their solutions being near completion. Both at the Universities and elsewhere, the work will still continue to occupy the high position which it has held among treatises of its kind. W.

*The Threshold of Science.* By C. R. Alder Wright, F.R.S. Second Edition, Revised and Enlarged. (London: Charles Griffin and Co., 1892.)

THE primary aim of this book is to interest young readers in various simple and amusing experiments, illustrating some of the chief physical and chemical properties of surrounding objects, and the effects upon them of light and heat. In the present edition the author has made no change which is likely to interfere with this object, but he has added various scientific appendices, and an excellent chapter on the systematic order in which class experiments should be carried out for educational purposes. These additions will be of great service to all who may wish to use the volume not merely as a "play-book," but as an instrument for the training of the mental faculties. Any one who may still have doubts regarding the value of elementary science as an organ of education, will speedily have his doubts dispelled if he takes the trouble to understand the methods recommended by Dr. Alder Wright. The majority of the experiments he has selected must not, of course, be studied merely in his exposition. It is intended that each reader shall make them himself. If that is done, they cannot fail to quicken the intelligence even of "the average boy."

*Key to J. B. Lock's Elementary Dynamics.* By G. H. Lock, M.A. (London: Macmillan and Co., 1892.)

THIS key will be found most useful both to beginners and teachers alike. The examples are all carefully worked out, many of the more difficult problems being treated at greater length with the view of helping those who are studying without the aid of a teacher. By an intelligent use of this book, a student should acquire a good knowledge of the method of working out problems as well as the important factor of attacking them in the right way. W.

## LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* NATURE. *No notice is taken of anonymous communications.*]

### Ice in the South Atlantic.

THE following account of ice met with in the South Atlantic at the commencement of last April, which has been supplied to the Meteorological Office by Captain Froud, of the Shipmasters' Society, may be of interest to your readers.

ROBERT H. SCOTT,
June 17. Secretary, Meteorological Office.

Ship *Cromdale*, London.

SIR,—I now send you a short account of my unusual encounter with ice in the above ship on our homeward passage from Sydney.

We left Sydney on March 1, and having run our easting down on the parallel of 49° to 50° S., rounded the Horn on March 30 without having seen ice, the average temperature of the water being 43° during the whole run across.

At midnight on April 1, lat. 56° S., long. 58° 32′ W., the temperature fell to 37°·5, this being the lowest for the voyage, but no ice was seen, although there was a suspicious glare to the southward.

At 4 a.m., April 6, lat. 46° S., long. 36° W., a large berg was reported right ahead, just giving us time to clear it. At 4.30, with the first sign of daybreak, several could be distinctly seen to the windward, the wind being north-west, and the ship steering north east about nine knots. At daylight (5.20) the whole horizon to the windward was a complete mass of bergs of enormous size, with an unbroken wall at the back; there were also many to the leeward. I now called all hands, and after reducing speed to seven knots, sent the hands to their stations and stood on. At 7 a.m. there was a wall extending from a point on the lee bow to about four points on the quarter, and at 7.30 both walls joined ahead. I sent the chief mate aloft with a pair of glasses to find a passage out, but he reported from the topgallant yard that the ice was unbroken ahead. Finding myself embayed, and closely beset with innumerable bergs of all shapes and sizes, I decided to tack and try to get out the way I had come into the bay. The cliffs were now truly grand, rising up 300 feet on either side of us, and as square and true at the edge as if just out of a joiners' shop, with the sea breaking right over the southern cliff and whirling away in a cloud of spray. Tacked ship at 7.30, finding the utmost difficulty in keeping clear of the huge pieces strewn so thickly in the water, and having in several cases to scrape her along one to get clear of the next. We stood on in this way till 11 a.m., when to my horror the wind started to veer with every squall, till I drew quite close to the southern barrier, having the extreme point a little on my lee bow. I felt sure we must go ashore without a chance of saving ourselves. Just about 11.30 the wind shifted to the south-west with a strong squall, so we squared away to the north-west, and came past the same bergs we had seen at daybreak, the largest being about 1000 feet high, anvil-shaped, and at 2 p.m. got on the north-west side of the northern arm of the horse-shoe shaped mass. It then reached from four points on my lee bow to as far as could be seen astern, in one unbroken line. A fact worthy of note was that at least fifty of the bergs in the bay were perfectly black, which was to be accounted for by the temperature of the water being 51°, which had turned many over. I also think that had there been even a small outlet at the eastern side of this mass the water between the barriers would not have been so thickly strewn with bergs, as the prevailing westerly gales would have driven them through and separated them.

