# Correspondence.

## LONDON PUMPS.

LETTER FROM LIONEL J. BEALE, ESQ.

SIR,—I do not know whether the following remarks are exactly suited to your columns; but the subject has been mooted in the Public Health Section of the Social Science Meeting at Guildhall; and, thinking the medical public the most fitting arena for a fair and full discussion, I send the paper to you.

Soon after the appointment of Medical Officers of Health, a circular was addressed to them, asking their opinion of the London pumps; and there was a very general condemnation of them. Being a large water drinker, and having for forty years drank of London spring water, I could not join in this general condemnation; and took up the position that each well should be judged for itself. Admitting much impurity in many of the London surface wells, I raised the question whether much might not be done to improve them, and to render the water more generally available for drinking purposes. Part of a report of mine on the subject, which had been copied into some of the newspapers, was quoted yesterday; but as it was not corrected by me for the press, I should prefer a more faithful record of what I think on this subject.

Whatever may now be the case, there is no doubt that up to a recent period, the spring water from the surface wells in London was among the finest in the world. Of late years it has been demonstrated that some of the wells are contaminated by proximity to drains and sewers. There is no question but that the water of a large number contains a considerable quantity of saline, and also of organic matter. Much of the saline matter may also be traced to the decomposition of organic remains. I yield to the fact that our London spring water is not in all places so good as it was formerly; but I ask the question, Can nothing be done to restore its former condition?

I think that the merits of every well should be judged separately, and that my pump water ought not to be condemned because that of my neighbour has been fouled by a cesspool or bad drainage. The pumps near our modern squares should not be placed in the same category as those of the overloaded graveyards of the City; but even for those latter, I do hope that some means may yet be devised to preserve them for the water-drinking part of the community.

In this age of ingenuity and of science, surely we may contrive means to retain the supply of some of our beautiful London spring water. The well might be so isolated by brickwork and cement that no contamination from a drain or sewer could be possible; or it might be placed at sufficient distance from any contaminating agency. One charge against the London pump water is, that it contains saline matter that must have come from organic decomposition; but if the decomposition has been so complete that the saline matter be really incorporated with the water as a salt, that can be no reason for condemning the water. Such saline matter may not be injurious to health; on the contrary, there may be a large portion of the drinkers of water who not only like the nitrates now complained of; but assert that they and innumerable other mortals have drunk such water for years with pleasure to their palate and benefit to their health.

If we are to condemn natural substances because they contain elements or principles resulting from decomposed organic matter, we ought to eat neither flesh, corn, nor vegetables. The celery and cabbages grown round London have as many of the elements of organic matter in them as our London pump water. Decomposition and regeneration is a natural law; out of death comes life; and, perhaps, every particle of our own bodies may have gone through the process of decomposition of former organic beings. The mere presence of nitrates or other salts in spring water proves nothing against it; all spring water contains more saline matter than river water, to which, no doubt, it owes its sparkling refreshing character; but it is yet to be proved that such saline matter is injurious to health. If the decomposing organic remains are bodily mixed with the water there can be no doubt that it is injurious to health; but it is remarkable how few are the instances on record of any known mischief from drinking the London pump water, even when the pump is close to a churchyard. The well in Broad Street, St. James's, during the last outbreaks of cholera, no doubt, was the means of propagating the disease, and of literally poisoning a large number of persons who drank the water. But it was discovered that the contents of some neighbouring water-closets actually mixed with the well water from imperfection in the brick work.

No one who knows anything of disease would doubt the propagation of typhus fever, and perhaps other diseases as well as cholera, from such a cause. This is the principal practical case against our London pumps; there may be others where evidence of disease can be traced to the water of our London wells. I mean actual instances of effect and cause, where illness can be traced to the drinking of London pump water; but they are few in comparison with the large body of people who still indulge in the spring water of our London surface wells. In theory the water ought to have upset the health of many of us; but practically has it done so?

