

ANNUAL REGISTER

—OF THE—

STATE COLLEGE

—OF—

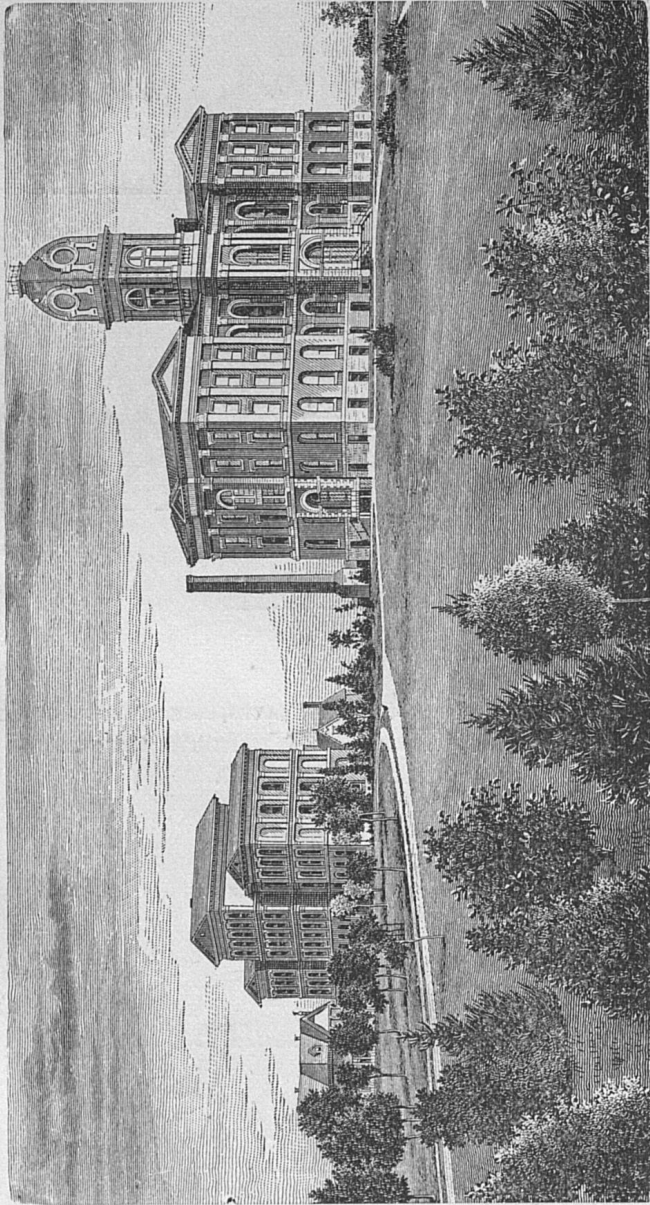
KENTUCKY.

STATEMENT OF THE CONDITION, MATRICULATES, AND COURSE OF STUDY FOR
THE COLLEGIATE YEAR 1885-86, WITH THE ANNOUNCE-
MENTS FOR 1886-87.

—SESSION BEGINS—

WEDNESDAY, SEPTEMBER 8th, 1886.

FRANKFORT, KY.:
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1886.



COLLEGE BUILDING.

DORMITORY.

PRESIDENT'S HOUSE.

= Introductory. =

Agricultural and Mechanical Colleges in the United States owe their origin to an act of Congress, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agricultural and the mechanic arts," approved July 2, 1862. The amount of land donated was 30,000 acres for each Representative in the National Congress. Under this allotment Kentucky received 330,000 acres. Several years elapsed before the Commonwealth established an Agricultural and Mechanical College under the act. When established it was not placed upon an independent basis, but was made one of the Colleges of Kentucky University, to which Institution the annual interest of the proceeds of the Congressional land grant were to be given for the purpose of carrying on its operations. The land scrip had meanwhile been sold for fifty cents per acre, and the amount received—\$165,000—invested in six per cent. Kentucky State bonds, of which the State became the custodian in trust for the College.

