1890.			
January	27 (5)	July	24 (2)
February	24 (5)	August	30 (8)
March	28 (4)	September	29 (7)
April	28 (7)	October	24 (5)
May	27 (7)	November	22 (1)
June	26 (8)	December	30

If these numbers be compared with the curves, it will be found that in a rough way they agree with them; the diminishing number of these low readings every autumn, no less than their increase towards the summer, being obviously correlated with the rise and fall of the curves.

F. H. PERRY COSTE.

THE SCIENCE MUSEUM AND GALLERY OF BRITISH ART AT SOUTH KENSINGTON.

VIGOROUS protests continue to be made against the appropriation, for the new Gallery of British Art, of the site which ought to be used, as originally intended, for the Science Museum. Several letters on the subject by men of high authority have been printed in the *Times*; and on Tuesday a deputation, which could not but command attention and respect, waited upon Lord Cranbrook and Mr. Goschen to represent to them the opinions held by all who are in a position to form a trustworthy judgment on the question. The Government are still engaged in considering the matter, and it is to be hoped that they are receiving and giving heed to the counsel of their natural advisers, although, unfortunately, this is *a priori* extremely doubtful.

We print the letters addressed to the *Times* by Sir F. Bramwell, Mr. Poynter, and Sir J. Coode, and an account of the proceedings of the deputation on Tuesday.

It has for many years been recognized that the science collections at South Kensington are housed in a manner which largely diminishes their value for their principal use—viz. that in connection with the Royal Normal School of Science.

This school, as every one knows, is, as regards its main building, situated on the east side of Exhibition Road, while the collections are scattered about in the South Gallery and in the West Gallery adjacent to Queen's Gate.

In 1885 the Government appointed an inter-departmental committee to consider the subject and to report, and they nominated me, as being unconnected with any department, chairman of the committee. The committee (with one dissentient) reported in the sense that on the land lying west of Exhibition Road, and between that road and Queen's Gate, suitable buildings should be erected according to a complete design, but that they should be carried out in successive portions. Nothing was done on this report.

In 1889 another committee was appointed; this committee made very similar recommendations, and last year the Government acquired further land.

There are now on the west side of Exhibition Road, and immediately opposite the science schools, the observatories used by Mr. Norman Lockyer, and also a newly-erected physical laboratory.

Everything seemed to be, after all these years of waiting, in train for affording the needed accommodation, when, incredible as it must appear, the Chancellor of the Exchequer announced that the whole of this well-considered and satisfactory arrangement is to be given up. He stated it had been determined to sweep away the observatories and the physical laboratory, already on the west side of the road, and close to the science schools, and to devote this particular plot of ground to a picture gallery. I look upon this as a most disastrous proceeding, and one that, in the interest of the great National Department at South Kensington, should not be entertained for one moment.

Any one who will take the pains to visit the ground, or even to look at an accurate plan of it, will see that there is plenty of good space available for the picture gallery without interfering with the needs of the science collection, and that the notion of building it where proposed is so thoroughly preposterous that, as our American friends say, it must have originated in "pure cussedness."

FREDERICK BRAMWELL.

No. 5 Great George Street, Westminster, May 9.

SIR FREDERICK BRAMWELL in his letter of this morning points out the disastrous effect on the interests of the national Department of Science at South Kensington which will result from the intrusion of the new Gallery of British Art, to be planted precisely on the spot where it will cause the greatest amount of inconvenience. To an artist a still more flagrant instance of "pure cussedness" in this matter would appear to be that the building should be placed where it can have no connection with the existing galleries, when there is a piece of ground higher up the road in immediate connection with them.