I have frequently seen ice down south, but never anything like even the smaller bergs in this group. I also had precisely the same experience with regard to the temperature of the water in our homeward passage in the ship *Derwent* three years ago, as we dipped up a bucket of water within half a mile of a huge berg and found no change in the temperature.

I trust you will warn, as far as possible, those about to sail for the Cape, as these bergs must soon reach that part.

I remain, yours truly,
(Signed) EDGAR H. ANDREW, Master.
June 12.

### Land and Freshwater Shells peculiar to the British Isles.

MR. COCKERELL, in his article in NATURE of May 26 (p. 76), draws attention to a list of land and freshwater shells peculiar to the British Islands in Dr. Wallace's new edition of "Island Life." This work is of such very great importance to every one engaged in the study of the geographical distribution of animals, that it is regrettable the author should have repeated an error made in the first edition. *Geomalacus maculosus*, as is mentioned in Mr. Cockerell's article, is not peculiar to the British Islands. A specimen was discovered in Northern Spain as far back as 1868 by Mr. von Heyden, and recorded in the *Nachrichtsblatt d. deutschen Malakozool. Gesellschaft* by Heynemann in 1869. The allied species, supposed to have been found in France, has been proved to be an Arion; but several species of the interesting genus Geomalacus have been recently described by Simroth from Portugal.

Mr. Cockerell also states that several varieties in the list of peculiar British forms may have to be eventually struck out; and this is certainly the case, as the variety *albolateralis* of *Arion ater*, mentioned as "very distinct," was found near Bremen, in Germany, and is described in Simroth's "Naturgeschichte der deutschen Nacktschnecken" (*Zeitschr. f. wiss. Zoologie*, vol. 42, 1885). R. F. SCHARFF.
22 Leeson Park, Dublin, June 13.

## THE IMPERIAL INSTITUTE.

THE Imperial Institute is no longer a castle in the air, an abstraction the meaning of which is to be guessed at through a veil of mist, but a solid and hand-

some structure, affording a pleasant contrast to those in its immediate vicinity.

The objects and purposes which this institution should fulfil have been fully ventilated and discussed in these columns ever since the idea of such a national memorial, commemorative of the fiftieth year of the reign of Her Majesty, was suggested. This being so, it will be interesting to many of our readers if we make one or two comparisons of the scheme as it exists at present with the past suggestions. In an article on "Science and the Jubilee" in 1887 (NATURE, vol. xxxv. p. 217), we wrote:—

". . . . There is room for an Imperial Institute which might without difficulty be made one of the glories of the land, and which would do more for the federation of England and her colonies than almost any other machinery that it is possible to imagine. But it must be almost exclusively a scientific institution. Its watchwords should be 'Knowledge and Welcome.' England, through such an institution, should help her colonies in the arts of peace, as she does at present exclusively in the arts of war. In an Imperial Institute we can imagine the topography, the geology, the botany, and the various applications of science, and the industries of Greater Britain going hand in hand."

Again, referring to the proposed inclusion of an Emigration Office in the scheme, it was remarked:—

"With this we cordially agree. But the return current must be provided for. Those who have lived in England's colonies and dependencies know best the intense home feeling, and in many cases the stern necessity there is of close contact with the mother country. Let the Imperial Institute be England's official home of her returning children—the hall in which she officially welcomes them back. Let them here find all they need, and let information and welcome be afforded with no stinted hand."