The connection with Kentucky University continued till 1878, when the act of 1865, making it one of the Colleges of said University, was repealed, and a Commission was appointed to recommend to the Legislature of 1879-80 a plan of organization for an Institution including an Agricultural and Mechanical College such as the necessities of the Commonwealth require. The city of Lexington offered to the Commission (which was also authorized to recommend to the General Assembly the place, which, all things considered, offered the best and greatest inducements for the future and permanent location of the College) the City Park, containing fifty-two acres of land, within the limits of the city, and thirty thousand dollars in city bonds for the erection of buildings. This offer the county of Fayette supplemented by twenty thousand dollars in county bonds, to be used either for the erection of buildings or for the purchase of land. The offers of the city of Lexington and of the county of Fayette were accepted by the General Assembly.

By the act of incorporation, and the amendments thereto, constituting the charter of the Agricultural and Mechanical College of Kentucky, liberal provision is made for educating, free of tuition, the energetic young men of the Commonwealth whose means are limited. The Normal Department, for which provision is also made, is intended to aid in building up the Common School system by furnishing properly qualified teachers. This College, with the associated departments which will, from time to time, be opened as the means placed at the disposal of the Trustees allow, will, it is hoped, in the no distant future, do a great work in advancing the educational interests of Kentucky. Being entirely undenominational in its character, it will appeal with confidence to people of all creeds and of no creed, and will endeavor, in strict conformity with the requirements of its organic law, to afford equal advantages to all, exclusive advantages to none. The liberality of the Commonwealth in supplementing the inadequate annual income arising from the proceeds of the land scrip invested in State bonds will, it is believed, enable the Trustees to begin and carry on, upon a scale commensurate with the wants of our people, the operations of the Institution whose management and oversight have been committed to them by the General Assembly of Kentucky.

Board of Trustees of the Agricultural and Mechanical College of Kentucky.

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HIS EXCELLENCY GOVERNOR J. PROCTOR KNOTT.

Secretary.

L. J. BRADFORD.

Assistant Secretary.

JAMES K. PATTERSON.

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Trustees Whose Term of Office Expires January 10, 1890.

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Trustees Whose Term of Office Expires January 10, 1892.

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PHILIP BIRD.

W. D. NICHOLAS.

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JAMES K. PATTERSON, Assistant Secretary.

FACULTY.

JAMES K. PATTERSON, Ph. D., F. S. A., F. R. H. S., PRESIDENT,
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Professor of Chemistry and Experimental Physics.

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Professor of the English Language and Literature.

JAMES G. WHITE,
Professor of Mathematics, Physics and Astronomy.

A. R. CRANDALL, A. M., Ph. D.,
Professor of Natural History and Director of the Mechanical Department.

F. M. HELVETI,
Professor of the French and German Languages and Literature.

JOHN H. NEVILLE, A. M.,
Professor of the Latin and Greek Languages and Literature.

MAURICE KIRBY, A. M.,
Professor of Moral and Political Philosophy and Principal of the Normal Department.

ALBERT E. MENKE, D. Sc., F. C. S.
Professor of Agricultural Chemistry, Agriculture and Horticulture.

J. R. POTTER, A. B.,
Professor of Theory and Practice of Teaching in Normal School.
F. E. PHELPS, FIRST LIEUT. U. S. A., COMMANDANT,
Professor of Civil, Mechanical and Mining Engineering and Military Science.

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Principal of the Preparatory Department.

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Instructor in Book-keeping and Assistant in Preparatory Department.

W. D. LAMBUTH, A. B.,
Instructor in Latin and Greek, and Assistant in Preparatory Department.

J. L. McCLELLAN,
Assistant in Preparatory Department.

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Assistant Professor of Chemistry in Experimental Station

DAVID A. KING
Professor of Practical Mechanics.

WILLIAM B. MAPLE,
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E. H. D. WHITT.
Tutor in Preparatory Department.

EXPERIMENT STATION OF THE STATE COLLEGE OF KENTUCKY.

Board of Control.

- | | | |
|---------------------------------|---|---------------------------|
| JUDGE W. B. KINKEAD | } | Executive Committee. |
| PHILIP BIRD | | |
| DR. R. J. SPURR | | |
| W. D. NICHOLAS | | |
| R. A. SPURR | } | President of the College. |
| JAS. K. PATTERSON | | |
| M. A. SCOVELL, M. S., | | |

Officers of the Station.

