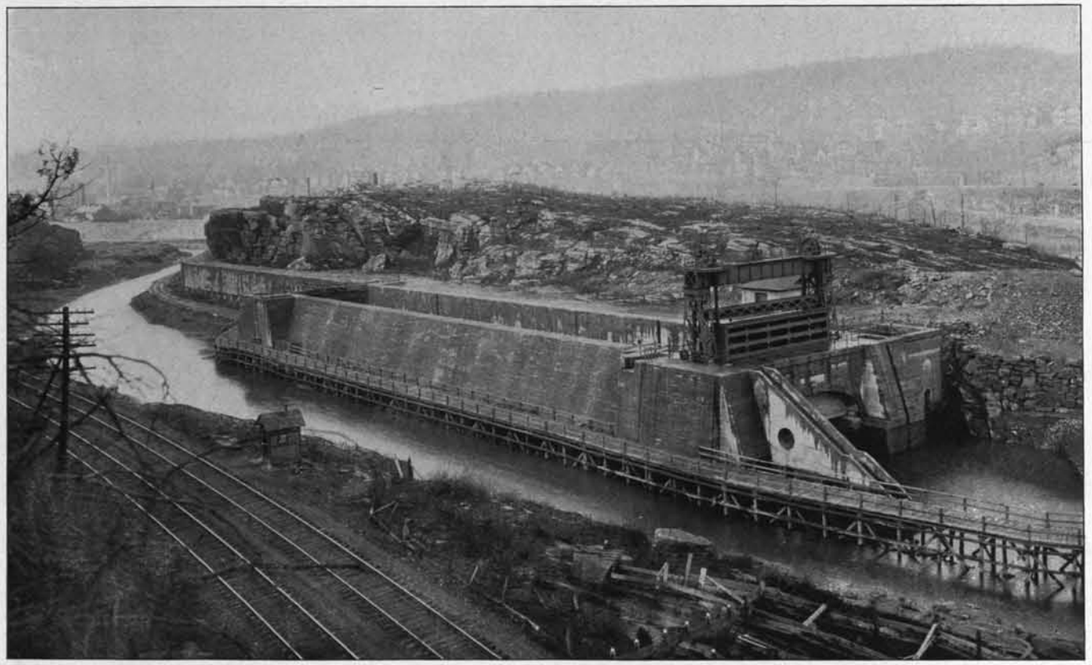


Vischer's Ferry dam, midway between Crescent dam and Schenectady, consisting of sections across two river channels and upon an intervening island. Total length, nearly 2,000 feet. Crest, 36 feet above apron. View from the northern end, showing head-gates and lock in old canal in the foreground, while the new Barge canal lock is seen at the left on the opposite bank.

