“My clock before the magnet was attached, and the break-circuit before it, was regulated to sidereal time. With the magnet and break-circuit the observed errors of the clock have been as follows:—

					Daily Rate.
May 3	.	.	10h	+ 26.10	
					—1.28
4	.	.	10	24.82	
					—1.25
5	.	.	12.2	23.46	
					—1.25
11	.	.	13	15.94	
					—1.27
15	.	.	14	10.81	
					—1.20
22	.	.	12	2.47	
					—1.17
23	.	.	12	+ 1.30	
					—1.26
25	.	.	12	—1.22	
					—1.32
29	.	.	12	6.52	
					—1.32
June 2	.	.	14	—11.90	

“A better rate than this can hardly be expected, and shows that the magnet has no sensible disturbing influence.”

Barometers.

From the Journal of the Society of Arts, No. 601.

SIR: In your *Journal* of the 1st of April appears a description of a so-called new barometer, which, I think, will be found accurately described in the following extract from the *Encyclopædia Britannica*, 7th edition, 1842, and written by Sir J. Leslie:—“The most accurate construction of a barometer of this kind [the conical barometer, invented by Amontons, 1695,] is attained by joining together two tubes that have even but unequal bores, the longer and narrower being uppermost. If the width of the upper tube were supposed to be, to that of the under one, as two to three, the scale would be enlarged three times, since, by descending three inches from the top, and, consequently, two at the bottom, the column would suffer a contraction of one inch in height. This species of barometer is thus recommended by its simplicity and its ample range; but the bore of the tube being indispensably small, the mercury moves with difficulty, and resists impressions of minute changes of external action.” Also, page 400:—“A modification of the conical barometer in traveling we have ourselves employed. The principal part consists of a small steel stop-cock, a glass tube 31 or 32 inches long, with a bore of the tenth of an inch, sealed at top and filled with quicksilver, is cemented into the one end of the stop-cock, and into the other end is cemented an open and wider tube, 16 inches or more in length, and having its diameter above the eighth of an inch. This compound tube is lodged in a walking-stick, divided into inches and tenths through its whole extent, or only at the upper part.” It will thus been seen that this barometer was invented

and published more than 20 years since, and, if necessary, I could mention persons, both in London and elsewhere, who have made them, but probably they have not been much used, from the defect alluded to, which cannot be got rid of, except by using a larger tube, and having a movable piston in the bottom, on Whiting's plan, as exhibited by Mr. Becker last year at the soire of the Royal Society. Mr. Becker informed me, and, no doubt, others as well, that Whiting had also made them, as described above, with the small tube. Mr. Becker's instrument led, no doubt, to the recent revival of this kind of barometer; but while, perhaps, as a matter of business, it may be thought legitimate for any maker to introduce, in connexion with his own name, an instrument not generally known in the trade, it was hardly to be anticipated that the Royal Society should lend the sanction of their authority to the introduction of an instrument as new which was published more than 20 years since in a by no means obscure work. The above quotations appear also in the eighth edition of the *Encyclopædia*.

I am, &c.,

W. SYMONS.

Constancy of the Daniel's Battery.

From the London Chemical News, No. 242.

In order to increase still more the constancy of the Daniel's battery, Father Secchi advises the use of fine sand or of powdered sulphur in the porous cell. He accounts for its action by supposing that when the ordinary liquid alone is used there is greater liability to local action taking place upon the zinc. In a battery, the circuit of which is closed for two minutes every quarter of an hour, the learned Father has used an ordinary piece of commercial sheet zinc, half a millimetre in thickness, which has continued in action for more than six months, without showing the least sign of corrosion. For large elements instead of porous diaphragms, he uses bags made of coarse linen cloth, well annointed with a luting of flour and lime. Those who have experienced the difficulty of procuring large porous cells would do well to test these contrivances.

A Case of Dialysation.

To the Editor of the London Chemical News.

Sir:—In preparing solutions of vegetable acids in a large manufactory lately, where, as usual, the solutions are separated from an insoluble residue which is washed until tasteless, I found in one of the filters an impossibility of accomplishing this, the acid taste remaining, although water freely percolated through the mass; and on closer examination I found that the filtered liquor, which originally contained only a very small percentage of sulphuric acid, now consisted almost entirely of it, the crystallizable acid having been kept back by the precipitate, which in this case seems to have acted as a dialyser. I may further add that as soon as there was more space allowed below the false bottom, so that the liquor could not remain at all in contact with the precipitate, this effect ceased.—I am, &c.,

CHEMICUS.