- M. A. SCOVELL, M. S., Director.
- ROBERT PETER, M. D., Professor of Chemistry.
- A. R. CRANDALL, A. M., Professor of Botany.
- A. E. MENKE, D.Sc., F. C. S., Professor of Agriculture and Agric. Chemistry.
- A. T. PARKER Microscopist.
- A. M. PETER, M. S., Assistant in Chemistry.
- JAMES MURRAY Practical Agriculture and Horticulture.

GRADUATES OF 1885-86.

THOMAS HUNT MORGAN.
WILLIAM PREWITT.
ROBERT LEE PREWITT.

UNDERGRADUATES.

AMIS, JAMES WESTERFIELD	FLAT LICK.
ALLEN, CLAUDE	LEXINGTON.
ALLIN, PETER DUNN	McAFEE.
ANDERSON, RICHARD THOMAS, JR.	LEXINGTON.
ARNETT, T. J.	SALYERSVILLE.
BAKER, ANNIE JANE	LEXINGTON.
BAKER, BERTHA	LEXINGTON.
BAKER, NORAH CROSS	LEXINGTON.
BAKER, SALLIE BELL	LEXINGTON.
BARR, ROBERT MCCREARY	LEXINGTON.
BARTLETT, FREDERICK VINCENT	LEXINGTON.
BASHAM, ARTHUR PEYTON	STEPHENSPORT.
BEALERT, ALICE	LEXINGTON.
BENTHAL, JAMES LEWIS	OAKTON.
BERRY, BAILY DAWSON	BERRY.
BERRY, HENRY SKILLMAN	LEXINGTON.
BIRD, BETTIE CLARKE	BAGDAD.
BOSWORTH, JO. FRAZER	SLICKAWAY.
BOSWORTH, MADISON ADAMS	LEXINGTON.
BONNYMAN, ALEXANDER	LEXINGTON.
BOYD, CLARENCE	MINERVA.
BUCKLER, ROBERT	MT. OLIVET.
BUSH, ALEX. HUSTON	LEXINGTON.
BURTON, ROBERT ALLEN	WILLISBURG.
BULLOCK, SAMUEL REDD	LEXINGTON.
BUTLER, THOMAS E.	SHREVE.
BROCK, WILLIAM BASS	LEESBURG.
BROWN, ROBT. ANDERSON	MEADOW CREEK.
BROWNELL, CLAUDE SYLVESTER	LOUISVILLE.
BRONSTON, ALICE JULIA	RICHMOND.
BRYAN, GEORGE GIST	WINDOM.
BRYAN, ROBT. MILLIGAN	WINDOM.
CALHOON, CLARENCE CHAPMAN	OWENSBORO.
CALHOON, LELIA ZERILDA	OWENSBORO.
CASSITY, JOHN CABELL	BETHANY.

CASSELL, ROBT. LEE	WINDOM.
COONS, ANNIE	LEXINGTON.
COOVER, WILLIAM ELLSWORTH	ANGOLA, IND.
COCHRANE, CLARA WARFIELD	LEXINGTON.
COYLE, HARRY BODLEY	RUSSELL CAVE.
CURTIS, HENRY ERNEST	GREENDALE.
CURTIS, RICHARD ALLAN	GREENDALE.
CURTIS, SUSIE SPURR	GREENDALE.
CHEEK BLANCHE	LEXINGTON.
CLAY, LAURA	LEXINGTON.
CLUBB, H.	NORTH PLEASUREVILLE.
CLUBB, B.	FRANKLINTON.
CRUM, FLOYD JACOB	LOUISVILLE.
CRAWFORD, VICTOR LEE	MILTON.
DEANE, HARRY FOSTER	LEXINGTON.
DECOURCEY, JAMES OSBORNE	GREENVILLE.
DELOZIER, CHARLES E	WILLIAMSBURG.
DEROODE, RUDOLPH JOHN JULIUS, JR.,	LEXINGTON.
DENNY, FRANKLIN CLARK	CORDOVA.
DENNY, JOSEPH AMBROSE	CORDOVA.
DENNY, WILLIAM BUTLER	CORDOVA.
DILLARD, FLORENCE DUDLEY	LEXINGTON.
DODDS, SIDNEY LEE	HICKMAN.
DOLAN, THOMAS FRANCIS	RINEYVILLE.
DOWIS, GREEN ELLIOTT	WOODBINE.
DOTY, LAWRENCE TEAL	OWENTON.
DUNVILLE, ROBT. ANDERSON	SLAUGHTERSVILLE.
EVERSOLE, JOHN CORNETT	HAZARD.
FARLEY, EDWARD YOUNG	LEXINGTON.
FARNAU, WILLIAM ARTHUR	LEXINGTON.
FEENY, AUGUSTUS	PAYNE'S DEPOT.
FEENY, MICHAEL	PAYNE'S DEPOT.
FELIX, CHARLES WILLIAM	OLATON.
FITZGERALD, JOHN EDWARD	LEXINGTON.
FITZPATRICK, RUFUS	BURNSIDE.
FORSTON, KEENE RICHARD	LAWRENCEBURG.
FLANERY, JACOB WEDDINGTON	NEWFOUNDLAND.
FLANERY, WILLIAM HARVEY	NEWFOUNDLAND.
FRAZER, HUGH MILLER	LEXINGTON.
FRAZER, MARY FRANCISCO	LEXINGTON.
FREEMAN, JOHN V.	FULTON.
GARRED, ULYSSES ANDERSON	LOUISA.
GARRED, LEE ALVIN HATTEN	LOUISA.
GAY, KATIE SUDDATH	LEXINGTON.
GAY, FANNIE MARY	LEXINGTON.

