

The Calendar

OF

KING'S COLLEGE,

WINDSOR, NOVA SCOTIA,

[Founded A. D. 1788.]

FOR THE YEAR OF OUR LORD

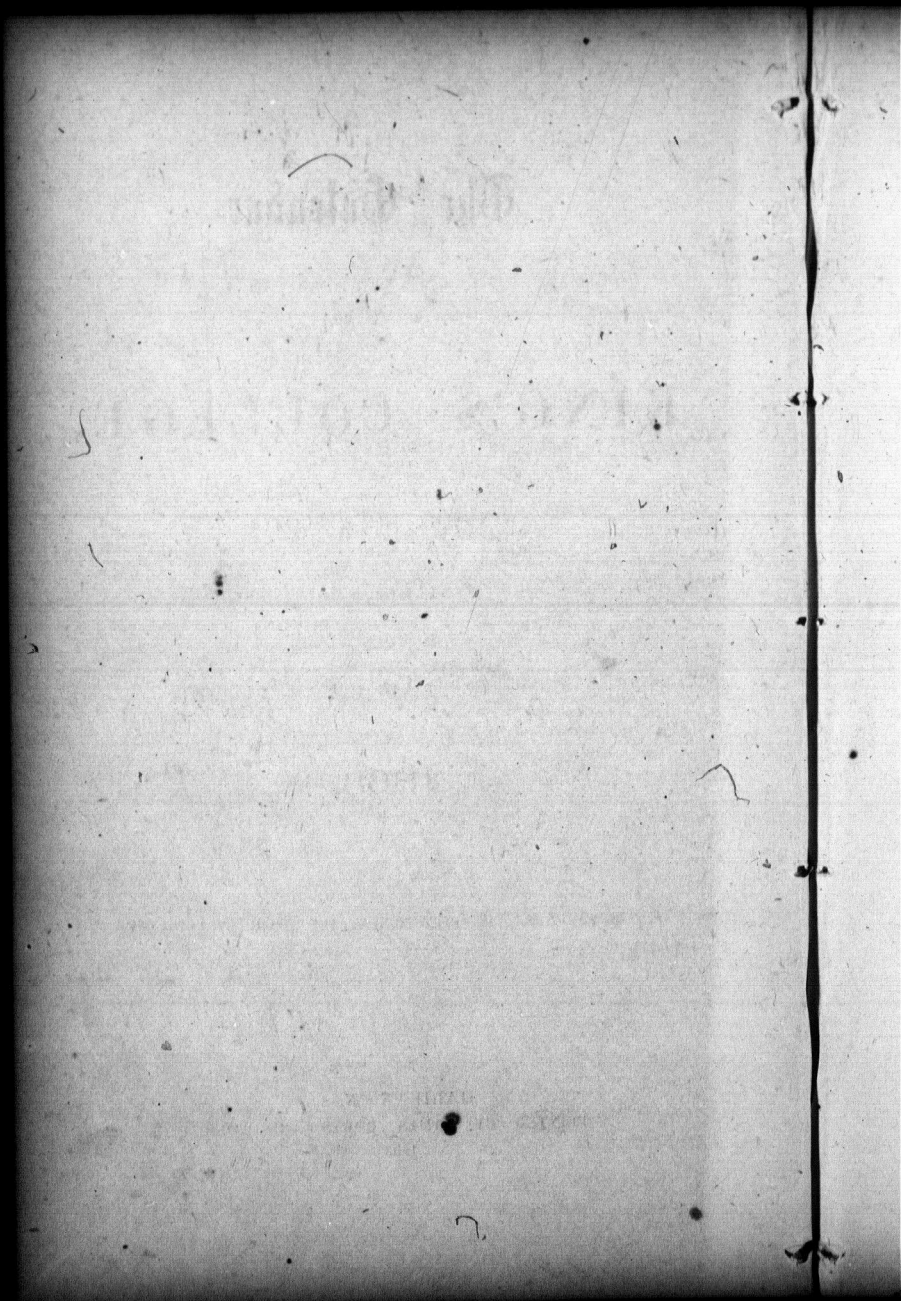
1863.

PUBLISHED UNDER THE DIRECTION OF THE BOARD OF GOVERNORS.

HALIFAX, N. S.

PRINTED BY JAMES BOWES AND SONS.

1863.



UNIVERSITY CALENDAR

FOR THE

ACADEMICAL YEAR 1863-4

1863.

Sept. 7. Mon. Michaelmas Term begins.
 " 8. Tue. Meeting of College Board.
 " 8. " "Welsford Testimonial" presented.
 " 26. Sat. Cricket Prize game.
 " ? " Alumni Scholarship Examination.

Nov. 30. Mon. Responsions begin.

Dec. 2. Wed. Degree Examinations begin.
 " 8. Tue. Terminal Examinations begin.
 " 15. " Michaelmas Term ends.

1864.

Jan. 18. Mon. Lent Term begins.

March 14. " Terminal Examinations begin.
 " 19. Sat. Lent Term ends. Easter Sunday is March 27.

April 4. Mon. Easter Term begins.

June 20. Mon. Terminal Examinations begin.

" 21. Tue. Degree Examinations begin.

" 27. Mon. } Prize Examinations.

" 28. Tue. }

" 29. Wed. Annual Meeting of Alumni.

" 30. Thur. ENCÆNIA.

July 1. Fri. Academical Year ends:

UNIVERSITY OF CALIFORNIA

LIBRARY

THE UNIVERSITY OF CALIFORNIA

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

LIBRARY

KING'S COLLEGE,

WINDSOR, N. S.

THE Governors of King's College have much pleasure in reporting, that during the year which has just closed, the number of Students in attendance has been unusually large, and it is hoped that, upon the whole, they have made a progress in their various branches of study, in some measure commensurate with the great advantages which are within their reach. For a particular statement of the standing of the Students, reference may be had to the "University intelligence" furnished periodically by the President and published in the Appendix to this Calendar.

By the mercy of God the inmates of the Institution have been preserved from any serious sickness during the year, an exemption indeed which has been enjoyed in a remarkable degree from the earliest period of our history, and is no doubt to be ascribed, under Providence, to the salubrity of the location wisely selected for the College.

The Governors have much pleasure in recording, that after a vacancy of more than a year the Head Mastership of the Collegiate School has been filled up by the appointment, in January last, of the Rev. T. J. M. Blackman, D. C. L., a Graduate of this University of the year 1853, and for several years engaged in the education of youth in Canada, in connection with ministerial duty. His testimonials in both capacities were highly satisfactory, and are, so far, fully justified by the Report of the Professors of the College, and by the examination of the pupils at the close of the last

Term. A large accession of boarders is expected at the re-opening of the School, and it is hoped that under the careful management which may be looked for from the Reverend Principal and Mrs. Blackman, a prosperous future is opening up for this important adjunct of our Collegiate Establishment.

The Academy Buildings have been put in good repair at considerable expense, and several alterations have been made for the greater comfort of the inmates. For particulars respecting the Collegiate School, reference may be had to its place in the Appendix.

The Encænïa of 1863 was particularly gratifying to the friends of the College, and was celebrated in the new and costly building which has been erected by the munificence of the Alumni, to their lasting honor.

The attendance was unusually large, including the Earl and Countess of Mulgrave, and Vice Admiral Sir A. Milne. Three of the oldest Alumni, the youngest of fifty-four years standing, were also present, to renew their old and hallowed associations, and note the favorable contrast between their day of small things, and the present prosperous condition of the Institution.

Mr. Justice Bliss, upon whom the degree of D. C. L. was deservedly bestowed, an ornament as he is to the College and the Bench, was one of those three; and in the course of a touching address he feelingly alluded to his Academical life, and to his venerated Instructors, the late Rev. Dr. Cochran, who has passed away thirty years ago, and the Rev. Dr. Porter, who still enjoys a green old age, in his native land, and was able to enrich the Commemorative Oration of the President with a classic effusion from his polished pen, in reference to the late lamented Major-General Inglis, once an inmate of the College, who has been numbered with departed Alumni during the past year.

During the year, two of the oldest Alumni have passed away, the Ven. Archdeacon Stuart, D. C. L., of Kingston, C. E., who was a student before the Charter, about the year 1792, and the Rev. Charles Ingles, formerly Rector of Sydney, C. B., who gra-

duated in 1811, both of whom retained through life a grateful recollection of their Alma Mater.

One of the outgoing Governors, Dr. J. C. Cogswell, was re-elected; the other, Rev. Dr. Gray, of St. John, N. B., whom distance always prevented from attending the meetings of the Board, gave place to Edward Binney, Esq., who has been a liberal benefactor to Church and College, his latest good work being the assuming the cost of the Tower of the new Hall, now in course of erection.

It is to be hoped that some one of a like generous spirit may rise up, to add to the University Buildings a neat Chapel, which, if placed opposite to the Hall, will impart uniformity to the group, and be an honorable monument to the memory of the enlightened donor.

The Governors while returning thanks for the donations to the Library and Museum, received during the year, beg leave to call the attention of the Alumni, now so numerous in these Provinces and in other parts of the world, to the benefit that would accrue to the Institution if even some *small* contribution were annually made by each, the aggregate of which would be large and creditable.

The funds of the Institution having to some extent been affected by the troubles in the United States, the Governors are constrained to remind those persons who are indebted by note to the Endowment Fund, and who are the holders of valuable educational privileges, of the necessity of immediately liquidating their respective claims.

The Inglis bequest mentioned in the last Calendar, has not yet become available, but the hindrances thrown in the way will probably soon be removed, and the kind intentions of the testator will then be allowed to take effect.

