Cohoes—Continued.

Description of distributing reservoirs: On elevation; one built in clay soil and the other in clay and gravel; capacity, 4,000,000 and 8,000,000 gallons.

Sizes of distributing mains: 16 to 4 inches.

Available head: 130 to 240 feet.

Total length of distributing mains: About 12 miles.

Consumption of water: 30 gallons per head per day (estimated).

First cost of water-works: $160,000.

Average annual cost of maintenance and repairs: $12,000 to $15,000.

Number of fire-plugs: 135.

Design and dimensions of pumps and water-plungers: Geyelin, Philadelphia; built at Cohoes in 1858-59 and 1868-69; two plain plungers, 10 and 10 inches diameter, 5 and 6 feet stroke, 12 to 16 strokes per minute; pump-barrels, 10 inches by 5 feet, 16 inches by 6 feet.

Time pumps are run: Almost constantly.

Time spent in repairs: About five days per year.

Description of force-main: 1,250 feet long, 10 inches diameter; 3,400 feet long, 16 inches diameter; 20 to 70 pounds pressure on pumps.

Description of water-valves: Clack-valves.

Kind of power used: Water.

Description of water-wheels: 2 Jouval turbines, one 4 feet diameter, one 3 feet 6 inches diameter, 30 and 40 horse-power; 14 feet head; 70 revolutions per minute; 194 gallons required to lift 1 gallon to reservoir.

Remarks: Water pronounced very pure by silk-dyers, who require the best.

Hudson:

Design and dimensions of pump and water-plungers: Clapp & Jones, Hudson, New York, 1874; 2 plain plungers, 8 inches diameter, 30 inches stroke, 34 strokes per minute; pump-barrel, 36 by 8 inches.

Time pump is run: 12 hours per day (average).

Time spent in repairs: 1 hour per day (average).

Description of force-main: 7,215 feet long, 12 inches diameter; iron; head, 130 feet (average).

Description of distributing reservoir: Area at crestline, 39,606 square feet; 20 feet deep; capacity, 3,200,000 gallons.

Sizes of distributing mains: 12, 6, 4, and 3 inches.

Available head: 20 pounds (average).

Total length of distributing mains: 12½ miles.

Number of water-takers: 888.

Consumption of water: 830,000 gallons per day (average).

First cost of water-works: $250,000.

Average annual cost of maintenance and repairs: $10,000.

Number of fire-plugs: 177.

Design and dimensions of pump and water-plungers: Clapp & Jones, Hudson, New York, 1874; 2 plain plungers, 8 inches diameter, 30 inches stroke, 34 strokes per minute; pump-barrel, 36 by 8 inches.

Time pump is run: 12 hours per day (average).

Time spent in repairs: 1 hour per day (average).

Description of force-main: 7,215 feet long; 311.9 feet head on pump.

Description of water-valves: Rubber; made by Clapp & Jones.

Kind of power used: Steam.

Description of boilers: Tubular; 16 by 54 feet; 40 pounds pressure, 6 pounds by 1 pound coal; fuel, Pittston coal.

Description of engine: Condensing; 36 by 25 inches, 34 strokes per minute; slide-valves; jet-condenser, 15 by 26 inches; lifting-pump.

Cost of engine and pump: $34,000.

Duty of engine: 77,000,000 foot-pounds per day; 50,000,000 foot-pounds guaranteed.

Lyons:

Population: 3,800 inhabitants.

Name of corporation: Rawley Water-Works (private).

Water obtained from: Springs.

New York:

Population: 19,416 inhabitants.

Name of corporation: Cohoes Water-Works (municipal).

Water obtained from: Mohawk river.

Character and dimensions of dam: 144 feet long, 9 feet high (average); stone, capped with limestone; built diagonally across Mohawk river.

Cost of dam: $100,000.

Water first introduced: In 1859.

Description of main conduit: Diameter, 16 and 12 inches; cast iron; head, 130 to 245 feet.

Pumping to Distributing Reservoirs.