GIBSON, CARLTON JAMES	DAYTON.
GIBSON, ELIZABETH DUNSTER	LEXINGTON.
GOLDEN, BEN. BRISTOW	BARBOURVILLE.
GORMLEY, PHILIP	LEXINGTON.
GUTHRIE, WALLACE COX	FLAG FORK.
GUNN, ROBERT TEVIS	LEXINGTON.
GUNN, JOHN	LEXINGTON.
GUNN, BELLE CLEMENT	LEXINGTON.
GRAVES, SIDNEY MONTGOMERY	LEXINGTON.
HAGGARD, LELAND	WINCHESTER.
HAGGARD, GORDON AUGUSTINE	WINCHESTER.
HANCOCK, FLORENCE BODLEY	LEXINGTON.
HANSON, JENNIE MARIE	PARIS.
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HARDESTY, HATTIE BELLE	LEXINGTON.
HARDESTY, FRANCIS LEONARD	LEXINGTON.
HARRISON, LENA TILFORD	LEXINGTON.
HATCHER, JAMES SAMUEL	PRESTONSBURG.
HATCHER, JOHN WILLIAM	PRESTONSBURG.
HECK, JOHN NEAL	ROCKPORT.
HENSLEY, HENRY M.	BIG CREEK.
HERR, HARDIN HELM	OWENSBORO.
HILL, THOMAS CHESTIN	SHARP.
HOEING, CHARLES	LEXINGTON.
HOWARD, TYRUS	CALLOWAY.
HOWARD, WILLIAM FRY	WALLEN'S CREEK.
HOWARTON, VIRGIE MAY	PARIS.
HOUSE, ROBT. EDMUND LEE	MANCHESTER.
HODGES, MARY	LEXINGTON.
HOLLADAY, BEN LEWIS	PINE GROVE.
HOLIDAY, LUCY ANN	LEXINGTON.
HORNBrook ERNEST ADAMS	LEXINGTON.
HORNBrook, SALLIE ADAMS	LEXINGTON.
HUMSTON, AMANDA	LEXINGTON.
HUMSTON, PRICE	LEXINGTON.
HUNT, LEONORA IRENE	LEXINGTON.
HUNTER, WILLIAM M.	SPEARS.
HUGUELY, EVERT MARSTON	RICHMOND.
HUNT, RICHARD EUGENE	LEXINGTON.
HURST, WILLIAM D.	PINEVILLE.
INGRAM, MARIE LETITIA	HENDERSON.
INGRAM, MARY ANNIE	HENDERSON.
INNES, GEORGE WHITNEY	RUSSELL CAVE.
JACKSON, THOMAS ROMULUS	WINCHESTER.
JACKSON, THOMAS RUSSELL	ALTON.

