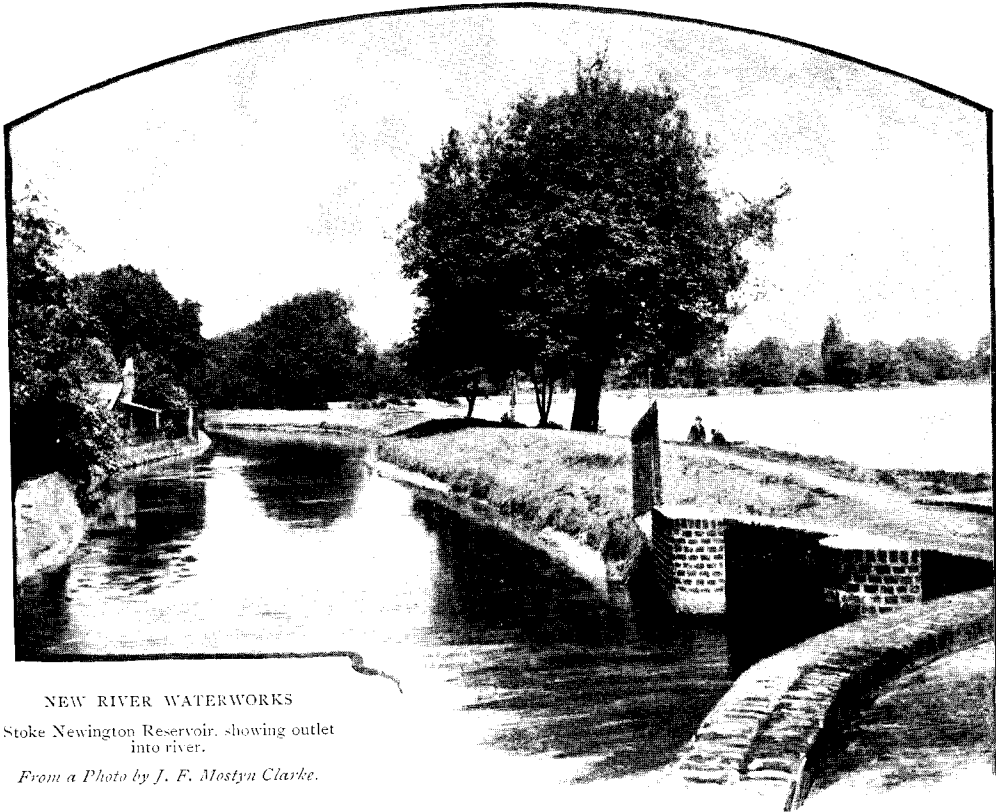


standing until the abolition of the old London Bridge in 1831. We may now conveniently glance at the history of each big company in turn.

The water-supply was at the end of the nineteenth century in the hands of eight private companies, whose 620 square miles of area comprised the whole of the Metropolis and parts of Middlesex, Herts, Essex, Kent, and Surrey. The oldest of these, the New River Company, originated in 1613, in the manner already described. The first shareholders were incorporated in 1619, under the



NEW RIVER WATERWORKS  
Stoke Newington Reservoir, showing outlet  
into river.

*From a Photo by J. F. Mostyn Clarke.*

title of "The Governors and Company of the New River brought from Chadwell and Amwell to London." The directorate was vested in twenty-nine persons, who held thirty-six adventurers' shares—so called in contradistinction to those held by the King and his assigns—which had originally belonged to Sir Hugh Myddleton, who at this time retained only two.<sup>1</sup> James I. did not live to receive any profits himself, and the thirty-six King's shares were afterwards resigned by Charles I.

<sup>1</sup> No particular area of supply was granted to the Company, and there was no limitation of capital in the Charter. A Select Committee of the House of Commons in 1821 stated the original cost to have been £369,600. Its capital in 1837 was £1,200,000; revenue £105,000; houses supplied, 73,000. The total income of the nine other companies then existing amounted in 1837 to £193,000.

in return for a yearly payment of £500, which the Crown receives to this day: a paltry sum when compared with the great value the shares were destined to possess at a later date. No dividend was paid till 1633. By the end of the seventeenth century each share of the New River Company was earning a dividend of about £200, and in 1890 a King's share was sold for £95,000. The Company was regulated by Acts of Parliament in 1738, 1739, 1767, 1779, 1805, 1822, and 1830, the last of which empowered it to erect two large impounding reservoirs at Stoke Newington.