In concluding this brief introduction to the interesting matter contained in the Appendix, the Governors earnestly commend the Institution under their care to the continued support of the public. Parents will find high educational advantages for their sons within

its walls, and such moral and religious training as can reasonably be expected, away from the parental home. The Statutes prohibiting the introduction of intoxicating liquors into the rooms, and the frequenting of places where these are sold, are as stringent as they can well be; and it is the desire of the Governors and the College authorities, to carry out such regulations in their integrity, as well as to promote in every other way the best interests of the youth confided to their care.

The ordinary routine of College life has been varied during the year by the formation, among the under-graduates, of a Volunteer Rifle Corps, in conformity with the practice of the great Universities in the Parent Kingdom. The Governors being disposed to encourage among the young men the same patriotic spirit which has so generally shewn itself throughout the Province, have given their consent to this movement, under well digested regulations, and in the full confidence that it will not interfere with the studies of the young men. So far, the Professors report that this has not been the case, and it is satisfactory to add that at the time of the Encænna the Corps presented a very creditable appearance, and elicited the approbation of the Commander-in-Chief.

It is devoutly hoped that the Divine Blessing may still rest upon all concerned in the management of the College, so that in the future as in the past, it may continue to send forth persons duly qualified to fill their respective stations, to the Glory of God and the welfare of their Country.

JAMES C. COCHRAN, M. A.,

Secretary.

HALIFAX, July, 1863.

APPENDIX.

KING'S COLLEGE, WINDSOR, N. S.

FOUNDED A. D. 1788. CHARTERED BY H. M. GEORGE III., 1802.

BOARD OF GOVERNORS

FOR THE YEAR 1863-4.

The Right Rev. HIBBERT BINNEY, D.D., Lord Bishop of Nova-Scotia,
President.

Rev. GEORGE McCRAWLEY, D. D.

Hon. Mr. Justice WILKINS, B. A.

ANDREW M. UNIACKE, Esq., D. C. L.

Hon. MATHER BYLES ALMON, M. L. C.

SAMUEL P. FAIRBANKS, Esq., Q. C.

Hon. ALEXANDER STEWART, C. B.

Right Rev. JOHN MEDLEY, D. D., Lord Bishop of
Fredericton.

P. C. HILL, Esq., D. C. L.

HARRY KING, Esq., D. C. L.

WILLIAM J. ALMON, Esq., A. B., M. D.

JAMES C. COGSWELL, Esq., D. C. L.

EDWARD BINNEY, Esq.

J. C. HALLIBURTON, Esq., *Treasurer.*

Rev. JAMES C. COCHRAN, M. A., *Secretary.*

FACULTY.

President of the College.

The Rev. GEORGE McCawley, D. D.

Professor of Divinity, including Pastoral Theology.

The Rev. JOHN MANUEL HENSLEY, B. D.

Professor of Mathematics, Natural Philosophy, and Astronomy.

JOSEPH D. EVERETT, Esq., M. A.

Professor of Chemistry and Natural History.

HENRY HOW, Esq., D. C. L.

Professor of Modern Languages, viz.: French, German, Spanish and Italian, (also qualified to instruct in Drawing.)

HENRY STIEFELHAGEN, Esq., Ph. D.

Librarian and Bursar.

Professor HENSLEY, B. D.

TABLE OF FEES AND DUES

FROM WHICH NOMINEES ARE EXEMPT.

	Currency.		
	£	s.	d.
Matriculation	0	10	0
Tuition, each Term.....	4	0	0
Modern Languages, per Term.....	1	0	0
Professor of Natural History and Chemistry, per Term	2	10	0
Library, per annum	1	5	0
Degree of B. A.....	3	0	0

THE FOLLOWING ARE PAYABLE BY ALL.

Degree of M. A.....	3	0	0
Any higher Degree	5	0	0
Certificate from the Register, each	0	5	0
Every Certificate or Instrument under the Seal of the University.....	1	0	0

EXPENSES.

BOARD.—For Breakfast and Dinner, which are taken in the College Hall—per week.....	0	12	6
Attendance, portorage, messenger, and sundry small ser- vices per week, in Term time	0	1	0
Do. when two live together, each per week.....	0	0	9
Luncheon, if required	0	0	3
College road-money, yearly	0	2	6

Students take their evening meal in their own apartments, and provide lights and fuel, as also beds and bedding, and room furniture.

FEEs ESTABLISHED FOR THE DEPARTMENT OF THE PROFESSOR OF CHEMISTRY AND NATURAL HISTORY.

To Individuals or Companies requiring the analysis of any substance or mineral :

	£	s.	d.
For ascertaining the <i>nature</i> of any such mineral or substance	1	0	0
If the <i>quantity</i> of one or two elements is to be determined.....	1	15	0
If a <i>complete</i> analysis of a <i>simple</i> mineral is required....	3	0	0
If a <i>complete</i> analysis of any coal or other complex substance be required, such as soils, minerals of a mixed nature, &c.....	6	0	0

These fees are subject to modification according to circumstances.

PRACTICAL AND ANALYTICAL CLASS.

For the above there shall be two Terms: one from September to December 15, the other from January 15 to June 15.

Hours of attendance—from 10 to 12 o'clock.

FEEs PAYABLE BY ALL STUDENTS IN THIS DEPARTMENT, WHETHER NOMINATED OR NOT.

	Short Term.	Long Term.
Five Lectures per week	£3 10 0	£5 0 0
Four " "	2 16 0	4 0 0
Three " "	2 2 0	3 0 0
Two " "	1 8 0	2 0 0
One " "	0 15 0	1 0 0

All materials and apparatus provided by the college.

All damage, breakage, &c., to be paid for by the student at cost prices.

Additional charges for increased time.

SCHOLARSHIPS.

THE WILLIAM COGSWELL SCHOLARSHIP.

£30 per annum, open to Candidates for Holy Orders. Under the direction of the Trustees.

Scholar — FERDINAND PRYOR, A. B.

DIVINITY SCHOLARSHIP.

Paid by the Society for the Propagation of the Gospel in Foreign Parts—open to Students for Holy Orders, actually requiring assistance—and subject to the control of the Bishop of the Diocese.

Ten in number— £30 currency, per annum, each.

THE DR. BINNEY EXHIBITION.

Open to Students in indigent circumstances, and of exemplary conduct.

£20 per annum.

In the year 1858, Miss Binney, sister of the present Visitor, and daughter of the late Rev. Dr. Hibbert Binney, in the name and on the behalf of her father's executors, handed over to the Governors certain stock, amounting to \$1000, to found an Exhibition at King's College, to be called the "Dr. Binney Exhibition," in memory of her said father.

The design of this Scholarship is to assist poor students who may require assistance, and who shall have commended themselves by their exemplary conduct, although their abilities and acquirements may not qualify them to be successful competitors for an open scholarship.

TERMS.—On or before the last day of May in every year, the College Board shall nominate two Students, in their third term at the least, whom they may deem best qualified, having regard to their poverty and the excellence of their characters; and the President shall forthwith transmit their names, together with a brief statement of their claims, to the Visitor, who shall select one of them to be the Exhibitioner, and to receive the interest accruing for the following year, commencing July 1st. Or, at his discretion, if he consider the claims of the two nominees to be equal, or nearly so, the Visitor may adjudge that the amount may be divided between them.

PRIZES.

THE McCAWLEY HERREW PRIZE.

THE McCAWLEY HEBREW PRIZE of £9 sterling, open to all Members of the University who are below the standing of M. A., and who have not already gained the first premium in Hebrew.

THE BISHOP'S PRIZE.

THE BISHOP'S PRIZE of £5 in books.

DR. COGSWELL'S CRICKET PRIZE.

CHARLES COGSWELL, Esq., M. D., has made a donation of £100 to the Governors of King's College, the interest of which is to be expended in the purchase of a set of Cricket bats, balls, &c., to be given to the best player among the winning party of a Cricket match, to be contended for annually, on the College grounds, on some day in the month of September. "The object of the donation is to promote the health of the Students, and encourage them in the prosecution of their duties."

DR. ALMON'S WELSFORD TESTIMONIAL.

WILLIAM J. ALMON, Esq., M. D., has endowed King's College with £100, the interest of which is to be appropriated as a prize to be competed for every June, by matriculated students, in their first year. The prize is to be presented by the President in the College Hall, on the 8th September, being the anniversary of the attack upon the Redan, in which Major WELSFORD fell—on which day, in every year, his gallant and loyal deeds are to be commemorated in Latin.

If no candidate shall be deemed deserving of the prize, it will be appropriated to the purchase of books for the College library.

EXAMINERS FOR 1863.

B. CURREN, Esq., M. A.

REV. J. RANDALL, M. A.

REV. J. J. HILL, M. A.

A. COWIE, Esq., M. D.

PRIZEMEN 1863.

MR. BLACK, Welsford Testimonial.

MR. PRYOR, Bishop's Prize.

MR. HOYLES, Dr. Almon's Prize.

"CERTIFICATES OF MERIT."

MR. POOLE and MR. MILNER, Mathematics.

MR. POOLE, 1st,
MR. TRENAMAN, 2nd, } Chemical Physics.

MR. POOLE, 1st,
MR. HARDING, 2nd, } Organic Chemistry.

MR. GEO. ARMSTRONG, 1st in German.

MR. J. P. CHANDLER, 1st in French.

MR. C. BULLOCK, President's Premium.

NOMINATIONS.

THE following is the form of nomination of a student to pass through the University, free of fees, and must be addressed to the Secretary of the Board of Governors :

To

Secretary of the Governors of King's College, Windsor.

I do hereby nominate (A. B.) to pass through the University, free of fees, by virtue of certificate No. —, held by me.