An inspection of the parts already ready for occupation in the new building took place on Saturday last, and we confess frankly that the idea of "Welcome" referred to in the preceding paragraph has been fully carried out. The building is admirable architecturally, and in the various halls set apart for the purpose the children of the Greater Britain beyond the seas will find no unworthy home when they visit the mother country. Their intercourse will not be confined to meeting each other; the proposal to create home Fellows of the Institute will, no doubt, be taken advantage of by all interested in all the larger questions on which the progress of the Empire must depend. By this means an Imperial Club of a very real kind has been created.

So far, then, as one of the watchwords, "Welcome," is concerned, there is cause for sincere congratulation. It is too soon to discuss the many proposals regarding the other watchword, "Knowledge," with the future activity of the Institute in the second direction. The lines of activity already actually taken up and provided for in the building as now arranged may be gathered from a glance through the pages of the pamphlet and papers distributed on Saturday.

The contents of the galleries will constitute "a living representation of the resources of the Empire and of the condition of its industries and commerce." The permanent collections will illustrate "the natural and industrial products of the United Kingdom, of the several Colonies, and of India," while, from time to time, occasional exhibitions will be held which will, "it is hoped, stimulate and enlist the sympathies of Colonial, Indian, and British producers, and promote active co-operation with the industrial section of the Empire."

The collections will be arranged and described in such a manner as to afford full "scientific, practical, and commercial information relating to the sources, nature, facilities of supply, and applications of well-known natural products, and of those whose industrial or commercial value still needs development." The libraries, offices of reference, reading-rooms, &c., in conjunction with the above exhibits, should form therefore a mine of wealth. We note also an arrangement by which samples of products will be given to anyone who may be desirous of obtaining specific information respecting any particular product included in the collection.

Ample opportunities are to be offered for conference on matters of common interest, and for the interchange of information relative to both Great and Greater Britain.

Such, then, are some of the points included in the preliminary arrangement of the building. No one, we suppose, considers them as final. Natural selection will come in, and it rests with the representatives of the scientific bodies among the governing body to determine which parts of "Knowledge" of the higher kind shall be fostered. This is a problem for the future. We need not stop to consider it now.

One word about the building itself and the allocation of space.

Passing through the principal entrance, which is constructed altogether of Portland stone, the large reception hall is reached, which, when finished, will constitute one of the finest we have, various marbles and Indian teak panelling being profusely used.

The principal floor contains in its western corridor the British-American and British-Australasian conference rooms, the council chamber, and the secretarial and clerical offices; and in the eastern corridor the British-Indian and British-African conference rooms, the writing, reading, and news rooms, and the temporary library. The principal stairway, leading to the second floor, will, when finished, be a handsome piece of work; the steps will be of Hopton Wood stone, with marble balusters and rails, while the walls will be lined with specimens of British and Colonial marbles, and the ceiling profusely decorated with arabesque plaster.

On the first floor the Fellows' dining and reading rooms are situated. The rooms in the east corridor, occupied at present by a very interesting exhibition of Indian art metal work, will subsequently be used for the commercial department and commercial conferences. In the west corridor various rooms will be put at the disposal of various Societies "whose objects are kindred to those of the Imperial Institute."

On the second floor will be situated the public dining and refreshment room. Here also the rooms in the west corridor and on the south side will be used as sample examination rooms: there will also be a map room and a Fellows' smoking room. The east corridor will, we are somewhat ambiguously informed, be occupied probably by "certain Societies who are seeking the splendid accommodation which the Institute affords for carrying on their work." When these Societies are named, the policy of the governing body in this direction will become more obvious.

## *TIME STANDARDS OF EUROPE.*

THE era of world time is yet far off, and it is certain that the desirable scheme for a uniform horary standard put forward by the Astronomer-Royal (NATURE, vol. xxxiii. p. 521) will not be realized this century. But though this be so, signs of better times in the reckoning of the hours of the day have recently appeared, and the practical outcome of the Prime Meridian Conference at Washington (NATURE, vol. xxxiii. p. 259) is already of importance. Time is a problem to us all—a problem which has baffled the philosopher, driven the astronomer to devices which closely resemble subterfuges, and harassed the watchmaker beyond all other craftsmen. Much light on the difficult but all-important question is focussed in Mr. Lupton's article in NATURE, vol. xxxix. p. 374; but education will do more than it has yet done