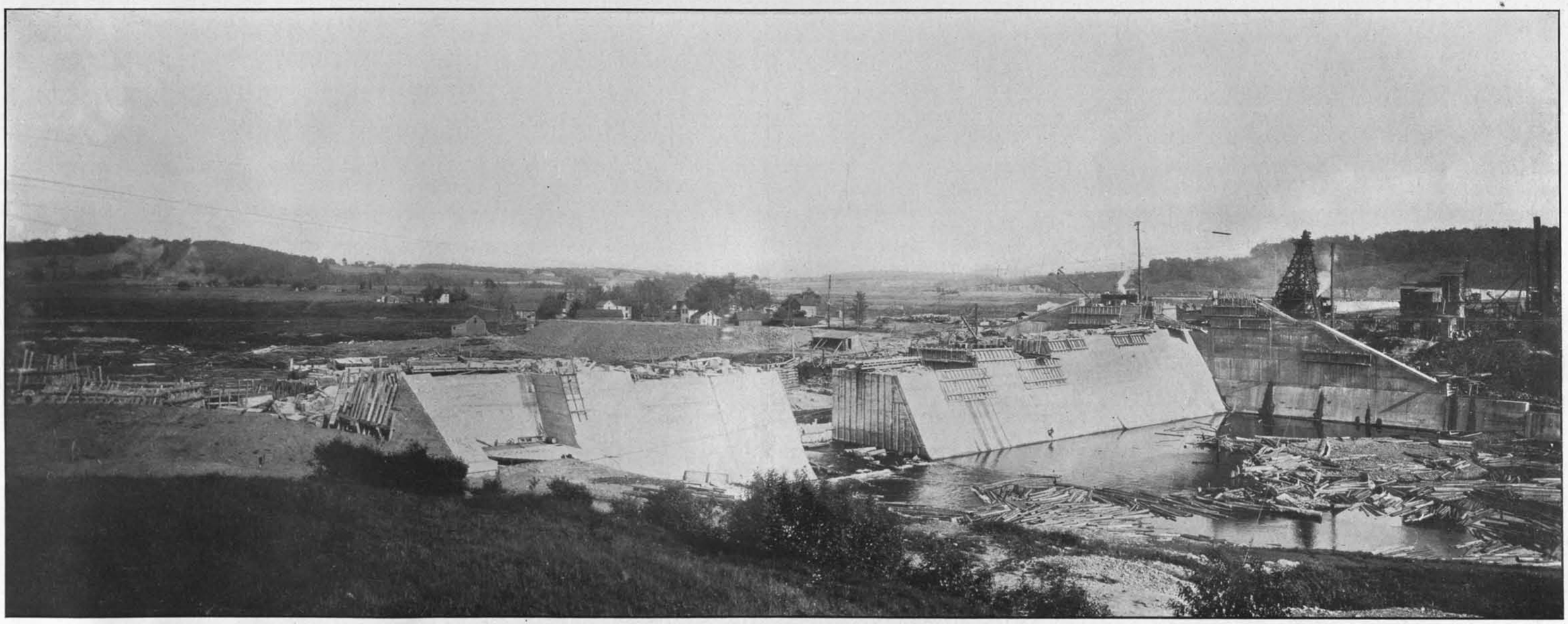


Lock and movable dam in the Mohawk river. Eight of these movable dams of bridge type are used to canalize the river between Schenectady and Little Falls.

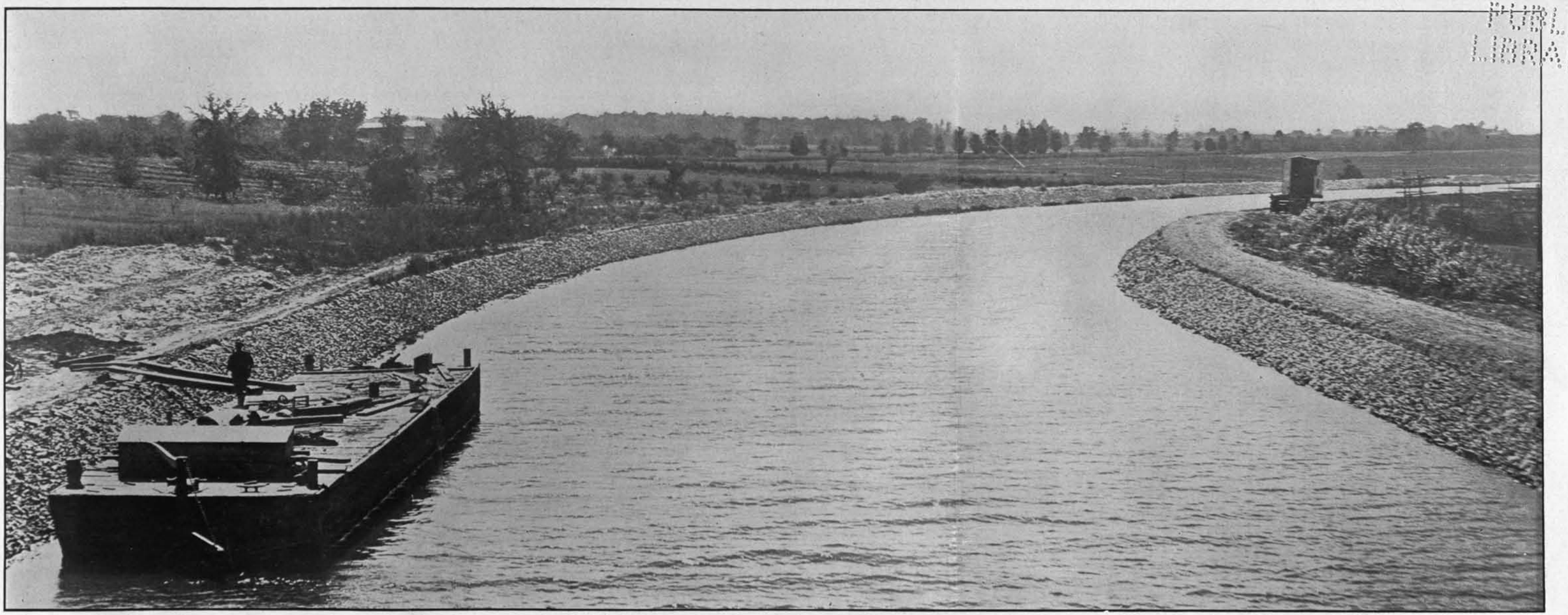
Another lock and movable dam of bridge type in the Mohawk. This view shows the gates raised and the uprights upon which they slide swung to a horizontal position beneath the bridge floor, ready for winter or flood conditions.