(Date.)

(C. D.)

In case of a joint certificate, the above form must be complied with, and the same must be signed by all the holders.

Each nominee is exempt from the payment of yearly fees, amounting to £74 15s. for the three years' course, including the fee for a B. A. degree. There being eighty certificates conferring this privilege, it is easy for students to obtain it. If a scholarship is held besides, nearly the whole yearly cost of education will be covered.

☞ No person is entitled to nominate a Student, unless he has paid up his subscription to the Endowment Fund. The Governors intend publishing, in the next Calendar, the names of all who possess the right of nomination, and they hope that those whose notes of hand are still unpaid, will discharge the same without further delay, so that their names may appear on the list, and that they may not lose the valuable privilege attached to a College certificate.

EXTRACTS FROM THE STATUTES.

No Undergraduate shall resort to any inn, tavern, or public house, except for some special cause, to be approved by the President, or shall spend his time in the streets of the town.

Any bills of Undergraduates are to be sent by the tradesmen with whom the debts are incurred to the Bursar, at the end of every Term; and parents are particularly requested to refuse payment of any bill not thus sent in.

The introduction of spirituous liquors into the College is absolutely prohibited.

COLLEGIATE SCHOOL, AT WINDSOR.

UNDER THE CONTROL OF THE GOVERNORS OF KING'S COLLEGE.

Head Master.

REV. T. J. M. W. BLACKMAN, D. C. L.

Terms.

BOARDERS—£40 per annum, everything included.

DAY SCHOLARS—£8 per annum.

Instruction in one or all of the four modern languages, by Professor STIEFELHAGEN, £3 per annum.

Vacations.

From July 1 to August 15.

From December 15 to January 15.

There are two exhibitions of £8 and £4 each, to be competed for annually. The first is open to the senior form, and the successful candidate must be qualified, though not required, to enter College. The second is open to the whole school. In both cases the competitors must be of one year's standing.

There are, in connexion with this school, six exhibitions, each £15 per annum, tenable for three years, to be given to the sons of clergymen, and to those who are designed for the ministry.

The annual Alumni Prizes of £8 and £4 will be open for competition in June, 1864.

The Head Master gives two prizes annually, one at Midsummer for general good conduct, and the other at Christmas for neatness of person, and tidiness of sleeping apartment, &c.

At the recent Midsummer Examination, the Head Master's and the £8 prizes were awarded to Stephen B. Murray; and the £4 Prize to J. Alexander Murray.

King's College, Windsor.

CHRISTMAS, 1862.

THE *B. A.* examination, which occupied four days, has been concluded with the following result :—

Jack,	} <i>Examen subierunt.</i>
McCully,	
Scovil,	

The subjects were: The Greek Tragedians, Thucydides, Plato and Longinus, Juvenal and Tacitus, Logic, Bible History, Articles, Evidences, Greek Testament, Euclid, Algebra, Trigonometry, Mathematical Physics, Geology, Anatomy, Physiology, Physical Geography, Lamartine (H. d. G.) Chrestomathie, Causeries, Charles XII.

The *Responsions* were also passed in the following order :

J. P. Chandler,	Harding,
G. C. Armstrong,	Richardson,
Poole,	Brown,
Fairbanks,	J. Chandler.
King,	

SCHOLARSHIP.

The Alumni Scholarship was gained by Mr. C. Bullock. Mr. Hoyles' papers were very creditable in versification.

TERMINAL EXAMINATIONS.

<i>In Liberis Humanioribus.</i>	<i>In Disciplinis Mathematicis Physicis.</i>	<i>In Theologia.</i>		<i>In Scientia Naturali.</i>	<i>In Linguis Recentioribus.</i>
		<i>Schol. Facul.</i>	<i>Schol. Art.</i>		
Hoyles C. Bullock Wood Harrington Moore Kaulbach Lynch A. D. Jamison Lynch W. H. Jamison Holden } ab McKiel }	C. Bullock Harrington Wood Moore Kaulbach } Lynch } Hoyles W. H. Jamison Holden } ab McKiel } A. D. Jamison, ag. Poole Cogswell Fairbanks Sargent } Richardson } Milner Kinneer Harding Sargent } Brown } King J. P. Chandler } J. Chandler } ab J. Armstrong } Croucher } Bowman } Almon Cox Payzant Maynard Haire, ag.	Ruggles, B. A. Pryor, B. A. Unacke, B. A. Sheraton, B. A. Bullock Armstrong Wainright Wood Hoyles Kaulbach Lynch W. D. Jamison A. D. Jamison McKiel, ab. Cogswell Richardson Brown Sargent Croucher Cox Haire, ag.	Milner King Fairbanks } Poole Kinneer Bowman Almon Maynard J. P. Chandler } J. Chandler } ab G. Armstrong }	<i>Chem. Org.</i> Poole Harding J. P. Chandler } ab J. Chandler } <i>Phys. Chem.</i> Trenaman Bowman Almon Payzant Croucher <i>Chem. Prac.</i> Poole Harding Trenaman Holden, ab.	<i>Gall.</i> Moore Lynch Fairbanks } Wood Trenaman Bowman } King } Milner } Payzant } Maynard } Almon Sargent Harding Richardson W. D. Jamison Croucher Kinneer Brown Tent. Kaulbach Hoyles C. Bullock Moore Hyp. C. Bullock Hoyles Bowman Fairbanks

CLASSICAL LITERATURE.

In this department, besides the authors mentioned under the head of Degree Examination, portions of Homer, Herodotus, and Horace, have been read. Practice in Grammar, Composition, and Versification, has been continued as usual.

MATHEMATICS.

Arithmetic, Algebra, Euclid, Trigonometry, Plane and Analytical, Solid Geometry, Mensuration, Dynamics, including motion of Projectiles, Centrifugal force, &c.; Conic Sections and Differential Calculus; numerous exercises on all these subjects have been performed.

THEOLOGY.

Horne's Introduction, the Articles, Creeds, Septuagint and Greek Testament, Composition of Sermons, Hebrew Grammar and Hebrew Bible, Practical instruction in Pastoral duties.

CHEMISTRY AND NATURAL HISTORY.

Several of the numerous branches of the natural and experimental Sciences, on which lectures are given in rotation, have been discussed this term in the classes. Among the chief subjects may be mentioned Organic Chemistry in its leading divisions; Chemical Physics in detail, with ample illustrations and demonstrations, by means of our extensive apparatus. Chemistry Analytical and Practical, has also been diligently pursued during the term.

MODERN LANGUAGES.

In French the Chrestomathie and Causeries have been continued with practice in conversation and written exercises. In German, Schiller's Maria Stuart has been the text-book, with some of his minor poems. The Rudiments of Spanish Grammar have also been studied.

VISITS.

On the 8th September, Dr. Almon, attended by some of the other Governors and friends of the University, was present at the usual Welsford Celebration. The successful competitor on this foundation read his panegyric *Oratiuncula*, which was highly commended. The founder of the memorial addressed the Students in very forcible and encouraging language, on presenting the prize to Mr. J. P. Chandler. On the 24th November the Lord Bishop of the Diocese visited the College, attended morning chapel and delivered a discourse full of timely counsel and advice to all the Students. His Lordship afterwards inspected the examination papers and accompanied the President and the Professors to the new Hall, which is much admired.

MATRICULATIONS, &c.

There was one admission *ad eundem statum* early in the term, and in the course of it eight matriculations or entrances for elective studies, were recorded:

Haire,	Parker, (E. S.)
Maynard,	Cox,
Almon,	Fretwell,
Trenaman,	Black.

DONATIONS.

Meteorological Observations, 1854-9—Smithsonian.

Diodori Siculi Historia, H. Stephens, 1559—T. B. Akins, Esq.

Annals of Observations, Harvard University, 1858—G. P. Pond,
Esq.

Mathematical and other works—W. Bowman, Esq.

Fine specimen of rock wick Pholas—Rev. J. Ambrose.

Branch, leaves and fruit of Oleander, (Algiers,) } W. Bowman,
Bark of Cork Tree, } Esq.

Centipede, (Trinidad)—H. Wainright, Esq.

Cast-skin of Snake, (Sherbrooke, N. S.)—H. Poole, Esq.

Chameleons, Snakes, &c.—S. Fairbanks, Esq.

A very beautiful mounted collection of ma-
rine Algæ, from the neighbourhood of } J. R. Willis, Esq.
Halifax,

Spider's nest in bottle—H. Poole, Esq.

Albert Coal—G. Armstrong, Esq.

Thomson's instrument for observing Atmospheric } H. Binney,
Electricity, } Esq.

"Plan du Bassin et de la Riviere du Port
Royal ou Annapolis, dans l'Acadie," } John Bourinot, Esq.,
finely engraved in Paris, 1779, with } M. P. P.
letter from Jesse Hoyt, Esq., }

An exchange has been effected with Capt. Anderson, who has enriched the College Cabinet by the addition of various fossils, (chiefly of Devonian and Silurian Systems of Great Britain,) of great interest, and he kindly promises more at a future time.

GEORGE McCRAWLEY, *President.*

King's College, Windsor,

EASTER, 1863.

THE Rev. J. O. Ruggles, B. A., and the Rev. R. F. Uniacke, B. A., after performing the required exercises, were admitted in Convocation to the degree of M. A.

The *Responsions* have been passed by Messrs. Milner and Cogswell.

The Examiners appointed for the *B. A. examination*, are :

Rev. E. E. B. Nicholls, M. A.

Rev. J. Randall, M. A.

A Cowie, Esq., M. D.

B. Curren, Esq., M. A.

G. Hodgson, Esq., B. A.

TERMINAL EXAMINATIONS.

