

abridged from Dr. Boyd's researches in upwards of 2000 post-mortem examinations made at the St. Marylebone Infirmary, communicated to the Royal Society by the late Dr. Sharpey, and published in the "Philosophical Transactions" of 1861. The figures are printed distinctly in two colours for males and females respectively. The table is mounted on glazed cardboard, and intended to be hung on the wall for easy reference.

New Inventions.

THE SIEMENS GAS-BURNER.

AMONG the many interesting scientific and economic exhibits in the Smoke Abatement Exhibition, it is certain that Siemens Regenerative Gas-burner is second to none. The inventors have applied to gas-burners the principle which has long been identified with their regenerative smelting furnaces, and, as far as illuminating power is concerned, with the best results. Without the aid of diagrams the exact construction of the Siemens burner is difficult to explain. The gas is conveyed to the flame by means of a circle of copper tubes. By the aid of a chimney of peculiar construction the products of combustion, having a temperature of 900° F., are drawn downwards through the centre of the flame to their point of escape, and in their passage they are made to heat the gas which is on its way to the flame, and the air which is being supplied for the combustion of the flame. The temperature of the flame is thus raised to a height very much greater than that of ordinary gas flames, and the combustion is proportionately more complete. The illuminating power is further heightened by the use of a hollow white porcelain shield, around which the gas is delivered. The products of combustion are all drawn off by the chimney, the exit from which should be outside of the chamber to be illuminated. It is asserted that with an hourly supply of twenty-six feet of sixteen-candle gas an illuminating power of 144.9 sperm candles of six to the pound is obtained. This is a great result. Practically the flame is too bright to look upon, and must prove a formidable rival to the electric light. From an æsthetic point of view the Siemens burner and chimney is not in its crude form a desirable object; its decoration, however, is, we are informed, merely a matter of money.

BRIGHT'S SELF-ACTING FIRE-DETECTOR.

THE great merit of this little piece of apparatus is its extreme simplicity. It consists merely of a spiral spring enclosed in a metal box. When the box is heated the spring expands, and in so doing establishes a connexion between the line-wire and the earth-wire of an electric bell, and this sets the bell ringing to warn those within hearing that there is a danger of fire. The spring can be set, as it were, to any temperature, and Mr. Bright recommends that in England it should be set at 110°. The specimen which we have seen, established the necessary connexions for ringing the bell immediately on the application of a spirit-lamp flame to the box. The value of early intimation in case of fire cannot be over-estimated, and the Shakspearian motto on the outside of Mr. Bright's descriptive pamphlet has been well chosen:—

"A little fire is quickly trodden out;
Which, being suffer'd, rivers cannot quench."

PROFESSOR FLOWER has been elected a trustee of Sir John Soane's Museum, on the recommendation of the President and Council of the Royal Society, in the vacancy occasioned by the decease of Sir Philip de Malpas Grey Egerton, Bart., M.P.

"THE WATER-SUPPLY OF EXETER."

To the Editor of THE LANCET.

SIR,—My attention has been drawn to a paragraph in THE LANCET of the 3rd inst. on the water-supply of Exeter. Were it possible for one moment to suppose that the word "Exeter" in the heading is anything but the result of an accident which, when brought to the notice of the Editor, will be met with the most ample apology, I should have characterised the paragraph as a tissue of the grossest falsehoods.

There has been no Local Government Board inquiry in Exeter on the subject of the water-supply; and, moreover, the water which the Corporation furnishes to the consumers has found a very high place in the recent (independent) valuation (Wigner scale) of waters supplied for domestic use in the principal towns of the kingdom (see the *Analyst* for November, where the Exeter water is classed as "exceptionally good"). But, Sir, if there has been no such inquiry at Exeter, there has been one at another town whose name begins, unfortunately perhaps for us, with the same vowel; and a perusal of some observations on that inquiry in the *Journal of Gas Lighting* for November 15th will satisfy you of the unfortunate mistake into which you have been betrayed.

Such a statement in such a journal as yours, if not promptly contradicted, cannot but have a very damaging effect both upon the city and its rulers; and I confidently ask you to afford us all the reparation in your power.

I am, Sir, your obedient servant,

BARTHOLOMEW C. GIDLEY,
Town Clerk.

Exeter, Dec. 6th, 1881.

To the Editor of THE LANCET.

SIR,—Having read a paragraph in your issue of the 3rd inst. with the above heading, I have to inform you that there is not one single word of truth in the allegations made with reference to the Exeter water undertaking, to which I am engineer.

I am, Sir, your obedient servant,

H. PERCY BOULNOIS, M.I.C.E.

City Surveyor's Office and Exeter Corporation Water,
Bedford-circus, Exeter, Dec. 5th, 1881.

* * * We have to thank the Town Clerk of Exeter for his courteous letter, and for the suggestion which has led to the discovery of a misprint in our columns of the 3rd inst., which had not previously attracted our attention. The paragraph he refers to related to *Ely*, and not to *Exeter*, and we are more grieved than we can well express that the blunder in the name of the town has occurred. The Town Clerk's letter and the subjoined note from the Engineer of the Exeter Waterworks furnish ample evidence of the excellence of the water-supply of that city, and we have to express our great regret to the sanitary authority of the city and their officers that we should unwittingly have been led into so gross an error, and to apologise in the fullest manner for the annoyance the mistake must have caused them and their officers.—ED. L.

THE DEFENCE OF SCIENTIFIC RESEARCH.

To the Editor of THE LANCET.

SIR,—May I through your columns remind those gentlemen who propose starting an association for the defence of scientific research, that there are already two medical defence associations? Why should not one of these undertake to protect any subscribing qualified medical man or scientist from persecution or injury in any form connected with professional work? By having so many societies, the funds are so subdivided that all are crippled for anything likely to prove very expensive, as a test case involving expensive appeals. Were there only one society, I believe it would receive very general support, and in case of extra heavy expenses, a levy might be made, as is done by some sick benefit societies, to meet expenses.

I am, Sir, yours truly,

A. PHILLIPS HILLS.

Carlton House, Battersea Park, Dec. 1881.