The galleries on the east and west of the Horticultural Gardens, which were built for pictures at the time when there was a scheme for holding annual international exhibitions, are, whether by a happy "fluke" or by careful calculation on the part of their constructor, General Scott, without doubt the best lighted and the best proportioned picture galleries that have ever been constructed in England. Sir Frederick Leighton has, I know, expressed this opinion, and every artist who exhibited in these galleries during the three or four years that the exhibitions were held there will, I believe, agree in it: "We never saw our pictures look so well." These galleries are even now being connected by a building crossing the intervening space, the lower half of which will belong to the Imperial Institute, while the upper part is to be available for purposes of exhibition, thus making a connected group, and what would appear to be an unrivalled building for the purposes of a Gallery of British Art.

Why these buildings, acknowledged to be as good as they can be, and actually ready on the spot, should not be used for this purpose, according to what I understand was the original and nearly accepted scheme, it is somewhat difficult to understand. If the building for which £80,000 has been so liberally offered were placed higher up the road, above the Technical Institute, where there is a piece of ground available, it would back immediately on the Eastern Gallery, in which the Indian collection is now housed, thus affording provision for the extension of the collection, which is growing annually by the addition of the pictures purchased under the Chantrey bequest, and to which it is certain that further considerable additions will constantly be made by gift and bequest as soon as there is a place in which they can be properly and permanently exhibited.

Also, there is for once, if advantage be taken of it, an opportunity for carrying out a reasonable and consistent scheme for both science and art.

EDWARD J. POYNTER, R.A.

28 Albert Gate, S.W., May 11.

HAVING served on the Committee on Machinery and Inventions in connection with the Science and Art Department of the Committee of Council on Education, I desire most emphatically to endorse the protest of Sir Frederick Bramwell which appears in your columns of this day's date.

Although the fees received from patentees up to the end of 1885 exceeded the expenditure of the Patent Office by upwards of 2½ millions sterling, nothing practically has been done to put the Patent Museum and Museum of Machinery and Inventions in an efficient condition.

Year after year the Committee, of which I am a member, has urged that more space should be given to the authorities at South Kensington, and now, when it was thought the recommendations were about to be realized, it is asserted that the promised site is to be devoted to a picture gallery.

I sincerely trust that this intention may not be carried out, but that the site in question, which exactly faces the Royal College of Science, will be appropriated for the science collections, to which purpose it has long been assigned.

JNO. COODE, President.

The Institution of Civil Engineers, 25 Great George Street, Westminster, May 11.

The deputation which waited upon Lord Cranbrook, the Lord President of the Council, and Mr. Goschen was large and representative. Mr. Plunket, M.P., First Commissioner of Works, was also present. Among the deputation were: Sir William Thomson (President of the Royal Society), Sir Bernhard Samuelson, M.P., Sir George Gabriel Stokes (Past President of the Royal Society), Mr. C. Acland, M.P., Sir Frederick Bramwell, F.R.S., Prof. Story-Maskelyne, M.P., Sir Douglas Galton, C.B., Mr. Poynter, R.A., Prof. Unwin, Mr. Francis

Galton, Prof. Ayrton, Prof. Flower, C.B., Prof. Armstrong (Secretary of the Chemical Society), and Mr. Fletcher and Mr. Woodward, of the British Museum.

Prof. Story-Maskelyne, in introducing the deputation, in the absence of Sir Henry Roscoe (who is laid up with influenza), said it embraced a body of gentlemen distinguished not so much by their numbers as by their character, representing as they did the Royal Society and the scientific men of England. They had come there to ask that the question of the site of the new National Gallery for British Art should be reconsidered. Those who were deeply concerned in what he might call the new University which had risen for science at South Kensington felt that the proposed building would be a wedge put in between the place now occupied by it and the place dedicated to science. Scientific men would have to go across the road to get to another and interesting branch of the National Science Collection in a portion of the ground which would then be considerably remote from where they at present were. They understood it to be very much a question of money, and it was believed that the Government would have to ask Parliament to supplement the grant of £80,000 given by the anonymous donor. What he asked was that they should not be told off-hand that the scheme could not be altered, but that they should be allowed to take the sense of Parliament as to whether the site was to be occupied in the way proposed or not. They objected to the money being simply asked from Parliament and the control taken out of its hands.