<i>In Literis Humanioribus.</i>	<i>In Disciplinis Mathematicis et Physicis.</i>	<i>In Theologia.</i>		<i>In Scientia Naturali.</i>	<i>In Linguis Recentioribus.</i>
		<i>Schol. Pat.</i>	<i>Schol. Art.</i>		
Hoyles	C. Bullock	E. F. Ualocke, M.A.		<i>Physiol.</i>	<i>Gall.</i>
C. Bullock	Harrington	J. O. Ruggles, M.A.		Wood	J. P. Chandler
Smith	"	Pryor, B.A.		Holden	McKiel
Holden	"	J. Ualocke, B.A.		Harding	Moore
Wood				C. Bullock	Chandler
Harrington	Wood		J. P. Chandler	Pooler	Lynch
Moore	Holden		G. Armstrong	Harrington	Fairbanks
Kaulbach	Holden		Miller	J. P. Chandler	Wood
McKiel	Kaulbach		Pooler		G. Armstrong
A. D. Jamison	Lynch		King		Holden
Lynch	Hoyles	Bullock	Almon		Miller
McKiel	McKiel	Armstrong	Fairbanks		Trenneman
A. D. Jamison	A. D. Jamison	Walawright	Kinnear	<i>Chem. Inorg.</i>	Bowman
Jamison	Jamison		Chandler		King
Cogswell			Bowman		Black
Harding			Maynard		Black
J. P. Chandler	Pooler	Wood		Black	Trenneman
Miller	Cogswell	McKiel		Payzant	Maynard
G. Armstrong	Sargent	Holden		Almon	
King	G. Armstrong	Kaulbach		Bowman	Croucher
Chandler	Fairbanks	Lynch		Croucher	Almon
Fairbanks	King	McKiel		Benison	Sargent
Richardson	J. P. Chandler	Jamison		Payzant	Harding
Chandler	Chandler	A. D. Jamison			King
Kinnear	Richardson				Richardson
Pooler	Harding				Jamison
Brown	Brown				Croucher
Sargent	Kinnear			<i>Chem. Pract.</i>	A. D. Jamison
		Cogswell			Benison
		Brown		Holden	
Cox		Richardson		Pooler	<i>Zent.</i>
Croucher	Croucher	Sargent		Harding	Hoyles
Bowman	Black			Harding	Kaulbach
Almon	Haire			Harrington	C. Bullock
Haire	Almon			Trenneman	Holden
Black	Cox			Black	J. P. Chandler
Payzant	Bowman	Haire			Armstrong
Trenneman	Benison	Cox			J. Chandler
Maynard	Payzant	Croucher			
	Trenneman				<i>Hap.</i>
	Maynard				C. Bullock
					G. Armstrong
					Hoyles
					Bowman
					Fairbanks

CLASSICAL LITERATURE.

The following portions of the Classics have been read during the term: *Homer* 5th book, *Euripedes*, *Phœnissæ*, *Sophocles* *Œdipus Tyrannus*, *Æschylus* *Septem contra Thebas*, *Agamemnon*, *Pindar* *Olympians*, *Herodotus* 1st book, *Thucydides* 1st book, *Aristotle* *Rhetoric* 1st book; *Horace* *Epistles*, *Tacitus* *Annals* 3d book and *Histories* 5th, *Juvenal* completed, *Lucretius* to 4th book; *Logic* 1st part. Appropriate exercises and essays have been regularly written. Examination questions have been continually answered orally, and on paper.

THEOLOGY.

With the general class on Sunday evenings the Gospel of St. Luke in the Greek Testament has been studied to the end of the XVII. chapter, and general questions have been answered on the Book of Genesis. With Divinity Students the following subjects have been read: Genesis in the Septuagint; Acts ch. viii.—xiii., Romans i.—vi., Ephes. iv.—vi., 1 St. Peter and St. James in Greek Testament; a systematic analysis of the Books of the Old and New Testament, and Horne's Introduction as far as the Physical Geography of Palestine; Ecclesiastical History from the Compendium Theologicum; Browne's Exposition of the Articles; Pearson on the Creed; Butler's Analogy, and a portion of Wall on Infant Baptism. The composition of sermons has been continued, and suitable theological works have been recommended for private study. In Pastoral Theology the Rev. Professor continues to train his pupils for parochial work, and in singing and chanting daily in the College Chapel. Students, not members of the Church of England, present certificates to the President at the end of Term of their attendance on the ministrations of their respective Pastors.

MATHEMATICS AND NATURAL PHILOSOPHY.

The Professor has furnished the following summary of his work for the Term:—

With the Juniors—Vulgar and Decimal Fractions, Proportion Simple and Compound, Logarithms, Solution of Triangles, Algebra in Young's Course, Euclid III. and IV., and numerous problems.

With the Second Class—Algebra, (Young and Colenso,) including Quadratics, Surds and Progression, Young's Plane and Spherical Trigonometry, Solid Geometry.

With the Seniors—Algebra, (Colenso,) including Progression, Ratios and Binomial Theorem. Hydrostatics and Pneumatics, (Young's Course,) Miscellaneous Problems from Wrigley, Integral Calculus, including the "Quadrature and Rectification of Curves," and the determination of "Surfaces and Volumes of Solids of Revolution."

The labours of Professor Everett in certain departments of Physical Science, have lately been acknowledged by his election as a *Fellow of the Royal Society of Edinburgh*, in whose Transactions two papers from his pen had previously been published.

CHEMISTRY AND NATURAL HISTORY.

A class has been engaged with the Professor on the subject of *Human Physiology* as treated in the new and admirable text-book recommended by Dr. Gossip, one of the University Examiners for last year. Especial attention is given in this treatise to the Hygienic Inferences from the facts adduced. The Chemical lectures of the Term have been on the general principles of Chemistry, the properties of the non-metallic elements, and the chief compounds formed by their union among themselves; the newest experimental illustrations have been supplied. The minerals which fall under consideration in connection with these bodies have been duly exhibited. In Practical and Analytical Chemistry six students have been engaged in separate courses of study. Maynard Bowman, Esq., B. A., who studied Chemistry here, has been approved by the Professor to act as his Assistant during the Term. It is worthy of note, that Dr. How has obtained *two awards of Medals* from the Jurors of the International Exhibition, 1862, for *Minerals of Nova*

Scotia collected and arranged by him: these medals being in Class I., referring to Mining and Mineral products, and in Class XXIX. referring to Educational works and apparatus. The Professor has also been distinguished by two *Diplomas of "Honourable Mention"* issued by Her Majesty's Commissioners in London; one in class X. for *building-stones*, the other in class III. for a collection of *Medicinal and other Plants of Nova Scotia*.

MODERN LANGUAGES.

In French, extracts from the works of Madame de Stael, Chateaubriand, Segur, and others have been read, the most important parts of the grammar studied, conversation practised, and exercises from dictation and from books constantly written. In German, Schiller's *Maria Stuart* and some of his minor poems have been translated, and conversation has also been attended to. In Spanish, some progress has been made in the Grammar, including the irregular verbs; a few well selected pieces of prose have been mastered.

DISCIPLINE.

The College Board meets every Monday morning. The President is happy in uniting his own testimony to the following statements. Rev. Professor Hensley, M. A., reports: "I have derived much satisfaction from the regularity and diligence of my classes, and can also bear witness to the general progress and good behaviour of all in attendance on my lectures." Dr. How adds: "The deportment has been good and the attendance of the majority of students regular." Professor Everett, M. A., subjoins: "I am happy to be able to report favorably of the morals and general conduct of all the students, so far as my knowledge has extended." Dr. Stiefelhagen concludes: "I had every reason to be satisfied with the attention and general conduct of the gentlemen in my classes, and their attendance was regular."

LIBRARY.

As the Library is shortly to be removed to the handsome new edifice erected by the generosity of our Alumni, it may not be inappropriate to take a brief survey of it, and of the Museum, Apparatus and Instruments.

There are several thousand books, but the Librarian well observes that the number by no means gives an adequate idea of the value. Contrary to what is generally the case in such large collections, our Library contains very few volumes which would not be looked upon as valuable, while some of the works are very rare, and to be procured only at enormous prices. *The Theological Department* comprises fully one-third of the Library, and contains some of the best standard authorities. Our deficiencies in this respect have been in part supplied through the benefactions of T. B. Akins, Esq., and E. Binney, Esq., ample scope being left nevertheless for the liberality of other friends of the University. It would be very desirable to have a choice selection of works bearing on the controversies of the day, as well as a few of the principal periodicals. *The Classical Department*, containing many scarce copies of Latin and Greek authors, might be advantageously augmented by a *uniform edition of the Classics* and a series of the publications of the best modern critics and annotators. Good *books of reference* too are much needed. In *Science* the Library contains several of the most eminent treatises, but it is still deficient in many essential branches. The *Encyclopædia Britannica* would be a great acquisition. In *History and General Literature* our collection is good, though incomplete; but in *English Poetry* we have scarcely any of the writers of the present century, a want which we hope will not long be permitted to exist. In the languages of modern Europe our catalogue is very meagre; the works of Schiller and Goethe in German, and of Lamartine and Voltaire (Historical) in French, being almost the only books in these languages likely to attract the attention of students. We must look to the Alumni and other friends for a supply of interesting works of standard merit to encourage proficiency in the Modern Languages.

MUSEUM.