In my district there is a pump the well of which is at no great distance below the paving-stones of the street; the water contains a large quantity of saline and some organic matter. It is so suspicious a pump, that I have authority from our vestry to close it at any moment. It is close to a densely populated court. I have diligently sought for evidence against it; I have desired our inspector of nuisances to learn all he can about it; but the neighbours so like it that, during the last six years, they have repeatedly exhausted its supply of water without any injury to health; and it would be distressing to the people to close it, for, when it is out of order a few days, they petition for its speedy reparation. I am, however, ready to admit that, in the event of an outbreak of cholera or even of bad diarrhœa, this and many other pumps ought to be closed; but, I ask, is the evidence of practical evil against the London well-water sufficient to justify its total condemnation? And can we do nothing to preserve it?

The movement for drinking-fountains must be gratifying to all who take an interest in whatever may improve the health of the community; but, if we could supply the public with good spring-water instead of the mawkish stuff supplied by our present water-companies, the boon would be enormously increased; and I cannot but think that means may be devised to make the spring-water under London available for drinking. It is supposed that the rainfall on the open London churchyards, percolating through the soil, carries with it many of the impurities which lie in its passage to the strata from which the surface wells draw their water. This source of impurity could be prevented by covering all the City churchyards with Yorkshire stone well cemented. We cannot suppose that much of the water which supplies the London surface wells is obtained by percolation from the ground on which London stands; the paved streets and courts prevent this. The open ground of our squares permits some of the rainfall of London to pass directly into the gravel below; but the greater part of the rain which falls in London passes into the sewers, and is carried away. Bad brick drains

and sewers may leak, and the fluid pass into the water which supplies the London wells; but our sewers ought to be impermeable to leakage; and our brick drains ought to be all removed, and replaced by impermeable pipes. In a few years we may hope that such a thing as a brick drain will be unknown; for it is so much the interest of all dwellers in houses to carry away their sewerage by earthen pipes, instead of allowing it to accumulate in the elongated cesspool formed by all old brick drains, that this source of possible contamination to our spring-water will cease.

If any percolation of rain into our springs took place through the soil of our streets, the water would be impregnated with gas; for such is the constant leakage from the gas-pipes, that every square foot under the paving-stones is full of it. And this, by the bye, is another argument for trying to utilise the London spring-water; for every empty water-pipe attracts into it the gas which escapes, and there are very few houses where the water supplied by the London water companies is not thus tainted. If any one will be at the trouble of smelling that rush of air out of the water supply pipe which always precedes the flow of the water, he will perceive that much of it is coal-gas. But I must caution such observers not to take a light to assist their explorations, because several explosions have thus occurred. The only means of keeping the gas out of the water-mains is to keep these always charged with water; for so sure as a water-pipe is empty, so surely it will imbibe some of the gas always escaping from the neighbouring gas-pipes.

I hope I have made out a case for inquiry before we condemn altogether our London spring-water. A benevolent person, who has the time to agitate and go into this question, could not do a more useful thing than to take up this question. If the London pump-water is injurious to health, let us all give up the use of it. I have myself for more than thirty years drank at least a pint *per diem* of the water supplied by the pump in Covent Garden Market, and I still continue to do so, together with multitudes of other people; and I have never heard of any injury to health in consequence. The well of this pump is near the church; but the graveyard is not so numerously tenanted as those of the City; and that part of it which is near the pump is so covered with Yorkshire paving, that there can be no percolation from the surface for a very considerable distance. I am, etc., LIONEL JOHN BEALE,

*Medical Officer of Health, St. Martin-in-the-Fields.*

Long Acre, June 1862.

## THE LATE MR. STANLEY'S PRACTICE.

LETTER FROM CHARLES KIDD, M.D.

SIR,—I think there are few St. Bartholomew's men that will not grieve for the sad loss of Mr. Stanley, even as though they had lost a kind personal friend or an esteemed relative. I do not believe there was ever a kinder man to pupils and patients. Whilst his death is fresh in the recollection of the profession, I would wish to refer to a couple of facts of great practical value (as I suppose them) which I heard him state in one of his last clinical lectures. These lectures were curiosities of research, and of that intuitive wisdom, or deductive prophecy, quite invaluable to students,

"To which old experience doth attain."

