MUSEUM OF INDUSTRY (DUBLIN).

RETURN to an Order of the Honourable The House of Commons, dated 26 April 1864;—*for*,

RETURNS "(in continuation of Parliamentary Paper, No. 331, of Session 1854) of STATEMENTS of Amount voted by Parliament or expended from other Sources for the MUSEUM of INDUSTRY, *Stephen's Green, Dublin*, during each Year since last Return; distinguishing the Amount expended in Purchasing additional Space; in Building, or Enlarging, or Repairing; in Rent; in Fittings and Furniture; in Salaries, and in Purchases of Specimens or Collections:"

"Of the Number and Subjects of LECTURES delivered, and by whom:"

"Of the REPORTS or PUBLICATIONS issued:"

"And, of the Amount of FEES received, and how applied."

ROBERT KANE,
Director.

7 May 1864.

— No. 1. —

STATEMENT of Amount voted by Parliament or expended from other Sources for the MUSEUM of IRISH INDUSTRY, *Stephen's Green, Dublin*, during each year since last Return; distinguishing the Amount expended in purchasing additional Space; in Building, or Enlarging, or Repairing; in Rent; in Fittings and Furniture; in Salaries; and in purchases of Specimens or Collections.

1. For Amount voted by Parliament in each Year. *See* annexed Table (A).

2. For Amount expended by the Museum in each Year. *See* annexed Table (B).

3. For Amount expended from other Sources:—

The only funds besides Parliamentary Grants that have been made available, have been in the form of property by donations of specimens of industrial materials and products, and also books, but no exact money valuation of such donations has been made, or could be made, without much time. The nature and amount of these donations have been annually reported to Parliament, and printed with the Estimates for the Museum, to which papers, therefore, reference may be made.

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(A.)

STATEMENT of Items and Amount of PARLIAMENTARY GRANTS made to the MUSEUM of IRISH INDUSTRY, from 1 April 1854 to 31 March 1864, respectively.

Description of Items in Grant.	1 April 1854 to 31 March 1855.	1 April 1855 to 31 March 1856.	1 April 1856 to 31 March 1857.	1 April 1857 to 31 March 1858.	1 April 1858 to 31 March 1859.	1 April 1859 to 31 March 1860.	1 April 1860 to 31 March 1861.	1 April 1861 to 31 March 1862.	1 April 1862 to 31 March 1863.	1 April 1863 to 31 March 1864.	GENERAL TOTAL.
SALARIES:	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Director	300 – –	400 – –	400 – –	400 – –	400 – –	400 – –	400 – –	400 – –	400 – –	400 – –	3,900 – –