The additions of Minerals, Fossils, and Zoological specimens noted from time to time in our late periodical reports, obtained by collections, donations and exchanges, have greatly increased the value of the College Cabinets. It is hoped that when properly displayed and arranged, in the new hall, these illustrations of the Natural History of Nova Scotia and other parts of the world, will be not only of great service to students, but of attractive interest to visitors. Of apparatus used in Physical Science, a tolerable collection has been in the College for many years, and while the actual state of all experimental science demands the effectual and continued assistance of generous friends of scientific education, the leading principles of the various sections of Physics can still be illustrated. Very desirable additions would be a Ruhmkorff's Induction Coil, a Spectroscope for Spectrum Analyses, some Dialysing Apparatus, and a useful Microscope.

LABORATORY.

Replacement and additions of Apparatus, useful in illustrating the yearly course of Chemical Lectures, and in the study of Practical and Analytical Chemistry, have been continually made the last few years. Numerous preparations of Chemical substances, many of them made in the Laboratory, have been placed upon the shelves. It is under consideration to convert a portion, at least, of the present Library into a Lecture Room and Laboratory; for the purpose of increasing the facilities in this important department.

ASTRONOMICAL AND OTHER INSTRUMENTS.

Large sums have been expended on this department. We have some fine Astronomical Instruments, including among several others, Ramsden's Altazimuth, Transit, Sextant and Artificial Horizon, one of Carey's best and largest Telescopes, a Planetarium, Whirling Table, Solar Microscope, and large Globes.

The revolving building erected to answer the purpose of an Observatory is found very serviceable, being well adapted for such instruments as we possess. Our apparatus for Surveying is, however, incomplete: we greatly need a Levelling Instrument, another good Theodolite, and an Azimuth Compass. Our Mechanical apparatus is sufficient for exhibiting the principal laws of Statics and Dynamics, comprising sets of pulleys and levers, illustrations of centrifugal force and motion of projectiles. Some additions in this department would be very desirable, none having been made for many years.

The two instruments for observing atmospheric electricity, which were furnished last year, one of them by the liberality of Edward Binney, Esq., and the other by the Royal Society of London, have been in constant use by the Professor, who is engaged in preparing an abstract of his observations for the Royal Society.

DONATIONS.

Hon. Mr. Justice Bliss, M. A., Twenty-two silver coins of the reign of Charles II., James II., William III., Anne, George I., George II., George III., some foreign coins, and one of Massachusetts, 1652, "*the first coinage in America*," Vid. Hist. Mag., Aug. 1857.

Mrs. Bliss, Historical Medal, "Loyal Associated Refugees."

W. Shore, Esq., Silver Coin with the monogram of Charles III. of Spain, 1711.

C. B. Bowman, Esq., Medal "Lincolnshire Protectionists," 1852.

H. Poole, Esq., Specimens of Copper ore, Molybdenum, Serpentine, Fluor Spar, &c., Owl Stryx Nictea.

J. R. Willis, Esq., Two specimens of *Pholas crispata* in shell.

Lieut. Duncan, R. A., D. C. L., and F. G. S., a series of papers on "Cupolas adapted to modern fortresses," favorably reviewed in United Service Magazine, and in Naval and Military Gazette.

T. Brown, Esq., Robertson's Thesaurus Linguae Sanctæ 4to, 1860. Agassiz, Contribution to Natural History of America. Vol. IV. Several pamphlets and reports.

COLLEGIATE SCHOOL.

The Rev. Dr. Blackman has been recently appointed to the office of Head Master. The Bishops and Clergy with whom he has been associated for many years past have testified to his "*ability, energy, and perseverance*," and characterised him as "*a good classical scholar and experienced teacher*."

This School is intended to furnish an education of the highest order, so as to prepare pupils for the University or for general or professional life. The number is already encouraging, and the progress during the term satisfactory. The discipline of the school is thoroughly maintained by uniform and gentle firmness: the comforts of home are secured to the boys by Mrs. B. Dr. Blackman is assisted by C. Bullock, Esq., scholar of K. C. for Mathematics and Natural Philosophy. The Modern Languages are taught as formerly by Dr. Stiefelhagen, Ph. D., and it is probable that Dr. How may arrange courses of elementary lectures to initiate the pupils in Natural Science, in order to qualify them for intelligent attendance on his more advanced lectures to members of the University.

GEORGE McCRAWLEY,
President.

EASTER, 1863.

King's College, Windsor,

JULY, 1863.

THE usual proceedings, according to Statute, have attended the completion of the Academical year. The sermon before the University was preached by the Professor of Pastoral Theology, from John vii. 17.

The Encænïa was celebrated in the new Hall, which was duly inaugurated in presence of the whole University and a large assemblage of distinguished visitors and friends. Dr. Almon, chairman of the building committee, transferred the key with the use of the Hall for the occasion to the Governors, and the Bishop replied to his address. The Convocation was then opened, and the commemoration of Founders and Benefactors was observed in the customary way. Professor Everett delivered a discourse on Natural Philosophy and Mental Physics, which will be printed in the Calendar. The University Honours were then announced :

Mr. Wood,	in the B. A. Examination,	<i>progressus laud.</i>	
Mr. Hoyles,	"	"	"
Mr. Holden,	"	"	"
Mr. Smith,	"	"	satisfecit.
Mr. McKiel,	"	"	examen sub.
Mr. Harrington,	"	"	"

Among several meritorious papers the classical examiners particularly noticed one of Mr. Harrington's, from Juvenal, and one of Mr. McKiel's, from Euripides. The *taste papers* by Mr. Hoyles, and Mr. Holden, were very creditable. The Essays produced by Mr. Smith, and Mr. Wood, were praiseworthy compositions. Mr. Harrington's papers attracted especial attention from their very great neatness. Mr. Charles Bullock had been elected *Scholar*

since the last Encænna. The *Welsford* was gained by Mr. Black, who had the highest marks of his year in Mathematics and in Modern Languages, and very good marks in Chemistry. The names next in order were C. Almon, Croucher, and Matthew.

The President's Premium for the "*Corolla Nuptialis*" on the marriage of H. R. H. the Prince of Wales, was awarded to Mr. C. Bullock.

Dr. Almon's prize for Latin Elegiacs, "*in memoriam Jacksoni Ducis celeberrimi Americani*," was given to Mr. Hoyles, the *Proxime accessit* to Mr. Bullock: Mr. Milner and Mr. Cogswell were honourably mentioned among the candidates.

The Bishop's prize was gained by Mr. Pryor, especial commendation being given to Mr. W. H. Bullock: Mr. W. Armstrong having also written very creditably.

In Mathematics, Mr. Poole and Mr. Milner both entitled themselves to certificates of merit.

In Chemical Physics, Mr. Poole received the certificate, Mr. Trenaman being pronounced by the Examiners "a good second."

In Organic Chemistry, Mr. Poole took the first rank, and Mr. Harding the second.

In Modern Languages, Mr. George Armstrong was first in German, and Mr. J. P. Chandler first in French.

In the terminal examinations, the *four highest* in each of the principal classes are given:

Classics.	Mathematics.	Theology.	Chemistry, &c.	Mod. Lang.
Cogswell Armstrong Milner J. P. Chandler	Milner Poole Sargent Cogswell	Cogswell Richardson Brown Sargent	Black Almon Trenaman Croucher	Bullock Armstrong Fairbanks Bowman
Croucher Black Bowman Payzant	Black Croucher Matthew Almon	Matthew Haire Croucher Cox	Matthew Poole Jamison Harding	Armstrong Black Trenaman Milner
		Almon King Armstrong J. P. Chandler	Poole Harding Trenaman Black	Almon Matthew Harding Fretwell

Mr. Croucher was elected Dr. Binney's Scholar.

The Prize Compositions were recited by their authors.

The hon. degree of D. C. L. was then conferred, in solemn form, on the hon. Mr. Justice Bliss, M. A., whose eloquent address, in acknowledgement of the honour, gratified all who heard him. His faithful picture of his early college days, his grateful testimony to the ripe scholarship of the Rev. Dr. Porter, whose classic epistle to the President had just been received with plaudits, and to the comprehensive knowledge and warm-hearted kindness of the late venerated Dr. Cochran, affected every one with sensible delight.

DEGREES.

B. D. AND D. D. BY ACCUMULATION:

Rev. Edwin Gilpin, M. A., Head Master Halifax Grammar School.

B. D.

Rev. Professor Hensley, M. A., King's College.

M. A.

Rev. W. G. T. Jarvis, B. A.

“ J. Randall, B. A.

“ J. J. Hill, B. A.

B. A.

C. J. Townshend, (*laud.*)

B. Smith, (*sat.*)

W. H. E. Bullock, (*sat.*)

W. B. Armstrong, (*sat.*)

C. W. McCully, (*ex. sub.*)

H. Wainwright, “

W. E. Scovil, “

J. A. Jack, “

Henry Pryor, Esq., D. C. L., in an appropriate speech, presented the successful candidates for the Alumni prizes, and the President

delivered to them the certificates of Honourable Mention which they had gained.

His Excellency the Lieut. Governor addressed the Convocation in very encouraging terms, and closed his apposite observations by an earnest appeal to the University Volunteers.*

His Excellency the Vice Admiral, in a few brief words of glowing eloquence, pleased every one by his natural and appropriate metaphors, his gracefulness and ease.

His Honor Judge Bliss, D. C. L., paid an elegant and well merited compliment to the Countess Mulgrave, and the ladies whose presence graced the Inauguration; when the Rt. Rev. Visitor made a closing speech, and the President dissolved the Convocation.

UNIVERSITY NOTICES.

1. The subjects for the Scholarship Examination in Michaelmas Term, are:

- The Hecuba of Euripides.
- The first 100 chapters of II. Herodotus.
- The first book of Lucretius.
- The Agricola of Tacitus.
- Composition and Versification.