One of the facts was this. On going lately over all his notebooks from Mr. Abernethy's time up to last year, he found a very large number of surgical operations which he had personally performed; but, curiously enough, they were divided into two parts equal in numbers—one before, the other since, the chloroform discovery. The cases were amputations for knee-joint disease in large numbers; hernia, etc. He found the rate of mortality was *greater since chloroform*. He asked me to explain it, which I may at some time; but the fact is very remarkable. Mr. Bryant of Guy's has been examining the same point as to lithotomy; and, if he and Mr. H. Thompson could give us the result of one thousand cases of lithotomy before and since the year 1846, it would be very valuable.

The other point, on which Mr. Stanley was very clear, was the best after-treatment of strangulated hernia operation cases. He took a peculiar pleasure in bringing down to the hospital, on lecture days, a great pile of old notebooks of cases dating back from the time of Mr. Pott and Mr. Abernethy, when he was house-surgeon, and an evident favourite of these great men. I have heard him describe over and over again, with a sort of shudder as he looked back, the orthodox treatment of those early days; what huge doses of "jollop" were ordered, together with Mr. Abernethy's specific grey powder and salts, *nec temeré, nec timidè*, as soon as the strangulation operation was over; but the patients all, or nearly all, died. Mr. Stanley's method of late years was one pill of soap and opium; and, according as he adhered to that and eschewed purgatives, the patients all, or nearly all, recovered. He had also given up ice and tobacco (he had his doubts also of warm baths)—everything for chloroform and his soap and opium pill. I believe Mr. Stanley did not live in vain, as he sent out a thousand students with these ideas. As he said so often, with his usual firmness, he had "bushels" of such cases at both sides. I am, etc.,

CHARLES KIDD.

Sackville Street, May 27th.

# Medical News.

ROYAL COLLEGE OF SURGEONS. The following gentlemen passed their primary examinations in Anatomy and Physiology, at meetings of the Court of Examiners, on June 3rd and 4th; and, when eligible, will be admitted to the pass examination.

*St. Bartholomew's Hospital.*

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| Cheese, Frederick | Lawrence, Henry Cripps |
| Henderson, Hector Graham | Randell, Edward Benjamin |
| Hughes, William Frederick | Robinson, John |

*St. George's Hospital.*

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| Anstey, Arthur Newland | Staff, George Thomas Albert |

*Guy's Hospital.*

| | |
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| Brackwell, John | Richards, Vincent |

*King's College.*

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| Cartwright, Samuel H. | Saville, John James |

*University College.*

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|---|---|
| Clift, George | Woodforde, Alfred |

*Westminster Hospital.*

Sanderson, Marwood

*Aberdeen School of Medicine.*

| | |
|---|---|
| Redfern, Thomas | Roath, Samuel |

*Belfast School of Medicine.*

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|---|---|
| Logan, William | Musson, Arthur |

*Birmingham School of Medicine.*

| | |
|---|---|
| Greene, James Sherwin | Perks, Charles |

*Dublin School of Medicine.*

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|---|---|
| Atkinson, James | Mulock, John Bury |
| Close, Charles Stratherne | O'Sullivan, Edward |
| Harkin, John | Parks, Charles Holman |
| Hawkes, Anthony Mann | Thomas, William Robert |
| Madden, Thomas More | Wallace, Arthur Kennedy |

*Edinburgh School of Medicine.*

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|---|---|
| Conyers, James Saltus | Taylor, John William |
| Eddison, John Edwin | |

*Glasgow School of Medicine.*

Jones, William

*Hull School of Medicine.*

Goodsir, Thomas Henry

*Leeds School of Medicine.*

Field, Albert

*Manchester School of Medicine.*

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|---|---|
| Caldwell, John Thomas | Wardle, James Henry |
| Longbotham, William | Woodcock, John Rostron |