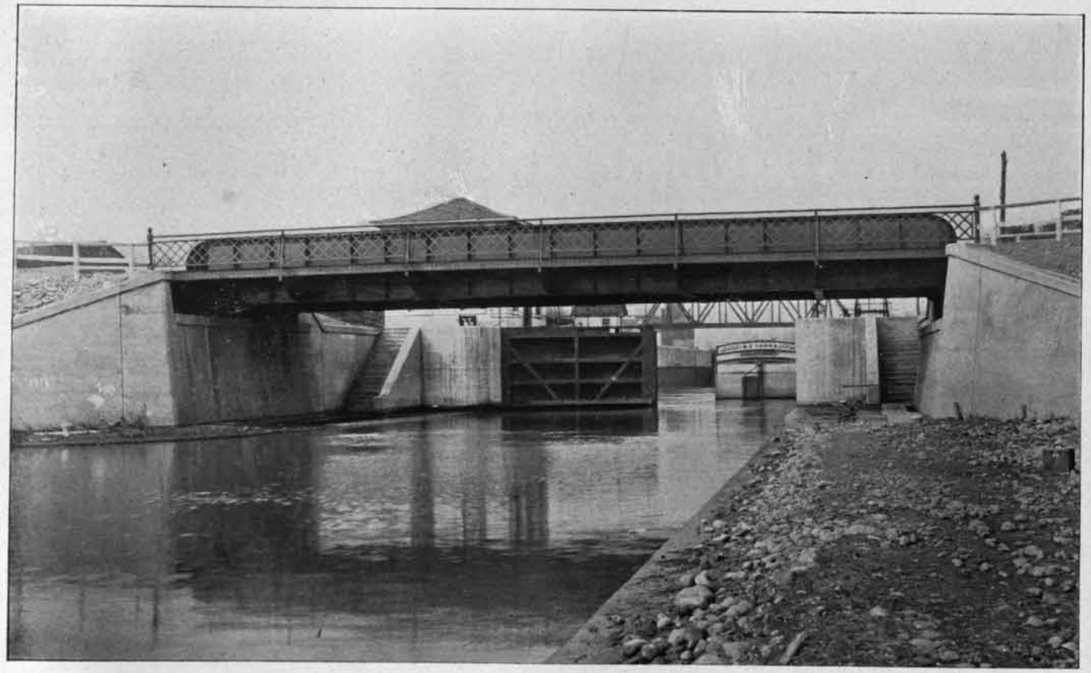
Lock at Little Falls, having a lift of 40½ feet. The lower gate is of the lift type. View from the south, showing the main part of the city in the background. This rift in the hills about a thousand feet wide, which the river made when it became the outlet of the Great Lakes during the last glacial overflow, accommodates a river, a canal, three lines of railway and a thriving city, whose industries cluster about the power-giving stream.



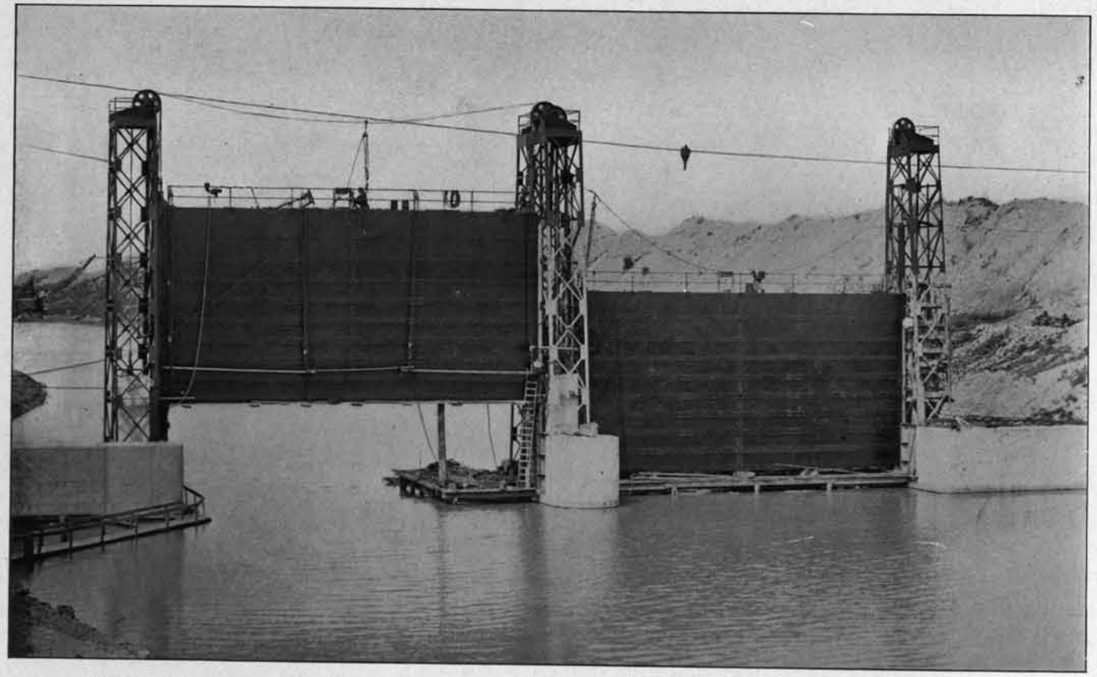
Hinckley dam, impounding the waters of West Canada creek, which lower down are diverted through a feeder to Nine-Mile creek and thence to the Rome summit level of the Barge canal. Length of dam, 3,700 feet; earthen portion, 3,200 feet; maximum height of masonry, 82 feet; of earth dam above natural surface, 56 feet; masonry content, 110,000 cubic yards; amount of embankment, 611,200 cubic yards. Length of reservoir (both branches), about 13 miles; maximum depth, 75 feet; capacity, 3,445,000,000 cubic feet.