2. The subjects for Responsions, are:

- The first Georgic of Virgil.
- De Senectute of Cicero.
- The fifth book of the Iliad.
- The first 100 chapters I. Herodotus.
- Composition, English and Latin.
- Algebra, Arithmetic, and Euclid, as usual.

3. Statutes, Cap. II. Sec. 4.—This Statute is interpreted by the Governor to apply to all Students under the degree of Master in Arts, who desire to enjoy the benefits of College residence.

4. Every Student is required to attend Hall Chapel, Morning Church, Lecture, and Commons in the *proper Academical habit*, prescribed by the Statutes.

DONATIONS.

Several handsome pecuniary donations have been mentioned; they will be duly acknowledged by the proper officer.

Granite with garnets, from Shelburne, N. S. } H. Poole, Esq.

Arborescent Copper, from Margaretville, N. S. }

Fac similes of Inscriptions, from the Catacombs of Rome, on Cotton—J. R. Willis, Esq.

Photograph of the late Chief Justice, Sir Brenton Halliburton, taken from his portrait in the Legislative Council Chamber—J. C. Halliburton, Esq.

Marbles from Rome

Variety of Minerological and other specimens } Hon. W. H. Odell.

Silver Half-crown, William III.—Rev. W. G. T. Jarvis, M.A.

Copper Coin—Rev. J. O. Ruggles, B.A.

Bp. Andrew's Sermons, folio, London, 1637

Chillingworth's Works, " 1742

Stillingfleet's Origina Sacra, 8vo. 1662

Stillingfleet's Unreasonableness of Separation, 1681 } E. C. Milner, Esq.

Hare, (Julius C.) Mission of the Comforter, two vols. 1846 }

COLLEGIATE SCHOOL.

This School is intended to furnish an education of the highest order, so as to prepare pupils for the University, or for general or professional life. In the recent Midsummer examination, the Professors were much pleased with the prompt and accurate rendering by the scholars of the passages in Cæsar, Virgil, Homer, and other authors, in which they were examined; and with the creditable grammatical knowledge which was evinced. The style of answering was such as to strike the examiners at once with the conviction that the discipline of the school had been good and the teaching thorough.

In French and in Arithmetic the knowledge displayed was very satisfactory, and some of the pupils had made fair progress in Algebra and Euclid.

The Copy books were neatly kept, and the style of writing good and correct.

The Alumni prize of £8 was assigned to Stephen B. Murray, who also received the Head Master's prize, (in books,) by the vote of his schoolfellows.

The second Alumni prize of £4 was awarded to J. A. Murray.

The report of the Head Master, Rev. Dr. Blackman, for the last half year, has been received with satisfaction by the Governors. The Bishop and Dr. J. C. Cogswell, Dr. A. M. Uniacke, and Dr. H. King, have particularly inspected the School with approval, and it is probable that a small grant will be made to complete the arrangements for the comfort of the boys, according to the judicious recommendation of the Master. The School has already attained a fair number of pupils, and a very large increase has been promised for the next term, which will commence on the 15th August.

CURRICULUM, OR COURSE OF STUDY, &c.

CLASSICS.

THESE consist of Historians, Orators, Poets, and Philosophers. Portions of the standard Greek and Latin authors, under each of these denominations, are studied.

In the First Year.

Homer's Iliad or Odyssey.
Xenophon's Cyropædia or Anabasis.
Demosthenes' Select Orations.
Horace's Satires and Epistles.
Livy, first or third decade.
Cicero de Officiis and Orations.

In Second Year.

Herodotus, Thucydides, Euripides.
Virgil's Georgics, Terence occasionally.
Tacitus: Germania, Agricola.
Juvenal and Persius.

In Third Year.

Sophocles, Æschylus, Longinus.
Aristophanes occasionally.
Tacitus and Juvenal, continued.
Lucretius occasionally.

Variations in the Course are sometimes admitted; and other authors, such as portions of Pindar, of Plato and of Aristotle's Ethics and Poetics, under favorable circumstances, are read; but the Degree subjects are usually Euripides, Sophocles, Æschylus, Longinus, Tacitus and Juvenal.

In *Logic*, Aldrich's treatise with reference to Whateley and others.

In *Rhetoric*, Aristotle, Quintilian, or Cicero de Oratore with reference to Whateley and others.

Suitable Exercises, Themes and Essays are required.

HEBREW.

The Grammar is carefully studied, and reference to the best subsidiary aids are constantly made.

Portions of the Old Testament are critically read and carefully compared with the variations in the Septuagint, and examination papers frequently written.

GEORGE McCRAWLEY.

HOURS OF PRAYER.....	7 A. M., 3.30 P. M.
HOURS OF MEALS.....	Breakfast 8, Dinner 3.50.
MORNING BELL.....	6.30 A. M.
EVENING BELL.....	10 P. M.

THEOLOGICAL DEPARTMENT.

PROFESSOR HENSLEY.

DIVINITY STUDENTS.

First Year.

Greek Testament: Acts.

Evidences: *Paley, Horn.*

Second year.

Greek Testament: Epistles.

Ecc. Hist. to accession of Constantine: *Burton, Mosheim.*

Liturgy: *Adolphus, Wheatly, Palmer.*

Third Year.

Greek Testament: Epistles.

Articles: Scripture proofs and explanations.

Eccl. History, Reformation and Church of England:

Hardwicke, Mosheim.

Fourth Year.

PREPARATION FOR ORDERS.

Greek Testament: Epistles.

Septuagint.

The Creed: *Pearson.*

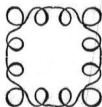
The Articles: *Browne.*

Ecclesiastical Polity: *Hooker V.*
 Church Government: *Potter.*
 Ecclesiastical History.
 Chrysostom de Sacerdotio.
 Composition of Sermons.

Butler's Analogy.
 Magee on the Atonement.
 Bingham's Antiquities.
 Wall on Infant Baptism.

The Sunday evening lecture at 7 P. M., is attended by all resident under-graduates.

Subjects: Greek Testament: Gospels.
 Bible History.



MATHEMATICAL COURSE.

PROFESSOR EVERETT.

First Year.

Arithmetic.
Algebra.
Euclid I to VI.
Use of Logarithms.
Mensuration.
Elements of Plane Trigonometry.

Second Year.

Algebra.
Plane and Spherical Trigonometry.
Euclid XI.
Practical Mechanics.

Third Year.

Statics.
Dynamics.
Hydrostatics, Optics, Astronomy.
Analytical Geometry.
Differential Calculus.

The above course will be varied as circumstances may require.
The books required for the first year are, Euclid, Colenso's
Algebra and Arithmetic, and Chambers' Mathematical Tables.

LECTURES IN CHEMISTRY AND NATURAL HISTORY.

PROFESSOR HOW.

First Year.

Chemistry and Mineralogy.
 Powers of Matter.
 Attraction, Heat, Light.
 Electricity, Chemical Attraction.
 Elements, Minerals.

Second Year.

Organic Chemistry.
 Human Physiology.
 Botany, in Summer Season.

Third Year.

Zoology and Geology.
 Botany, in Summer Season.

TEXT BOOKS.

Chemistry.—DRAPER'S.
 Chemistry, Analytical.—FRESENIUS.
 Mineralogy.—DANA'S *Manual*.
 Geology.—LOOMIS'S *Principles*.
 Physiology.—LAMBERT; Zoology.—AGASSIZ.
 Botany.—ASA GRAY'S *How Plants Grow*.

It would be convenient if students would provide themselves with these books in Halifax.

LECTURES IN MODERN LANGUAGES.

PROFESSOR STIEFELHAGEN.

FRENCH.

First Year.

Ollendorff's Grammar, combined with a systematic course of the pronunciation and the regular and irregular verbs. In this year the scholars read the reading-pieces in *Pinney's First Book of French*, because I find them excellent to practise the pronunciation.

Second Year.

Continuation of *Ollendorff's Grammar*. The scholars begin to read and learn by heart the "*Causeries Parisiennes*, by *Perschier*," a book which I find better adapted for my purpose than any I ever met with. They are supposed to finish *Ollendorff's Grammar* in two years, at latest. If it is finished sooner, I begin my course of Syntax, &c., which is generally reserved for the third year, in the second.

Third Year.

In this year I go through a regular course of Syntax, partly as a repetition, and partly to supply the wants of *OLLENDORFF's* system. The scholars are then supposed to be familiar with all the leading rules of Syntax from *OLLENDORFF's Grammar*, and, in going through them again, I call their attention to the niceties, dictate rules on them, and cause the class to practise them, by writing exercises after my own dictation, principally consisting of letters and conversations on topics of general interest, &c. In this year I have, moreover, constant verbal exercises in conversation, and the scholars are obliged to speak French as much as possible. They read *Christomathie Française*, par *Boniface*, an excellent book, containing all the varieties of style to be found in French authors.

GERMAN.

First Year.

OLLENDORFF'S Grammar, combined with a regular course of the pronunciation and the regular and irregular verbs. *Adler's Reader*.

Second Year.

Continuation of OLLENDORFF'S Grammar. The scholars continue to read *Adler's Reader*, and begin SCHILLER'S *Lyrical Poems*, and one of his *Comedies* in prose.

Third Year.

In this year I follow the same plan as in French. The scholars read one or more of SCHILLER'S Tragedies, besides one of the Comedies in prose, by the same author.



MATRICULATIONS SINCE THE DATE OF THE CALENDAR
OF 1860.

1859.
(OMITTED.)
W. B. Armstrong.
R. Matthew.
— Sharpe.
J. A. Jack.