Four Lecturers at 200 *l.*	700 – –	800 – –	800 – –	800 – –	800 – –	800 – –	800 – –	800 – –	800 – –	800 – –	7,900 – –
Chemist	200 – –	200 – –	200 – –	200 – –	200 – –	200 – –	200 – –	200 – –	200 – –	200 – –	2,000 – –
Assistant Chemist	100 – –	100 – –	100 – –	100 – –	100 – –	*100 – –	- -	- -	- -	- -	600 – –
Curator	- -	100 – –	100 – –	100 – –	100 – –	100 – –	200 – –	200 – –	200 – –	200 – –	1,800 – –
Clerk and Accountant	125 – –	100 – –	100 – –	110 – –	120 – –	130 – –	140 – –	150 – –	160 – –	170 – –	1,305 – –
Head Porter	- -	47 – –	47 – –	52 – –	52 – –	52 – –	52 – –	52 – –	65 – –	58 10 –	477 10 –
Six Attendants, and Messengers.	245 – –	237 – –	237 – –	234 – –	234 – –	234 – –	234 – –	234 – –	312 – –	273 – –	2,529 – –
Two House Servants	55 – –	55 – –	55 – –	55 – –	55 – –	55 – –	55 – –	55 – –	60 – –	60 – –	505 – –
Extra Attendants	- -	- -	- -	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	350 – –
For provincial lectures	†500 – –	500 – –	500 – –	500 – –	500 – –	500 – –	500 – –	500 – –	500 – –	500 – –	5,000 – –
For purchase of specimens for Museum, and books for Library.	450 – –	500 – –	500 – –	500 – –	500 – –	500 – –	500 – –	400 – –	400 – –	400 – –	4,650 – –
For outfit and illustrations for lectures.	400 – –	300 – –	300 – –	300 – –	300 – –	300 – –	300 – –	300 – –	300 – –	300 – –	3,100 – –
For prizes	- -	25 – –	25 – –	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	400 – –
For rent, rates, and taxes	253 6 –	253 6 –	253 6 –	253 6 –	253 6 –	253 6 –	253 6 –	253 6 –	253 6 –	253 6 –	2,533 – –
For repairs, furniture, and fittings, &c.	550 – –	550 – –	550 – –	550 – –	550 – –	550 – –	550 – –	550 – –	550 – –	550 – –	5,500 – –
For laboratories	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	1,000 – –
For fuel, light, soap, and cleaning articles.	140 – –	140 – –	200 – –	200 – –	200 – –	200 – –	200 – –	250 – –	250 – –	250 – –	2,030 – –
For uniforms for attendants	50 – –	50 – –	50 – –	62 10 –	62 10 –	62 10 –	62 10 –	62 10 –	62 10 –	62 10 –	587 10 –
For advertisements and printing.	50 – –	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	100 – –	950 – –
For travelling expenses	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	50 – –	500 – –
For incidents	100 – –	100 – –	100 – –	100 – –	100 – –	200 – –	200 – –	200 – –	200 – –	200 – –	1,500 – –
TOTAL £.	4,368 6 –	4,707 6 –	4,767 6 –	4,866 16 –	4,876 16 –	4,986 16 –	4,996 16 –	4,956 16 –	5,062 16 –	5,027 6 –	48,617 – –