When the New River Company absorbed the old London Bridge Waterworks in 1822 they undertook at the same time to supply water to all citizens whom the old Company had served, and to secure the then dividend to the original proprietors for two hundred and sixty years, namely, to the expiry of the lease of five hundred years which had been granted in 1582. Thus the New River Company were bound to pay £3750 per annum to the representatives of the original owners until the year 2082. Other undertakings bought by the Company were the Hampstead Waterworks, the North Middlesex Waterworks, and a private enterprise at Bush Hill Park.

The New River rises at Chadwell Spring, about a mile beyond Ware, in Hertfordshire. A short distance below this point the river is joined by a branch cut which conveys what became the main part of the Company's supply, namely the water from the River Lea. At first this supply was taken without let or hindrance, but after much litigation an arrangement was arrived at between the New River Company and the Lea Trustees whereby the amount of water to be drawn from the larger stream in the smaller was regulated. Originally the New River was 40 miles long, but short cuts over some of the valleys reduced the length considerably. The average quantity of water supplied by the Company is over 250,000,000 gallons of filtered water obtained from the River Lea, Chadwell Spring, and thirteen deep wells sunk into the chalk, and about 2,500,000 gallons of unfiltered water for other than domestic purposes from the same sources and from the Hampstead and Highgate Ponds. Surface water, which used to form a large proportion of the supply, has within recent years been as far as possible excluded from the river. The Company's district extends to 107 square miles, the actual area supplied is less than half, embracing the City and central London. Its boundaries may be described as, on the west, Charing Cross, Haymarket, and Hampstead Road, on the south the Thames, on the east the Tower and Stamford Hill, and on the north Southgate. The Company supply a population of 1,233,303.

2. The Chelsea Waterworks Company obtained their first charter from George I. in 1723, the result of an Act passed in the previous year for better supplying the City and Liberties of Westminster and parts adjacent. The scheme was to bring water from the Thames into canals and ponds, from which it was to be raised into

reservoirs between Oliver's Mount and Hyde Park. A royal warrant in 1726 authorised them to convert two ponds in St. James's Park into reservoirs, and another in 1727 authorised the construction of a reservoir in Hyde Park. The works were situated on the north bank of the river, and the water was drawn from the Thames direct and distributed in its polluted state to the consumers. In 1809, when they were raising 1,456,000 gallons daily, the Company were empowered to take water from the Thames near Ranelagh Creek, and to lay pipes in the river-bed for a distance of 240 feet in order to obtain water below low-water mark. The first attempt at purification was made by allowing the impurities to subside in settling reservoirs, but this did not prove effective. The first filter-bed in London was then introduced in 1829 by Mr. James Simpson, the Company's engineer, who had been instructed some years before to give his whole attention to this subject. The filter-bed was made of gravel and sand, and before being filled with water had the appearance of several channels parallel to one another, formed by banks broad at the bottom and gradually sloping on each side to a point at the top. It had brick sides, occupied about an acre, and was supplied by reservoirs having an area of about an acre and a half. First the water was pumped into the subsiding reservoirs; then, without disturbing the sediment, it flowed through small pipes to the filter-bed, where it soon percolated through the three strata of gravel and sand, which were each 2 feet thick and laid over brick tunnels. In 1852 the Company's intake was removed to Seething Wells, and new works were completed there in 1856, but, as the floods flowing into the Thames from the Mole regularly made the water turbid, the Company sought Parliamentary sanction in 1875 to remove the intake to a point higher up the river, about half a mile below Sunbury Lock, where, accordingly, new works were brought into operation in 1877. Two new filtered-water reservoirs with a total capacity of  $11\frac{1}{2}$  million gallons were completed at Putney Heath in 1900, and the storage capacity of the reservoir at Molesey was increased 50 million gallons by the raising of its banks. The Company's district of  $20\frac{1}{2}$  square miles is bounded on the north by Old Brompton Road and Knightsbridge, on the east by the New River Company's district, and on the south and west by the Thames. They supply a population of 285,249, and may take 22 million gallons daily from the Thames.

3. Lambeth Waterworks were established under an Act of Parliament passed in 1785 for supplying the inhabitants of Lambeth and parts adjacent with water from the Thames between Westminster Bridge and the confines of the parish of Christchurch. The works, containing an engine of only 20 horse-power, stood on Belvedere Road, close to the site where the footway over Charing Cross railway bridge now ends. One of the chief objects of the owners was to provide protection against fire, but in this respect they received no assistance from the all-powerful fire insurance companies. They had great difficulties to contend with at first owing to a large part of the district being below the ordinary high-water mark of the Thames.