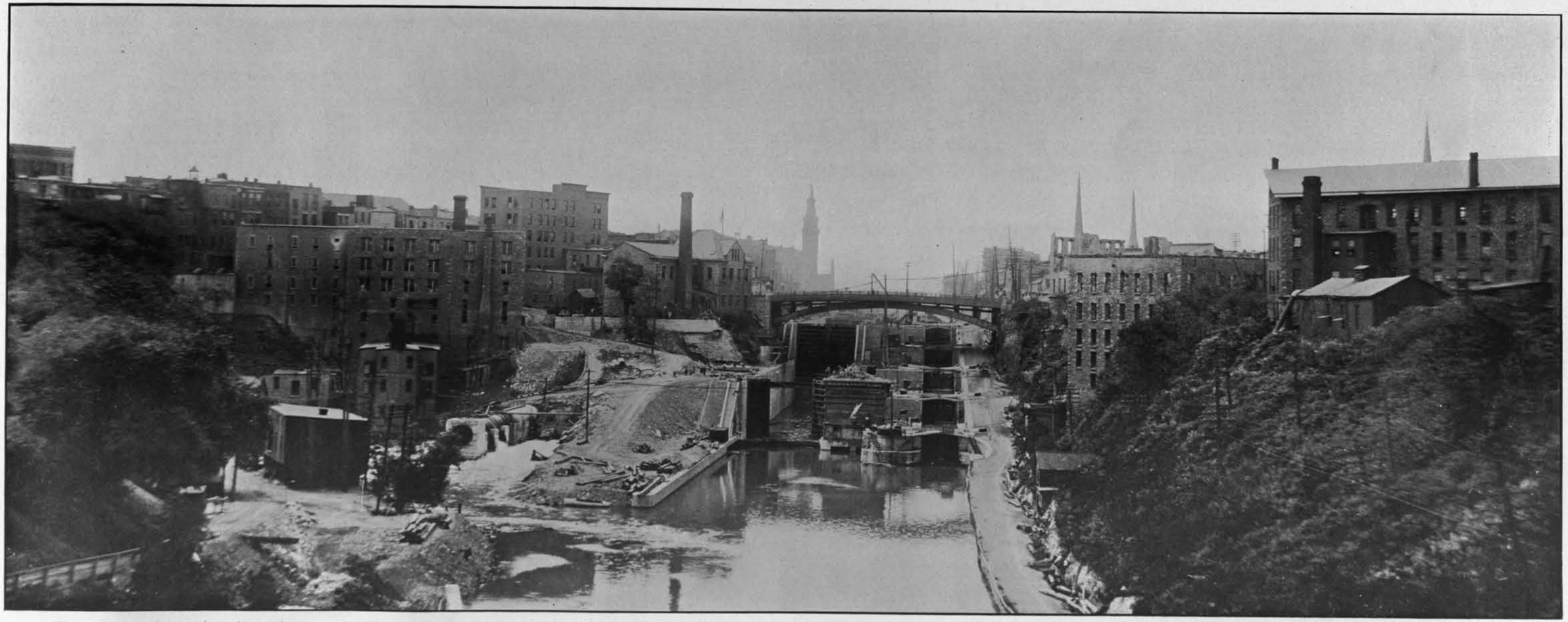
View typical of the completed canal on the long Rochester–Lockport level, where construction in general has consisted of a widening and deepening of the old channel, with the necessary new walls and structures.



Completed Barge canal lock at Newark, passing a boat of old canal dimensions. The bridge in the foreground is typical of highway bridges which cross at the foot of a lock at several localities.

