

**THE WATER SUPPLY.— CALLED FOR BY
INSANITATION AND DISEASE — DANGEROUS
DELAYS — THE WORK DECIDED ON —
DETAILS OF THE SUPPLY AND ITS TREATMENT
— AN OLD WATER SUPPLY.**

TUESDAY December 2nd, 1879, was an important day in the history of Bridgwater, inasmuch as it witnessed the opening of the Bridgwater Corporation Water-works — certainly the largest and most important work ever engaged in by the Town Council of Bridgwater. The auspicious occasion was appropriately made a general holiday, and the Mayor and Corporation, and a large number of the inhabitants, dined together at the Town Hall.

As long before as 1866 the first action was taken in the matter, in consequence of the reports of medical officers on the sanitary condition of the town. In November, 1866, the Mayor of Bridgwater, in accordance with a requisition received, called a public meeting of the inhabitants to consider the matter, in response to which a large and influential gathering of townspeople was held, when there was a unanimous expression of opinion in favour of a new water supply. A special meeting of the Town Council was held shortly afterwards, at which the matter was discussed in all its hearings, and ultimately it was decided to call in the services of Mr. Hawkesley, the eminent engineer. That gentleman accordingly visited the town, and inspected several streams from which a continuous supply of water could be drawn, pronouncing in favour of Seven Wells Brook, after its junction with the smaller stream of Cockercombe from the Quantoek Hills. Mr. Hawkesley, basing his calculations upon the supposition that 320,000 gallons of water per day would be required to adequately supply the town, estimated the cost of the necessary works at £20,000. A committee of the Town Council was appointed to consider the report, the members of which came to the conclusion which had previously been arrived at — that it was necessary to have a large and pure supply of water for the town.

A second public meeting was afterwards held, when, for some unexplained reason, a resolution was agreed to, to the effect that it was not desirable for the Corporation of Bridgwater to be promoters of Water-works. Notwithstanding the appointment and arduous labours of a public committee, which was appointed the next evening, several precious years were lost, until the recurrence of epidemic disease thrust the fact forward that something must be done. In consequence

of the action of a private company, of whom it was expected that they would provide the town with water as a commercial undertaking — an expectation that was never near realization — there was another unfortunate delay.

On November 26th, 1876, the Town Council showed that at last they were determined to grapple with the oft-deferred question. On that day the Corporation (Alderman J. Leaker being, then Mayor) decided to apply for the necessary Act of Parliament — a proceeding that was afterwards confirmed by a public meeting. No time was lost, and the Bridgwater Corporation Water Act received the Royal assent on August 2nd, 1877, the Corporation being authorised to borrow the money necessary for the works, the repayment to be extended over 50 years. Messrs. Hawkesley & Son were appointed engineers, plans and specifications were prepared, and the cost of the undertaking estimated at £32,800, to include the erection, of pumping-engines at Ashford Mills (which were not allowed for in the estimate- nine years previously).

The work was commenced without delay, and the total expenditure amounted to about £40,000, made up as follows : — Cost of obtaining the Act, including all law charges, nearly £1,500. Paid to the trustees of the late Lord Taunton and to Lady Cooper and Lady Oglander respectively, for land for the sites of the filtering-beds, engine-house, reservoirs, &c., £3,200. Contract with Mr. Chamberlain, of Anstey, Leicestershire, for the construction of a large subsiding-tank, three filtering-beds, pure water tank, and engine and boiler-houses, &c., at Ashford Mills, £9,425. Contract with Messrs. James Watt and Co., of London, for the supply of two ten-horse power cylinder rotative; pumping-engines, boilers and other apparatus, £1,580. The Wembdon reservoir, which will hold 800,000 gallons of water was constructed by Mr. Augustus Krauss, of Bristol, at an expense of £4,999. The lodge residence for the turncock on the grounds of the Wembdon reservoir was erected by Mr. Richard Escott, of North Petherton, at an expense, including that of the boundary wall, of £732. The pipes used for the conveyance of the water from its source to the Wembdon reservoir, and throughout the streets of the town (in all, about 13 miles of piping), were supplied by Messrs. Cochrane, Grove, and Co., of Middlesborough, at a cost of about £8,000 ; and these were laid down by Mr. Walker, of Crewe, at a cost of £3,449 6s. There were also several other smaller items of

expenditure. The money was obtained by way of private loans, mostly from the inhabitants of the town and neighbourhood, at a reasonable rate of interest.