1860.
(OMITTED.)
N. W. Hoyles.
A. D. Jamison.
—

1861.
J. P. Sargent.
— Archibald, E. S.
H. C. Carman.
T. Ward, E. S.
W. H. L. Cogswell.
J. Harris.
J. P. Chandler.
— Burgess.
— Barclay.
B. Richardson.
J. Chandler.
G. Armstrong.
A. Brown.
E. C. Milner.
T. M. King.

1861.
C. P. Cochran, E. S.
A. Merkel.
F. Kinnear.
G. McNutt.
F. Fairbanks.
F. Harding.
C. Croucher.

1862.
F. Bowman.
— Payzant.
— Haire.
T. Maynard.
C. M. Almon.
— Trenaman, E. S.
— Cox.
— Fretwell.
— Black.
W. E. Scovil.
— Bennison, E. S.

1863.
C. Matthew.
— Chipman.
— Davis.
— Symonds.
— Borden.

DEGREES SINCE 1860.

D. D.

Rev. E. Gilpin1863.

HONORARY D. C. L.

J. Anderson, M. D., F. R. G. E., F. C. S.1861.

H. How1861.

Hon. W. B. Bliss, M. A.1863.

D. C. L.

F. Duncan, R. A.1861.

B. D.

Rev. J. M. Hensley1863.

M. A.

H. P. Almon1861.

A. Moren1861.

J. W. Disbrow1862.

J. O. Ruggles1863.

R. F. Uniacke1863.

W. G. T. Jarvis1863.

J. Randall1863.

J. J. Hill1863.

B. A.

E. Ansell1861.

G. W. Hodgson1861.

L. M. Wilkins1861.

W. F. Pryor1862.

J. B. Uniacke1862.

W. D. Sutherland1862.

M. Bowman1862.

C. J. Townshend1863.

B. Smith1863.

W. H. E. Bullock1863.

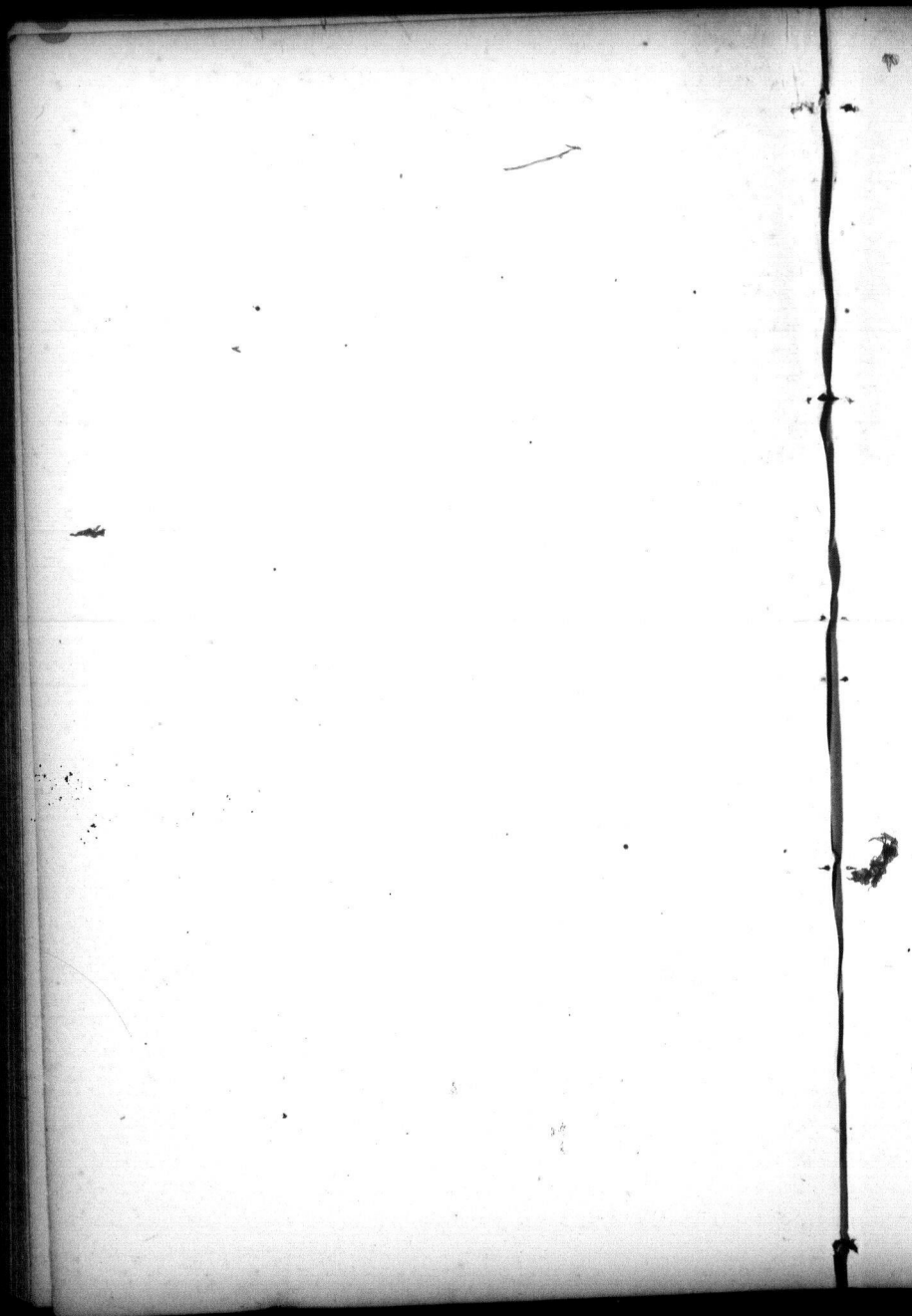
W. B. Armstrong1863.

C. W. McCully1863.

H. D. Wainwright1863.

W. E. Scovil1863.

J. A. Jack1863.



DISCOURSE ON NATURAL PHILOSOPHY.

BY PROFESSOR EVERETT, M. A., F. R. S. E.

DELIVERED AT THE ENCENIA OF KING'S COLLEGE, WINDSOR, N. S., June 25, 1863.

AN ancient poet in a work devoted to Agriculture, breaks off in the midst of a gorgeous description of the pleasures of rural life, to express his ardent desire to know the causes of things: why the stars pursue their courses, whence the eclipses of the sun and moon, earthquakes, and tides. With all his love for the ordinary pleasures of the country, he speaks of this knowledge as something far more to be desired, were it only attainable. And the sentiment which thus finds utterance in a place where we should perhaps have least expected it—a place which shows how near and dear it was to the poet's heart, is no peculiar sentiment of his own, but may rather be regarded as the common voice of humanity, making itself heard through the lips of the poet. All nations of men can join, and more heartily in proportion to their intellectual and moral earnestness, in the language—

*Felix qui potuit rerum cognoscere causas.**

The investigation of natural causes, which is comprehended under the general name of Physical Science, naturally divides itself into two departments, Natural History and Natural Philosophy. Observation and classification more especially belong to the former; the deduction of laws and the application of these laws to the prediction of results to the latter. Every branch of Physical Science must, in the earlier stages of its existence, belong to natural history, since observation and classification must always be the first steps in discovery; and so long as the reasoning which connects observed facts with general laws is of a comparatively simple character, the science may still be included under the same name. But when our knowledge of causes has advanced so far that we can not only predict results in a general way, but can predict them with as much or nearly as much accuracy as we can observe facts, then the science may be said to have come under the dominion of Natural Philosophy. And whenever this latter stage is reached, it is invariably found that that species of logic which sufficed in the earlier stages, is no longer sufficient for solving the numerous problems which present themselves, and which

* Virgil, Georg. II., 490.

are capable of solution by that more refined species of logic known as Mathematics. We may, in brief, define Natural History as embracing those branches of Physical Science which do not require the aid of Mathematics, and Natural Philosophy as embracing those which require it.

Whether the time will ever come when all branches of Physical Science will be so thoroughly known as to be included under Natural Philosophy thus defined, it is not easy to say. Possibly the inherent difficulties attaching to the study of those phenomena which most nearly concern the mysterious processes of life, in animals and vegetables, will prevent these phenomena from being ever brought under the dominion of strict law.

Some of the principal subjects at present included under the head of Natural Philosophy, are: mechanical force, heat, light, sound, and electricity. The laws or some of the laws of all these subjects are known with sufficient accuracy to admit of very refined applications of mathematical reasoning. Given, for instance, the velocity and direction of a planet's motion at one instant, we can calculate with precision where the planet will be at any time named, so complete is our knowledge of the laws of mechanical force.

On the other hand, to take an example which comes under the head of Natural History, when a grain of wheat is sown, we can predict that the ear which springs from it will contain a number of grains like that which was sown, but we cannot assert that this likeness will be perfect, neither can we predict the precise number of grains. The predictions of Natural History can only be given in broad and general terms, because the laws on which they depend are only known broadly and generally.

Natural Philosophy, properly so called is almost entirely of modern date. Some of the laws of Statics were known as far back as the time of Archimedes. Dynamics as a science, may be said to date from the time of Galileo, and the habits of thought and modes of working which have now become inseparable from the very idea of physical science, were first introduced to the favourable notice of the learned public by Lord Bacon. He first broke the chains which had fettered the free investigation of natural phenomena, insisted on the necessity of experiment, and pointed out that the logic even of the greatest masters could do nothing towards the investigation of nature's laws, unless furnished with experimental data on which to build.