JAGOE, WALTER MARSHALL	SACRAMENTO.
JAMES, GEORGE LEE	CRAB ORCHARD.
JONES, HOWARD	TERRY, MISS.
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KEALHOFFER, STARR	DAYTON.
KELLER, DAVID HENRY	LEXINGTON.
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KIENSTRA, WILLIAM HERBERT	NEWELTON, LA.
KIMBROUGH, THADDEUS LEE	CYNTHIANA.
KLINE, JOHN SINK	PIKEVILLE.
LACKEY, JOHN FARRIS	PAINT LICK.
LANCASTER, PEARL ANNA	LEXINGTON.
LANCASTER, GEORGE D.	LEXINGTON.
LAND, GEORGE WASHINGTON	LEXINGTON.
LAND, CHARLES	LEXINGTON.
LANDFAIR, ROBERT BLAKE	CELINA, OHIO.
LONG, HENRY MAY	GEORGETOWN.
LUSBY, DANIEL LEWIS	EAST EAGLE.
LUXON, LENA WINGATE	LEXINGTON.
MACCONNELL, SALLIE	LEXINGTON.
MADDOX, ELIJAH HUME	WATERFORD.
MAPLE, WILLIAM BARNETT	SMYRNA.
MARCUM, PHILIP D.	MANCHESTER.
MARCUM, JAMES FRANKLIN	MANCHESTER.
MARSHALL, HARRY CRAIG	CINCINNATI, OHIO.
MASON, WILLIAM M.	ALTON.
MAYS, EDWARD E.	CATLETTSBURG.
MILLER CHARLES BUNYAN	OWENSBORO.
MITCHELL, FRED. C.	CATLETTSBURG.
MOORE, CHARLES CHILTON	LEXINGTON.
MORROW, THOMAS ZANTZINGER, JR.,	SOMERSET.
MORGAN, MARCUS EWING	GRATZ.
MORGAN, THOMAS HUNT	LEXINGTON.
MORGAN, CHARLTON HOWARD	LEXINGTON.
MULLIGAN, LOUIS HUSTON CRITTENDEN	LEXINGTON.
MURRELL, WILLIAM P.	FULTON.
MUNCEY, VICTOR EMANUEL	LOUISA.
MCCARTY, DENNIS EDWARD	STAMPING GROUND.
McELHINNEY, MATIE	LEXINGTON.
MCDONALD, GEO. LAWRENCE	OWENSBORO.
MCCAWLEY, GEO. WASHINGTON	DEPOSIT.
MCKINLEY, BENJAMIN FRANKLIN	HUSTONVILLE.
McMANNON, EDWARD WOOD	OWENSBORO.
McMANAMA, GEO. BRASHER	CALHOON.
NAPPER, WILLIAM CAMPBELL	CHAVIES.
NICHOLAS, JOHN VANMETER	LEXINGTON.
NORTH GRANT	PINEVILLE.

O'BANION, JOHN BRYANT	HESLER.
O'CONNOR, JEREMIAH ALOYSIUS	SHELBYVILLE
OLDHAM, THOMAS EDWARD	LEXINGTON.
PARKER, AMBROSE COURTLAND	ALTON.
PATTERSON, ALVIN STEPHENS	HARRODSBURG.
PATTERSON, WILLIAM ANDREW	LEXINGTON.
PATTON, SAMUEL ELLIS	STANTON.
PAYNE, DANIEL MACARTY	LEXINGTON.
PAYNE, ROBT. TREAT	ATHENS.
PEARCE, MARION LENNARD	FRANKFORT.
PETERS, JAMES MONROE	COAL RUN.
PETTIT, HARRY	LEXINGTON.
PIERRIE, CLERELA	LEXINGTON.
PURNELL, MARY	LEXINGTON.
PUTMAN, ELLIE HARRISON	WHITE PLAINS.
PHELPS, EDWARD MARSHALL	ST. MARY'S, OHIO.
PRIEST, MARY VIRGINIA	HEBBARDSVILLE.
PREWITT, ANNA	ATHENS.
PREWITT, MARGARET	ATHENS.
PREWITT, ROBT. LEE	ATHENS.
PREWITT, WILLIAM	ATHENS.
RANKIN, ALLAN GILMORE	MILL SPRING.
RAILEY, CHARLES ELMER	MIDWAY.
REES, NANETTE	LEXINGTON.
REESE, KIRK	FERN LEAF.
RICE, HENRY T.	STANTON.
RICHARDSON, AGNES TAIT	LEXINGTON.
RICHARDSON, WILLIAM DARBY	MOUNT STERLING.
ROBERTS, WILLIAM TILFORD	BURNSIDE.
ROBERTSON, JAMES B.	LEXINGTON.
RODDICK, WILLIAM WALLACE	CHICAGO, ILL.
RUCKER, JOHN WILLIAM	LEXINGTON.
RUSH, RUTH	LEXINGTON.
RYAN, WILLIAM HENRY	HOPKINSVILLE.
SAFFARANS, COWLES MEADE	YAZOO CITY, MISS.
SALMON, JOHN THOMAS	OAKTON.
SEALS, CLAUD GREEN	TERRY, MISS.
SEPPENFIELD, HENRY PHILIP	CARROLLTON.
SIMMONS, MARGARET LEE	RICHMOND.
SISTRUNK, JOSEPH FRANKLIN	CRYSTAL SPRINGS, MISS.
SISTRUNK, WILLIAM THOMAS	CRYSTAL SPRINGS, MISS.
SUTHERLAND, HARVEY BERRY	WINCHESTER.
SCHMIDT, MARY ELIZABETH	LEXINGTON.
SCOVELL, ADA PRUELLA	NEWTON, ILL.
SCOVELL, LIZZIE JENNIE	NEWTON, ILL.
SCOVELL, FRANK ELMER	NEWTON, ILL.
SHACKLEFORD, THOMAS WHEATLEY	LEXINGTON