A few particulars of the manner in which the water is treated and brought into the town may be of interest. It is collected from the Currypool and Spaxton streams, and is then let into what is called the depositing or subsiding tank, where it remains for several hours, during which any suspended matter in, the shape of mud, etc., which may be brought down from the hills in time of flood, is partly deposited on the bottom of the tank, to be afterwards cleared out. The surface water is then skimmed off and conveyed into filtering beds, having an area of nearly 14,000 square feet. These are composed of a stratum of sand a few feet in thickness, on a stratum of gravel placed to support the sand and prevent it being washed into the pipes, but the sand is the only material that has any effect in filtering. The water passes through this, and leaves any suspended matter it may contain on the surface, from whence it is removed from time to time. After passing through the filtering beds the water flows into a pure water-tank, whence it is raised by two engines, each of about ten-horse power, but capable of working up higher should necessity arise. These engines raise the water to a covered surface-reservoir at Wembdon-hill, which contains about 800,000 gallons when full, and has a depth of about twelve feet. It is covered to protect the water from the rays of the sun, thereby keeping it cool and pure, as no growth will occur in it when covered, as usually happens in open reservoirs where the water is exposed to the rays of the sun. For this reason it requires cleaning very seldom. This reservoir is placed at an height of about 90ft. above the level of the Cornhill, in Bridgwater, but as this elevation is not high enough in case of fire the water is pumped up a high stand-pipe outside the reservoir, giving a pressure of considerably over a hundred feet. This standpipe is also a kind of safety valve: the water can be pumped direct into the town through it, and when the town mains are full the extra water is immediately carried to the reservoir without any undue pressure and risk of breaking the pipes. The water is conveyed to the reservoir by cast iron pipes 12in. in diameter, and from the reservoir to the town in pipes 15in. in diameter. Other smaller sized pipes branch into the various streets of the town. A pipe of 12in. is carried over the bridge into Eastover. The engines are

capable of raising 400,000 gallons a day, which is sufficient for a population of 20,000. Each engine is capable of raising that quantity, because one may become disabled, and have to be stopped for cleaning or repairing; but usually the two are employed at the same time, and therefore raise the water in twelve hours.

As before stated, the supply is sufficient for a town of 20,000 inhabitants, provided it is legitimately used, and no serious waste allowed. To prevent the latter, proper care and supervision are exercised by the authorities; and never in any instance has the supply proved unequal to the demand, even in the hottest weather. The water has been frequently analysed — always with satisfactory results; indeed it would scarcely be possible to obtain a better or more pure article. Since its introduction it has proved a great blessing to the inhabitants, who almost universally appreciate the advantages, from a sanitary point of view, conferred on the town by it. Its extreme utility in case of fire also cannot be lost sight of, and it has been found valuable in checking conflagrations on more than one occasion. Most of the townspeople have had it connected with their houses, and there is every prospect that ultimately it will become a paying concern. It may be mentioned that the first service laid was that to the residence of the Town Clerk, on the 30th day of December, 1879.

It is not generally known that previous to the above there was a well-conceived attempt at supplying the town with water. In 1709 the then owner of the mills in Blake-street, Diehard Lowbridge, entered into an arrangement with the Mayor (Mr. George Balch) and the Corporation, by which he was given power to remove the pavements, break up the soil of the streets, lanes, &c., in the town, in order to convey water from his mill-stream (Durleigh brook) to the High Cross on the Cornhill, and thence into any streets of the town for the use of the inhabitants. Lowbridge was to have the right of supplying the water to houses at one shilling per annum for one thousand years, and the Council were to pay him £100 to encourage him in the undertaking. When the Corporate seal was to be affixed, however, the Council refused to give the requisite permission unless the £100 was repaid. This appears to have been done, and the water supply was accomplished. Whether it was successful or otherwise is not known. In 1795, when the old stone bridge over the river was removed, the wooden water pipes were brought to light; and later, when gas-

pipes were laid in the town, in one or two instances similar relics were found.

An old town record, date about 1680, recites particulars of a "*piece or plot of ground and wall, laid out and fitted for the inhabitants of Bridgwater to fetch water, on the north-east end of a certain ground, called 'The Fryers' "* In 1805, Mr. Jefferys Allen took this plot of ground into his field adjoining, and provided a pump near for the use of the inhabitants.