The great authority on Logic, and on that vague kind of speculation which passed for knowledge in the days of the Schoolmen, was Aristotle, and his book on Logic was called the *Organon*. Bacon, desiring to establish a diametrically opposite method of investigation, called his book in which he described it, the *Novum Organum*, i. e., the new *Organon*. This famous work not only exhibits in the most forcible terms the futility of the old method, but prescribes at great length the course to be adopted in investigating natural laws by the new or experimental method, indicating and classifying in general terms the facts to be observed, the

experiments to be instituted, the precautions to be used in investigating evidence and guarding against prejudice, and the rules to be adopted in eliciting from a number of well authenticated facts the general laws which they establish.

Regarded as an *a priori* sketch of a new and complete method, this part of the *Novum Organum* is a remarkable specimen of acuteness; but it contains such errors as were to be expected in an *a priori* sketch—errors which were only to be corrected by the application of the method to practice. Bacon was little more than a theoriser in the subject of physical science—he had not himself conducted any series of experimental researches, when he laid down his rules describing how such researches were to be conducted; and though he saw enough to enable him to show the feasibility of the experimental method, it was inevitable that he should commit some errors, from his inexperience of the subject of which he was treating.

Perhaps the best existing work on the philosophy of experimental investigation, is Sir John Herschel's Introduction to the Study of Natural Philosophy, forming the first volume of Lardner's Cabinet Cyclopædia, being the work of a man who to a philosophical mind has joined ample experience of the practical details of his subject.

Bacon imagined that one effect of his method would be to place all intellects on a level, as regards their power of investigating natural phenomena. He thought he had described so plainly the course to be pursued, in following nature to her inmost recesses and tracing out her secrets, that the wayfaring man, though a fool, could not err therein. Ingenuity and sagacity were to be at a discount. Common sense was to carry the day. The idea of framing theories and putting them to the test of experiment was scouted. Experiment was to be everything—only observe all the facts, and the true theory would become so plain that the observer could not miss it. But no such result has happened. Ingenuity and sagacity are more than ever required in investigating nature's secrets. No levelling of capacities has resulted. On the contrary, the truly sagacious man is more clearly distinguished than ever from the mere visionary, inasmuch as truth regarding natural phenomena has ceased to be mere matter of argument, and is brought to the certain test of experiment. Under the old regime if a man could frame a plausible theory, and devise ingenious answers to meet objectors, no one could prove him to be wrong. Modern science is not content with plausibilities, but demands proof. Formerly, a fine command of language and versatility in argument might make a man famous in Physics. Now everything is brought to the test of fact, and errors can no longer be palmed off by rhetoric.

In one respect indeed plain and unskilful men may do good service to Physical Science, viz: by observing and recording facts, a duty which may be efficiently performed by those who have no talent for reasoning upon the facts thus collected. Indeed a plain man may often be a better

witness to facts than a philosopher, inasmuch as his mind may be more free from bias, and more ready to see and record things exactly as they appear.

A note in Dawson's *Archæia*, p. 43, is so apt on this point that I cannot forbear quoting it. He says:—

"Much that is very silly has been written as to the extent of the supposed 'optical view' taken by the Hebrew writers: many worthy literary men appearing to suppose that *scientific* views of nature must necessarily be different from those which we obtain by the evidence of our senses. The very contrary is the fact, and so long as any writers state correctly what they observe, without insisting on any fanciful hypotheses, science has no fault to find with them. What science most detests is the ignorant speculations of those who have not observed at all, or have observed imperfectly. It is a leading excellence of the Hebrew Scriptures that they state facts without giving any theories to account for them. It is, on the contrary, the circumstance that unscientific writers will not be content to be 'optical,' but must theorise, that spoils much of our modern literature, especially in its descriptions of nature."

It is found that experiment cannot, as Bacon would have had it, be made to drive theory from the field. Neither Bacon's rules nor any rules that can possibly be given, will enable an unskilful person to know what experiments to institute, and even if he performs the right experiments he will not, generally speaking, be able, with the help of Bacon's or any other rules, to draw correctly the conclusions to which they lead. In this class of investigations, rules can never be made to supersede the exercise of intelligence, and genius still retains all its old superiority.

In *another* respect Bacon overrated the power of common sense. He thought his method would supersede all occasion for the use of mathematics in physical science, whereas the contrary has notably been the fact, so that several departments of physical science are now ranked under the head of "applied Mathematics." More correct views on the relation of Mathematics to Natural Philosophy were entertained by Bacon's namesake—Roger, who flourished some three centuries earlier, and whose works, treating chiefly on physical science, still remain. In reference to this subject the *Athenæum* of Feby. 4, 1860, has the following very just remarks:—

"Suppose a person purposely kept ignorant of history, were to be deeply educated in Physics as it stands, and then introduced to the writings of the two Bacons; to Roger, teaching that all knowledge of natural laws must be sought by aid of mathematics, applied to observation; and to Francis, laying it down that nothing is to be done, least of all by mathematics, until all practical observation has been made. What must this person conclude, if he were told that the mass, even of experimentalists, look up to Francis as their chief, and think little of Roger? He would be strongly inclined to suspect that a confusion had taken place—that the general run of physical inquirers knew little of history.....

and had confounded Francis Bacon with Roger, either because Roger was a *Franciscan* or because *Fr.* has been taken for *Francis*, instead of *Frater*.

It is only in a few particularly simple cases that the results of natural laws can be predicted by unaided common sense. In the great majority of cases, their operation is far too complicated to be thus traceable with any tolerable accuracy, and we require the aid of Mathematics to determine, in number, weight and measure, the resulting phenomena which will flow from given laws. To take a simple instance, but one which is a type of many: When a heavy body falls towards the earth it moves with continually increasing velocity, which is always directly proportional to the time it has been falling. Knowing this, how can we find the distance fallen in a given time? or if the distance be determined experimentally, how can we reason back from it to the velocity? The solution, when higher mathematics are applied, is extremely simple, but the processes of ordinary arithmetic fail us, because the element of velocity with which we have to deal is not constant, even for the shortest conceivable time, but is in a state of continual change.

So it is with the motion of the planets about the Sun. The attractive force of the Sun, and the angle which this force makes with the planets' path, are both in a continual state of change. The great law of gravitation, which governs all the motions of the heavenly bodies, simple as it is in itself, rests on high mathematical grounds, and to say nothing of the possibility of discovery, the proofs of its truth, even now that it is discovered, cannot be rendered intelligible to a person ignorant of Mathematics.

In some departments of natural philosophy, the domains of experiment and a priori reasoning trench upon each other, and the truth of the elementary principles can be established by either method. This is especially the case in the science of Mechanics. The whole of Statics, as commonly taught, is made to rest on a priori grounds, and the attempt has been made by some writers to place Dynamics on a similar basis.

This is one out of many instances of the complete accordance between truths learnt by experiment and the inherent fitness of things. As science advances, we perceive more and more clearly, that the facts which are to be learnt from an examination of the material world are not isolated or arbitrary, but connected by relations of order and mutual dependence, so that no law could be other than it is without clashing with the rest. Metaphysicians have sometimes asserted that while the laws of logic and mathematics are necessary, the laws of nature are mere facts, an arbitrary impress of creative will. But we must beware of pushing this distinction too far. Some of the laws of nature are of such a character that, if there are to be any laws at all, they must be as they are, since a different law would involve a contradiction in terms. Other laws again if not necessary in so strict a sense, are marked by such eminent simplicity, and what strikes our minds as fitness and beauty, that they seem to flow as a necessary consequence from the wisdom of the Creator. The old philosophers endeavored to discover natural laws by a priori

reasoning, and they signally failed, because man's mind is not competent to determine, *a priori*, what laws it beseems the Creator to impose on his works. The skein of nature cannot be unravelled from that end. We must be content to begin like children with facts of observation, and by comparing things together, to travel upwards to more and more general laws. But though we shall meet with much complexity and many apparent exceptions to general laws, as we are groping our way through the darkness, when the light at last comes, we shall perceive an admirable connection between all the parts of our subject, the exceptions will prove to be only apparent, and the true law will be found to be the most simple and most fit. That *fitness of things* which the old philosophers believed in does exist, but its discovery must come last in order, not first.

A law which has been established in quite recent years has in a remarkable manner served to connect remote branches of natural science, I mean the law of "the correlation of forces." This law asserts that all force is one, and that all the different forms of force are capable of being converted, the one into the other. Mechanical force, for instance, when apparently wasted in friction, or destroyed by percussion, is really converted into its proper equivalent of heat; and conversely when heat is made to do work, as in the steam-engine, a certain portion of the heat disappears, not spreading itself in the air and warming the air, but ceasing to exist as heat in any form, having in fact been converted into mechanical effect. Heat and mechanical energy then are mutually convertible.

Again, chemical attraction, which is another form of force, is transferred into heat, whenever two elements between which it exists are allowed to combine. Sometimes a portion of the force is transformed into light, as in the flame of a lamp; for light, too, is a form of force. Conversely the heat and light of the sun enable plants to grow, and in their growth to deprive the carbonic acid which is in the air of a portion of its carbon. Here, then we have heat and light overcoming the force of chemical attraction; and a portion of heat and light disappear in the process, to reappear when the vegetable is burned. Thus the heat of our fires, whether of wood or coal, is heat that has been originally derived from the sun. Chemical attraction, then, is mutually convertible with heat and light.

Electricity is another form of force, which can be developed either from chemical attraction, as in the galvanic battery, or from mechanical force by means of friction. Conversely it can undo the work of chemical attraction, as in electrolysis, can do mechanical work, as when pith balls are attracted, or can develop heat and light, as in the electric spark.

Upon the whole it appears that force never comes into being, and is never destroyed. It may be mechanical, chemical, or electrical, or it may take the form of heat or of light, and it may be sometimes latent and sometimes sensible; but though it run an endless round of changes, passing in succession through all these forms, it gains nothing and loses nothing, but remains always the same in amount.