* By direction of the authorities of the Science and Art Department, the salary of the Assistant Chemist, amount 100*l.*, is now paid out of the grant allowed for incidental expenses.

† Part of 500*l.* for Provincial lectures, which is expended under the direction of a joint committee consisting of the Governors and Council of the Royal Dublin Society.

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(B.)

STATEMENT of Items and Amount of Expenditure of PARLIAMENTARY GRANTS made by the MUSEUM of IRISH INDUSTRY, from 1 April 1854 to 31 March 1864.

HEADS of EXPENDITURE.	1 April 1854 to 31 March 1855.	1 April 1855 to 31 March 1856.	1 April 1856 to 31 March 1857.	1 April 1857 to 31 March 1858.	1 April 1858 to 31 March 1859.	1 April 1859 to 31 March 1860.	1 April 1860 to 31 March 1861.	1 April 1861 to 31 March 1862.	1 April 1862 to 31 March 1863.	1 April 1863 to 31 March 1864.	GENERAL TOTAL.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Salaries of principal officers -	1,325 – –	1,700 – –	1,700 – –	1,710 – –	1,720 – –	1,730 – –	1,740 – –	1,750 – –	1,760 – –	1,770 – –	16,905 – –
Wages of subordinate officers.	226 9 5	296 1 –	349 16 –	393 4 4	391 – –	394 6 –	379 12 –	380 7 3	418 6 3	423 10 –	3,652 12 3
Purchase of specimens and books.	369 14 8	499 8 10	502 9 7	499 6 8	499 14 7	490 19 3	492 11 2	400 13 6	399 12 9	414 4 11	4,568 15 11
Outfit for lectures - -	329 7 7	299 6 2	301 9 9	319 14 1	298 – 6	299 13 10	299 12 6	294 16 7	284 – 5	289 17 5	3,015 18 10
Repairs and fittings - -	482 15 –	549 8 6	550 – –	549 18 2	550 7 1	545 15 7	553 12 1	550 19 2	510 11 10	403 7 10	5,248 15 3
Fuel, light, and cleaning articles.	114 16 9	127 6 6	200 17 7	201 16 3	197 16 9	212 17 1	20[illegible] 18 5	230 16 –	184 17 7	190 – 8	1,862 3 7
Laboratories - - -	96 17 3	98 15 10	99 19 5	99 9 1	97 1 6	95 5 7	100 1 1	103 3 8	97 3 1	*107 10 3	995 6 9
Advertisements - - -	49 14 6	66 18 –	98 9 6	61 19 –	99 13 –	99 16 –	99 19 2	89 6 4	90 9 3	124 10 10	880 15 7
Incidents - - - -	47 13 –	90 13 4	109 – –	101 4 1	98 16 9	206 2 2	230 1 10	207 4 9	186 6 9	164 3 4	1,441 6 –
Rent, rates, and taxes - -	226 1 –	226 1 –	228 3 6	228 18 8	226 1 –	223 3 4	228 18 8	226 1 –	223 3 4	223 3 4	2,259 14 10
Travelling expenses - -	29 16 6	47 17 11	20 19 7	39 – –	45 13 4	40 18 10	49 18 6	50 – –	31 10 –	41 2 6	396 17 2
Prizes - - - -	- -	- -	24 – –	50 – –	46 – –	46 – –	50 – –	49 – –	36 – –	50 5 –	351 5 –
Uniforms for porters - -	46 5 –	50 – –	50 – –	62 6 –	62 18 –	62 18 –	62 10 –	62 18 –	62 18 –	62 18 –	585 1 –
TOTAL - - £.	3,344 10 8	4,051 17 1	4,235 4 11	4,316 16 4	4,378 6 6	4,449 15 8	4,487 15 5	4,395 6 3	4,284 19 3	4,264 14 1	42,163 12 2

* In the above item is included the sum of 70 *l.* for the purchase of chemical apparatus for the use of the Professor of General Chemistry for lecture illustrations, and which has been charged to the account of the Laboratory Department, with the consent of the Chemist to the Museum.

I hereby certify that I have carefully prepared the calculations of the above stated amounts, and believe them to be correct,

5 May 1864. *George Penny*, Clerk to the Museum.

I certify that the above Return is made correctly and accurately, to the best of my knowledge,

7 May 1864. *Robert Kane*, Director.

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— No. 2. —

RETURN of the Number and Subjects of LECTURES delivered, and by whom.