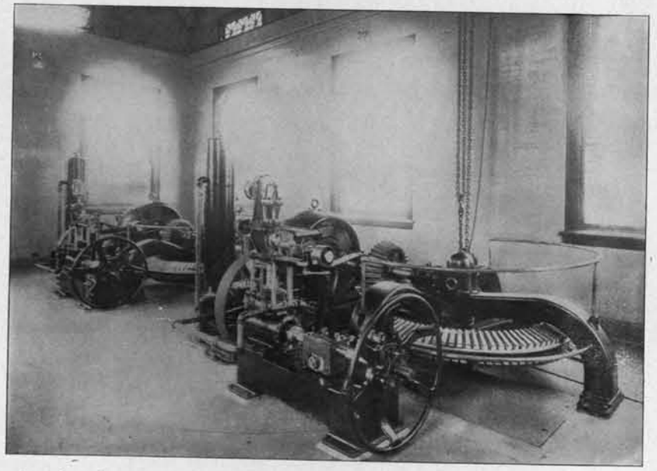


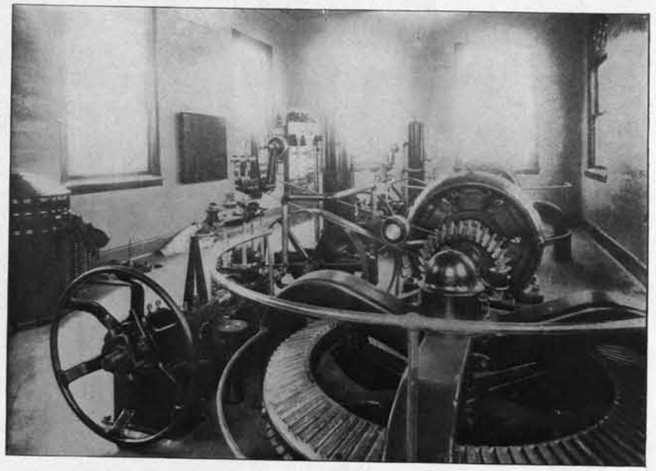
The guard-gate near Pendleton — built as a protection against a destructive inflow from Lake Erie, should a break at the Lockport locks jeopardize the canal and the adjacent low-lying territory on the 60-mile level stretching to Rochester.



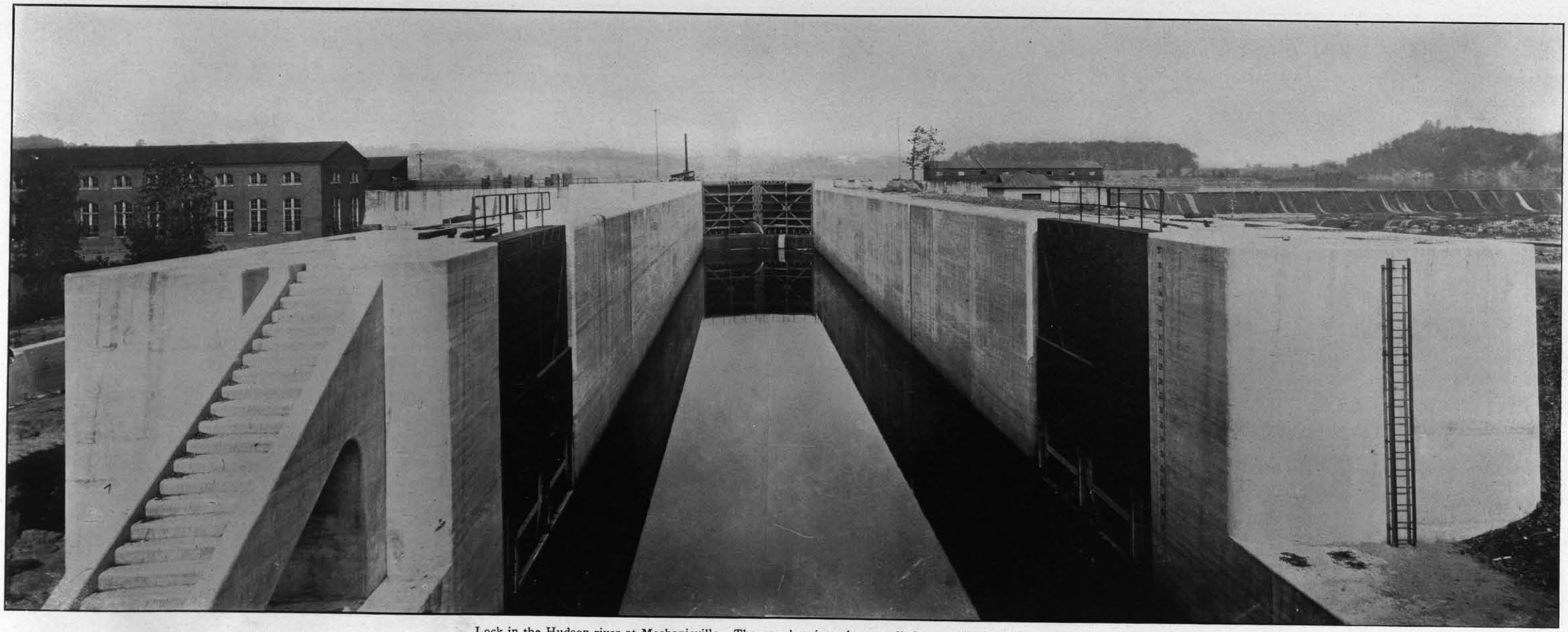
The locks at Lockport, where the canal crosses the Niagara escarpment. Two locks, with a combined lift of 49 feet, replace the south tier of five old locks, the north tier remaining to maintain navigation during construction and to accommodate small boats in the future.