The Chancellor of the Exchequer.—You may entirely exclude that. That will not be done. We shall take such precautions by trustees and by contracts that such a contingency will not occur.

Prof. Story-Maskelyne said he was very glad to hear that.

Sir William Thomson, on behalf of the Royal Society, said they respectfully protested against the proposal to take the site now occupied by the physical laboratory of the Royal College of Science for any other purpose. Sixty pupils were now actively engaged. There was also a mining school in the same locality. No other sites could be as convenient as the site which those departments at the present occupied. It would be most fatal to the science work if the present arrangements were interfered with or the scientific collections, so conveniently arranged, were disturbed. Nor would the proposed site be the most convenient one for the pictures. A far better one would be that at present occupied by the School of Cookery, which, while affording ample room for the present proposal, would also be perfectly convenient for subsequent expansion in a direction that would result in the most admirable collection of picture galleries in the world.

The Chancellor of the Exchequer.—Can you tell us—for I have not yet been able to make it out—in what way the proposed arrangement would be fatal to the work of the College of Science?

Sir William Thomson.—By cutting the school in two—by separating the school from the place in which the instruments are kept.

The Chancellor of the Exchequer.—You mean that it is too far to walk?

Sir William Thomson.—It would be dreadfully risky to have to carry about delicate instruments.

Sir Bernhard Samuelson, as a member of a departmental committee which considered the question of housing the College of Science, supported Sir William Thomson's views, and pointed out that already there had been an encroachment upon the land which had been acquired for the purposes of the Science Museum.

The Chancellor of the Exchequer.—It was purchased for science and art. You do not contend that the whole of it should be devoted to science?

Sir Bernhard Samuelson said he did. He would like to ask the Chancellor of the Exchequer, after the assurance which he had just given that there would be no occasion to go to the House of Commons for a vote in aid of this work, whether he meant that, if there should be an expansion of the art gallery, some one would be ready to extend the munificence of the present donor.

The Chancellor of the Exchequer.—I think that that is rather a matter for our grandchildren. I think there is plenty of space to fill with worthy pictures for a very long time to come.

Prof. Story-Maskelyne.—But £80,000 will not do it.

Sir B. Samuelson said he hoped the question of the site would be reconsidered, and that those representing science should have the assurance that ample space would be given them not only for their present requirements but also for the extension which appeared to be looming in the future.

The Chancellor of the Exchequer.—I am anxious to provide well for science. We hope to bring science into one centre fronting the Imperial Institute.

Sir B. Samuelson said that if they were given an area equal to the amount purchased last year for the purpose of science alone they ought, in his opinion, to be content. But already there had been a small encroachment, and the fact of their having no actual claim to the ground would lead to further encroachment, which would, in the end, make it impossible for science to be efficiently provided for.

The Chancellor of the Exchequer.—I am anxious to show you that, quite irrespective of my interposition, we have not been blind to the interests of science, and that one of our plans has been to satisfy science in the most ample manner for the future.

Sir B. Samuelson said the art gallery was looked upon with a great deal of jealousy, and in the next place they feared that the full area of 200,000 feet, which they considered to be absolutely necessary for the future requirements of science, would be encroached upon.

Sir Frederick Bramwell, who was chairman of the departmental committee which considered the question in 1888, said there was a site to the north of the City and Guilds Institute, and from the east to the west there were galleries, and a cross gallery was being made by the Imperial Institute which would give communication one with the other, and which would be in immediate connection with the site he suggested. That would be an admirable art gallery. He would be glad to see the Science School and everything belonging to it moved so that there might not be a road dividing it. He trusted that the anonymous donor might be induced to see that his gift would prove more graceful if he did not impose a condition that would have so prejudicial an effect as would be the case if the recommendations of the two committees he had referred to were disregarded.