Number of Free Lectures.	Number of Paid Lectures.	SUBJECT.	LECTURER.	Number of Tickets Sold.	Average Attendance.	Number Competed for Prizes.
Session of 1854–55:						
6	- -	Botany - - - -	Professor Allman - -	- -	140	
6	- -	Mechanics - - -	Professor Barker - -	- -	370	
6	- -	General Chemistry -	Professor Sullivan - -	- -	380	
6	- -	Geology - - -	Professor Jukes - -	- -	410	
12	- -	Geology - - -	Professor Jukes - -	- -	201	
12	- -	Physical Science - -	Professor Barker - -	- -	365	
	20	Geology - - -	Professor Jukes - -	102	44	
	20	Botany - - - -	Professor Allman - -	36	15	
	20	General Chemistry -	Professor Sullivan - -	55	17	
	20	Physical Science - -	Professor Barker - -	70	21	
Session of 1855–56:						
12	- -	Botany - - - -	Professor Kinahan - -	- -	68	
12	- -	General Chemistry -	Professor Sullivan - -	- -	129	
	30	General Chemistry -	Professor Sullivan - -	143	62	21
	30	Geology - - -	Professor Jukes - -	92	49	16
	30	Physical Science - -	Professor Barker - -	123	60	37
	30	Botany - - - -	Professor Kinahan - -	66	26	15
	—	Practical Chemistry -	Professor Sullivan - -	11		
Session of 1856–57:						
12	- -	General Chemistry -	Professor Sullivan - -	- -	279	
12	- -	Physical Geography -	Professor Jukes - -	- -	291	
	8	Geology - - -	Professor Jukes - -	168	124	33
	8	Chemistry - - -	Professor Sullivan - -	170	103	30
	20	Physical Science - -	Professor Barker - -	37	30	17
	20	General Chemistry -	Professor Sullivan - -	30	16	12
	20	Geology - - -	Professor Jukes - -	59	52	11
	20	Zoology - - -	Professor Kinahan - -	27	19	7
	20	Botany - - - -	Professor Harvey - -	47	62*	7
	—	Practical Chemistry -	Professor Galloway - -	15	13	9
Session of 1857–58:						
12	- -	General Chemistry -	Professor Sullivan - -	- -	207	
12	- -	Physical Geography -	Professor Jukes - -	- -	348	
	20	Zoology - - -	Professor Kinahan - -	31	18	7
	14	Physical Science - -	Professor Barker - -	17	6	3
	30	Geology - - -	Professor Jukes - -	40	37	4
	30	General Chemistry -	Professor Sullivan - -	26	16	5
	—	Botany - - - -	Professor Harvey - -	6	- -	2
	—	Practical Chemistry -	Professor Galloway - -	39†		
Session of 1858–59:						
12	- -	Physical Geography -	Professor Jukes - -	- -	213	
12	- -	General Chemistry - -	Professor Sullivan - -	- -	135	
12	- -	Zoology - - -	Professor Kinahan - -	- -	85	
6	- -	Botany - - - -	Professor Harvey - -	- -	130	
	6	Zoology - - -	Professor Kinahan - -	12	11	5
	30	Geology - - -	Professor Jukes - -	52	41	11
	16	Physical Science - -	Professor Barker - -	44	28	9
	30	General Chemistry -	Professor Sullivan - -	42	27	9
	—	Botany - - - -	Professor Harvey - -	6	- -	5
	—	Practical Chemistry -	Professor Galloway - -	45	- -	6
Session of 1859–60:						
12	- -	Physical Geography -	Professor Jukes - -	- -	176	
12	- -	General Chemistry -	Professor Sullivan - -	- -	250	
12	- -	Zoology - - -	Professor Kinahan - -	- -	91	
6	- -	Botany - - - -	Professor Harvey - -	- -	71	
	6	Zoology - - -	Professor Kinahan - -	11	12	6
	18	Physical Science - -	Professor Barker - -	35	20	10
	30	Geology - - -	Professor Jukes - -	42	33	11
	30	General Chemistry -	Professor Sullivan - -	39	27	11
	—	Botany - - - -	Professor Harvey - -	10	- -	7
	—	Practical Chemistry -	Professor Galloway - -	36		

* The Systematic Lectures on Botany are delivered partly in the Theatre of the Royal Dublin Society, and partly in the Botanic Gardens, Glasnevin. Members of the Royal Dublin Society are admitted free to all the Lectures.

† The Laboratory Session is divided into two terms, and a Student can register for the whole session, or each term separately. Many of the Students adopt the latter course, and this accounts for the apparently large number of Pupils in the Practical Chemical classes.