Power-house at the lock near Palmyra, typical of hydro-electric installations at most of the locks.

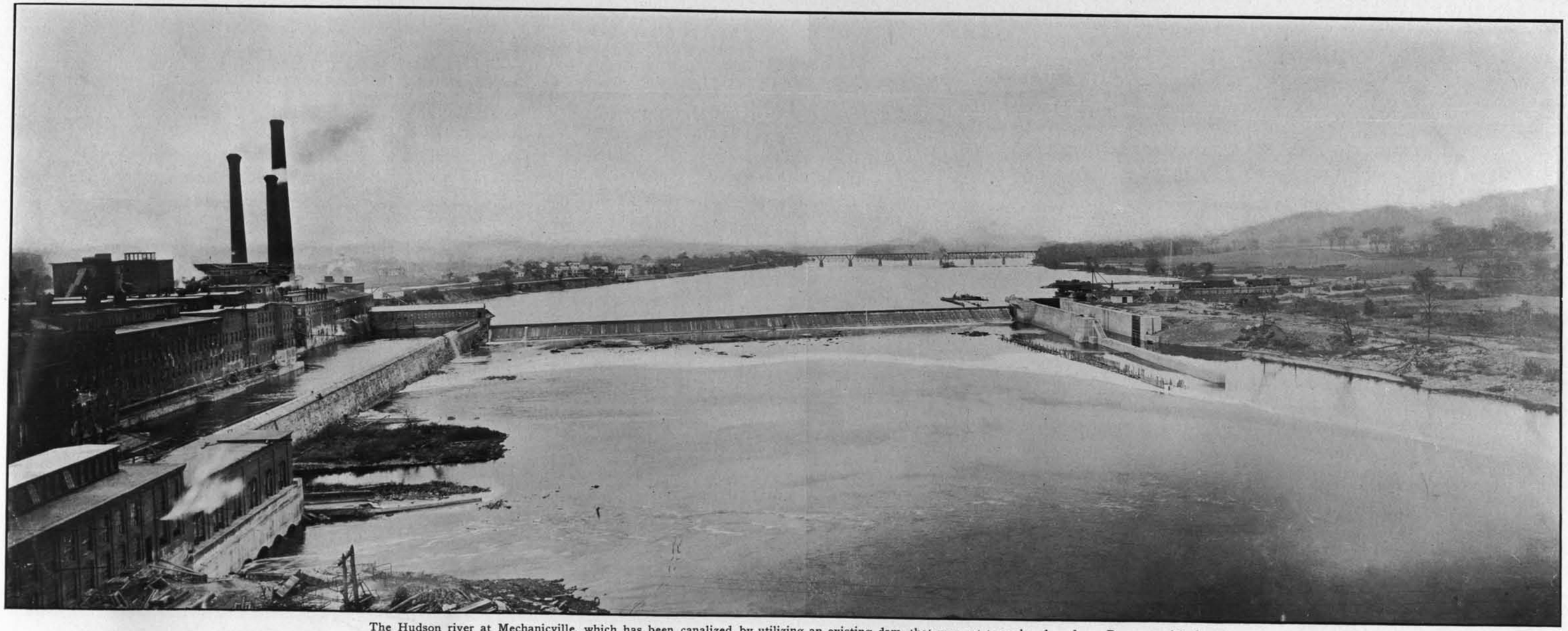




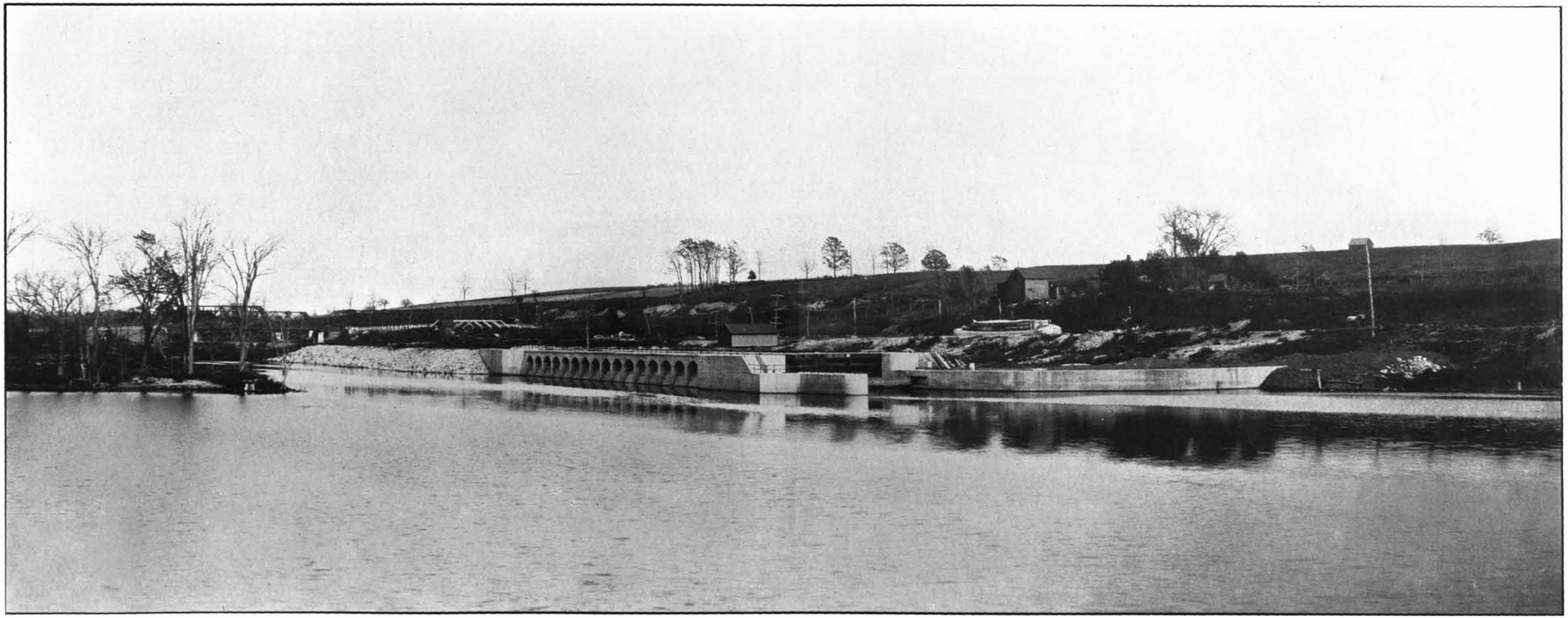
Interior views of one of the lock power-houses. Two power units are installed and also hand-operating machinery is provided for use, should both units become disabled. Each unit consists of a 50-kw., direct current, 250-volt generator, connected through bevel gearing to a 100-hp. water turbine.



Lock in the Hudson river at Mechanicville. The near-by view shows well the magnitude of the structure.