Lord Cranbrook.—The question, of course, so far as it can be considered will be considered, and I quite agree with Sir Frederick Bramwell that nobody can predict what may be done hereafter. You may have a scheme which, in itself, is a good one, but which may possibly have to wait. But in the meantime I can assure you that the interests of science will be most carefully considered, and that we will do what we can in order to further them.

Prof. Story-Maskelyne, having thanked Lord Cranbrook and Mr. Goschen for the hearing that had been given to their views,

The deputation withdrew.

We have received the following communication on this subject:—

SIR,—The curious admissions made by Mr. Goschen to the deputation which waited upon him and the Lord President indicate very clearly that we have, in the present muddle touching the site of the Art Gallery, another of those instances in which we suffer from the system, or, rather, want of system, which is characteristic of the relation of Government to science, and from the absence of scientific knowledge in those branches of the public service by which matters of the highest scientific moment are settled. A reference to some of the facts will, I think, show this very clearly.

The particular site which has been allocated by the Government in this way for the purposes of an art gallery forms part of a piece of land which, as is well known, only last year was deliberately purchased by the same Government for scientific purposes—to be quite accurate for “science and the arts”—that is, science and its manifold applications. *The space of ground thus purchased was less than half the space allotted to the Natural History Museum.* I say deliberately, because the purchase of the land in 1890 had for its object the carrying out of one of the recommendations of the Duke of Devonshire's Commission, which dates from the year 1874—namely, the erection of a Science Museum.

This object so warmly commended itself to the Royal Commissioners of the 1851 Exhibition that in 1876 they offered the land on which the Imperial Institute is now being erected and a sum of £100,000 towards its realization. Few acquainted with the

manners and customs of our Government Departments in relation to science will be surprised to hear that this magnificent offer was refused; and it is to prevent a like disastrous mistake being now made that the strong memorial was presented to Lord Salisbury.

The ideal arrangement for a great national collection of scientific apparatus which is to do for the sciences of experiment and observation what the British Museum does for literature and antiquities, the Natural History Museum for biology, and the National Gallery for art, is that it shall be in close connection with laboratories where the apparatus can be used, presided over by experts who are familiarly acquainted with its construction and uses.

This was the ideal recommended to the Government by the Duke of Devonshire's Commission in 1874, and such is the ideal now being carried out by several of our provincial Colleges.

As all Londoners know, at present the Science Schools and the collection of scientific apparatus, which are both necessary for the realization of this scheme, are placed one on the east side of Exhibition Road, and the other chiefly in the Western Galleries. If the apparatus is employed in teaching, it must necessarily be transported about a quarter of a mile and back from the one to the other. And this accounts for the strange processions occasionally met in the neighbourhood of the Museum carrying delicate apparatus along the street alike in wet and dusty weather.

When the new piece of land was purchased last year on the recommendation of a very strong Treasury Committee, it was naturally expected that, as the overcrowded state of the existing school buildings rendered immediate action imperative, plans would be at once drawn up for an extension in the closest possible contiguity with the present building—that is to say, on the part of the newly-acquired plot immediately fronting it.

It was also believed that the Science Museum would be built in close and organic relation with the new laboratories, and that a scheme would be initiated which would supply pressing needs, and could, in course of time, be developed into the ideal institution which has been sketched.

These plans, to the carrying out of which the friends of science confidently looked forward, would be rendered absolutely futile by the grant for art purposes of the particular plot the alienation of which from the use for which it was purchased will render the objects of its purchase nugatory.

All hope of a compact site, therefore, for the future worthy representation of physical science would disappear as the result of this action of the Government.

The public have a right to know who is responsible for this, and how far the scientific officers of the Science and Art Department have been consulted. If they have in any way been consenting parties, it seems probable that they will have a *mauvais quart d'heure* with their scientific brethren who have signed the memorial and who attended the deputation; if they have not been consulted, the whole transaction is a disgrace to our administrative system.