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Number of Free Lectures.	Number of Paid Lectures.	SUBJECT.	LECTURER.	Number of Tickets Sold.	Average Attendance.	Number Competed for Prizes.
Session of 1860-61:						
12	- -	Physical Geography -	Professor Jukes - -	- -	138	
12	- -	General Chemistry - -	Professor Sullivan - -	- -	153	
12	- -	Zoology - - -	Professor Kinahan - -	- -	84	
6	- -	Botany - - - -	Professor Harvey - -	- -	98	
	7	Zoology - - -	Professor Kinahan - -	16	13	12
	17	Physical Science - -	Professor Barker - -	28	23	11
	30	Geology - - -	Professor Jukes - -	46	35	11
	30	General Chemistry -	Professor Sullivan - -	35	26	7
	—	Botany - - - -	Professor Harvey - -	9	- -	7
	—	Practical Chemistry -	Professor Galloway - -	28	- -	10
Session of 1861-62:						
12	- -	Physical Geography -	Professor Jukes - -	- -	121	
12	- -	General Chemistry -	Professor Sullivan - -	- -	196	
12	- -	Zoology - - -	Professor Kinahan - -	- -	59	
6	- -	Botany - - - -	Professor Harvey - -	- -	81	
	3	Zoology - - -	Professor Kinahan - -	13	13	10
	18	Physical Science - -	Professor Barker - -	28	19	11
	30	Geology - - -	Professor Jukes - -	35	24	10
	30	General Chemistry -	Professor Sullivan - -	37	29	10
	—	Botany - - - -	Professor Harvey - -	7	- -	7
	—	Practical Chemistry -	Professor Galloway - -	47	- -	8
Session of 1862-63:						
12	- -	General Chemistry -	Professor Sullivan - -	- -	334	
12	- -	Geology - - -	Professor Jukes - -	- -	251	
15	- -	Zoology - - -	Professor Morgan - -	- -	134	
6	- -	Botany - - - -	Professor Harvey - -	- -	104	
	18	Physical Science - -	Professor Barker - -	35	27	9
	30	Geology - - -	Professor Jukes - -	71	53	18
	30	General Chemistry - -	Professor Sullivan - -	54	40	10
	—	Zoology - - -	Professor Morgan - -	12	- -	11
	—	Botany - - - -	Professor Harvey - -	12	- -	9
	—	Practical Chemistry -	Professor Galloway - -	57	- -	13
Session of 1863-64:						
12	- -	General Chemistry -	Professor Sullivan - -	- -	283	
12	- -	Geology - - -	Professor Jukes - -	- -	192	
12	- -	Zoology - - -	Professor Morgan - -	- -	154	
6	- -	Physical Science - -	Professor Barker - -	- -	193	
	6	Zoology - - -	Professor Morgan - -	17	17	11
	30	General Chemistry -	Professor Sullivan - -	39	28	12
	30	Geology - - -	Professor Jukes - -	50	41	12
	—	Practical Chemistry -	Professor Galloway - -	74		

SUMMARY of the Number of FREE and PAID LECTURES delivered, as also the Number of REGISTERED PUPILS, and of those who competed for PRIZES, from the Session 1854–55 up to the Session 1862–63 inclusive, and part of 1863-64.

	Number of Free Lectures.	Number of Paid Lectures.	Number of Tickets Sold.	Number Competed for Prizes.
Session 1854-55 - - -	48	80	263*	
" 1855-56 - - -	24	120	435	89
" 1856-57 - - -	24	116	553	126
" 1857-58 - - -	24	94	159	30
" 1858-59 - - -	42	82	201	45
" 1859-60 - - -	42	84	173	55
" 1860-61 - - -	42	84	162	58
" 1861-62 - - -	42	81	167	56
" 1862-63 - - -	45	78	241	70
TOTAL - - -	333	819	2,354	529

* During the first three sessions some of the systematic courses of lectures were divided into two, and some into three parts, and a separate fee charged for each part. This accounts for the large number of registered students during those years.

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— No. 3. —

RETURN of the REPORTS or PUBLICATIONS issued.

1. THE General Descriptive Guide of the Museum of Irish Industry, Dublin, 8vo., 114 pages, 1857.
2. General descriptive notice of the Museum of Irish Industry, 8vo., 32 pages, 1861.
3. Inventory Catalogue, part 1, 1861, of the specimens illustrating the materials, processes and products of the manufactures of earthenware, porcelain, glass, and enamels, in the collection of the Museum of Irish Industry Dublin.
4. Inventory Catalogue, part 2, 1862, of the specimens illustrating the composition, structure and other characters of the Irish, British, and foreign rocks, in the collection of the Museum of Irish Industry, Dublin.
5. Inventory Catalogue, part 3, 1862, of the specimens illustrating the nature, extent and uses of the Irish, British, and foreign coal and peat fuel deposits, and the materials, processes and products of the iron and steel manufactures in the collection of the Museum of Irish Industry, Dublin.
6. Programme of educational arrangements for the session of the Government School of Science applied to mining and the arts. Museum of Irish Industry, Dublin, 8vo., 120 pages; of this publication a new issue takes place in each year.