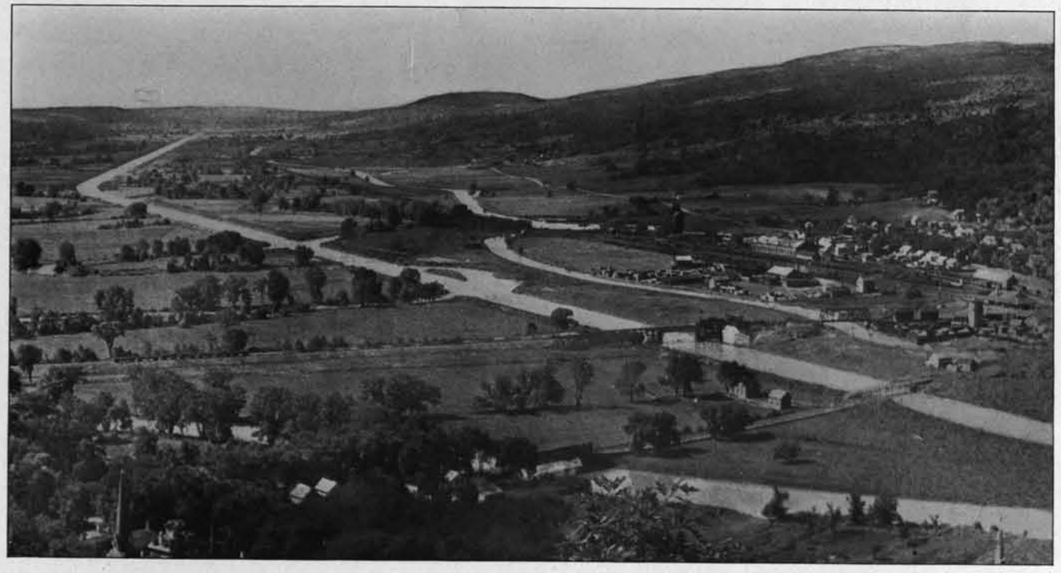


The Hudson river at Mechanicville, which has been canalized by utilizing an existing dam, that was cut to make place for a Barge canal lock.



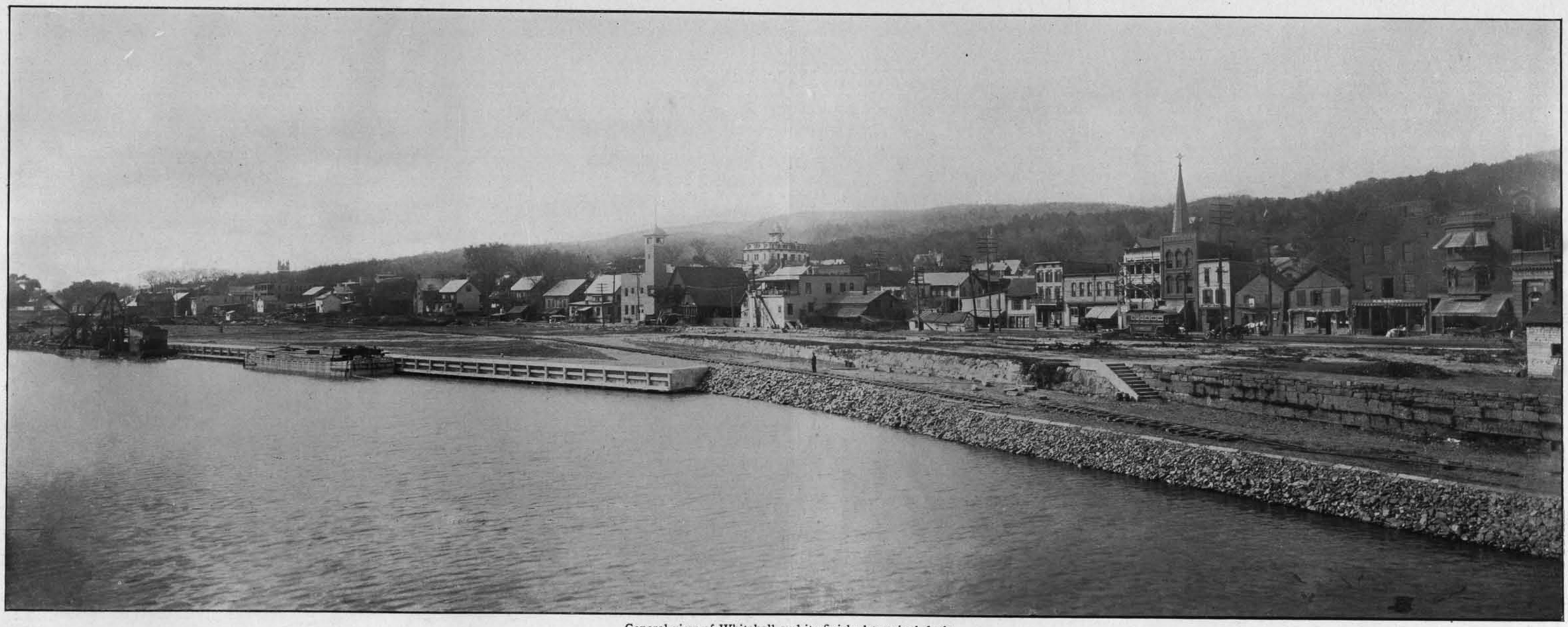
Lock near Fort Edward, at the head of Hudson river navigation, where a land line towards Lake Champlain begins. Boats are seen in the old canal beyond the lock.

A section of completed canal, filled with water, where a land line of the Champlain division diverges from the Hudson river between Fort Miller and Crocker's Reef.



Bird's-eye view from a hill in Whitehall, showing six miles of completed Barge canal at the north end of the Champlain division just south of its entrance into Lake Champlain.

The northern end of the Champlain canal at Whitehall. The view shows a siphon spillway at the left, a dam with movable crest of Taintor gate type operated from the highway bridge in the center and a lock and power-house at the right.



General view of Whitehall and its finished terminal dock.