An idea of the *impasse* in which this decision has landed matters scientific at South Kensington was to be gathered from one of Mr. Goschen's replies as to the makeshift arrangements at first proposed:—

(1) The second half of the Science Schools is to be built somewhere at the back of the new Art Gallery. This at once prevents all close relationship between the two halves of the same institution.

(2) The scientific apparatus is to be distributed in galleries which, although built for artistic purposes, are not considered good enough for art.

These, I presume, are the Western Gallery, the present *terminus a quo* of the processions to which reference has been made, a corresponding Eastern Gallery, now occupied by the Indian Museum, and the upper part of a new gallery, also designed for art, situated between the Imperial Institute and the Royal College of Music. All these galleries are as far removed as the limits of the Government estate will permit from the Science Schools, with which they are supposed to be in organic connection.

It appears, therefore, that the provision to be made for the Science Museum, which ought to rank, and in the future must rank, with the British Museum, the National Gallery, and other like institutions, is that the two halves of the Science Schools are to be widely sundered, while any organic connection with the Science Museum is to be rendered impossible.

I do not think, Sir, I need occupy any more of your space with recent history; the whole question stands thus:—

(1) In our museum system Art, Antiquities, Literature, and Natural History are magnificently provided for.

(2) Science is not provided for at all in any permanent manner.

(3) During the last twenty years Royal Commissions, Treasury and Departmental Committees without number, and deputations, have pointed out this gap.

(4) Last year the Government bought, and the Royal Commissioners for the Exhibition of 1851 sold cheap, a plot of land to be used for this purpose, and for this purpose alone.

(5) The plot is less than half of that on which the Natural History Museum stands.

(6) The Government now barter away a large portion of this small site for a mess of pottage.

I am, Sir,

Your obedient servant,

F.R.S.

NOTES.

THE ladies' *soirée* of the Royal Society will take place on Wednesday, June 17.

ON Tuesday the Convocation of the University of London considered the Draft Charter drawn up by the Senate. A resolution to the effect that the scheme should be approved was moved by Lord Herschell, seconded by Sir Richard Quain, and supported by Dr. Pye Smith. Mr. Bompas, Q.C., Mr. R. H. Hutton, and others spoke on the other side. In the end the scheme was rejected, 461 voting against it, and only 197 recording their votes in its favour. The whole subject needs to be thoroughly reconsidered, as the question of the higher teaching, one of the points first insisted on, seems to be dropping out of view. To educationists this is, of course, the really important element of the subject; and it cannot be for ever tolerated that the existence of an Imperial Examining Board, because it has been wrongly named, should prevent the largest city in the world from securing educational advantages which have for centuries been possessed by many a small German town.

THE Government of New South Wales have granted for the purposes of the Sydney Biological Station a plot of land of two acres on the north shore of Port Jackson at a part where the littoral fauna is particularly rich, and where the conditions are in other respects highly favourable. The Royal Society have made a grant of £50 towards the cost of the proposed new station.

THE annual meeting of the German Ornithological Society is being held this year at Frankfort, and the attendance is somewhat larger than usual, as several ornithologists have stopped at Frankfort on their way to the Congress at Budapest. The subject of zoological nomenclature was considered on Tuesday, when a discussion on the rules proposed by Dr. Reichenow and Graf von Berlepsch ensued. The question will be further considered at the forthcoming Ornithological Congress at Budapest, where Dr. Reichenow will be the exponent in the systematic section.

THE *conversazione* of the Society of Arts will be held at the South Kensington Museum on Wednesday evening, June 17.

M. EDMOND BECQUEREL, son, and successor as Professor, of Antoine César Becquerel, died on Monday, in Paris, at the age of 71. He was the author of treatises on the solar spectrum, the electric light, magnetic phenomena, and other scientific subjects.

PROF. JAMES GEIKIE, of the University of Edinburgh, has been delivering a course of lectures at the Lowell Institute,