The duties of the chemist to the museum having been, since the transfer of the Museum of Irish Industry to the Science and Art Department, understood by that officer to be limited with the authority of the head of the department to teaching day and evening classes in practical chemistry, the investigations and analyses made have been conducted by the professor and senior students as part of the practical instruction, and published in the scientific journals.

The following list, prepared by Professor Galloway, will show their nature.

1. On the separation of copper and iron by ammonia, and the analyses of some Irish copper ores.
2. On a new test for potash.
3. On the deportment of phosphate of sesquioxide of chronium with ammonia and other reagents.
4. Composition of linseed and rape cakes, selling in the Dublin Market, 1859.
5. On the solubility of bone earth from various sources in solutions of chloride of ammonium and common salt.
6. On the valuation of soils, and the nutrition of plants.
7. On the action of air on the alkaline arsenites.
8. On the estimation of tannin in some tanning materials.
9. On the feeding value of rape cake.
10. On the composition and feeding value of Indian corn and some other cereals.
11. Analyses of the specimens of iron, lead, and copper ores in the Museum galleries.
12. On Mire's method for estimating silver in argentiferous galena.
13. Estimation of ammonia in the solid and liquid refuse of tan-yards.
14. The analyses of waters for the Corporation of Dublin.
15. On the comparative value of the different feeding substances for horses.
16. Analysis of cairoidal limestone from Athboy.
17. On the solubility of granite in solutions of the ammoniacal salts.
18. Analysis of the white limestone of the county of Antrim.
19. On the composition of Dublin porter.
20. Estimation of tannin in some barks from British Guiana.
21. On the amount of tannin in some astringent substances, and the comparative rapidity with which the tannin in several of these substances undergoes decomposition.
22. The composition of a complex cyanide of iron, copper, and potassium.
23. On the quality of milk supplied to the poor and other districts of Dublin.
24. On the composition of Drogheda ale.
25. Examination of the coals employed in the manufacture of gas. Determination of the absolute heating power and proximate composition of the coal from different Irish coal fields. Amount of tannin in some astringent substances. Specific gravity of some woods from British Guiana. Composition of crystallized sugar.

— No. 4. —

STATEMENT of Amount of FEES received from the Students who attended the SYSTEMATIC LECTURES and PRACTICAL CHEMICAL CLASSES at the MUSEUM of IRISH INDUSTRY from the 1st April 1854 to the 31st March 1864, and how applied.

1 April 1854 to 31 March 1855.	1 April 1855 to 31 March 1856.	1 April 1856 to 31 March 1857.	1 April 1857 to 31 March 1858.	1 April 1858 to 31 March 1859.	1 April 1859 to 31 March 1860.	1 April 1860 to 31 March 1861.	1 April 1861 to 31 March 1862.	1 April 1862 to 31 March 1863.	1 April 1863 to 31 March 1864.	GENERAL TOTAL.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
—	29 19 6	50 2 6	41 13 6	124 13 -	78 19 -	88 6 -	100 4 6	118 3 -	157 3 -	789 4 -

Up to the year 1857 only three-fourths of the fees received from the students were paid to the professors, but since that period, by order of the authorities of the Science and Art Department, each professor now receives the entire of the fees received from the pupils of his class.

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MUSEUM OF INDUSTRY (DUBLIN).

RETURNS (in continuation of Parliamentary Paper, No. 331, of Session 1854) of STATEMENTS of Amount Voted by Parliament or Expended from other Sources for the MUSEUM of IRISH INDUSTRY, *Stephen's Green, Dublin*, during each Year since last Return; of the Number and Subjects of LECTURES delivered, and by whom; of the REPORTS or PUBLICATIONS issued; and, of the Amount of FEES received, and how applied; &c.

(*Mr. Waldron.*)

Ordered, by The House of Commons, *to be Printed,*
13 *May* 1864.

295.

Under 1 *oz.*

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