SHARPE, GEO. NORTON	LEXINGTON.
SHELBY, DAVID HART	LEXINGTON.
SHROPSHIRE, WILLIAM BRYAN	LEXINGTON.
SKAIN, JOHN AUGUSTINE	LEXINGTON.
SLEDD, GEORGIE	MT. STERLING.
SLEET, CHURCH WILLIAM	NAPOLEON.
SLOAN, ALBERT	FRAZER.
SMITH, ALICE MAUD	LEXINGTON.
SMITH, JOHN DISHMAN	MANCHESTER.
SMITH, JOHN WILLIAM	OWENTON.
SPEARS, LEWIS ALFRED	SPEARS.
STEADMAN, SAMUEL MADDOX	RUSSELL CAVE.
STEPHENS, ROBERT LEE	KENTON.
STIVERS, ANNE ADELIA	LEXINGTON.
STOCKDELL, EVAN WARNER	LEXINGTON.
SWOPE, HENRY BEN	OWENTON.
TAULBEE, JAMES MENIFEE	HAZEL GREEN.
TAYLOR, JOHN CALVIN	REDHOUSE.
TAYLOR, LESLIE LEE	REDHOUSE.
TEVIS, JOHN	LOUISVILLE.
TODD, FANNY SWIFT	LEXINGTON.
TUDOR, J. EDGAR	PAINTLICK.
TURNER, JOHN EDWARD	LOUISVILLE.
THOMAS, SAMUEL BEAUCHAMP, JR.,	TERRY, MISS.
THOMPSON, LULU VILLIERS	OWENSBORO.
THOMPSON, ROBERT MITCHELL	BEECHLAND.
THORNTON, JOHN WILGUS	LEXINGTON.
UNDERWOOD, ERNEST	COVINGTON.
VOLLENWIDER, OTTO	HANDEN JUNCTION, OHIO.
WALKER, PERCY MORTIMER	LEXINGTON.
WALKER, ROBT. BERNIE	LEXINGTON.
WALKER, WILLIAM	HARTFORD.
WALLINGFORD, HERBERT	MOUNT OLIVET.
WARNER, CALLIE	LEXINGTON.
WEAVER, RUFUS LEE	FRAZER.
WEDDINGTON, BALLARD	COAL RUN.
WILSON, NETTIE WALKER	MOOREFIELD.
WILSON, WILLIAM LEE	LEXINGTON.
WILLHAM, WILLIAM WALL	MACKVILLE.
WITT, OWEN WALTER	SPEARS.
WOOLUMS, JESSIE PATTERSON	LEXINGTON.
WOODWARD, RECTOR ELKANAH	WINDOM.
WOOLFOLK, JOHN GROSVENOR	LEXINGTON.
WORD, JAMES WALKER	GARETTSBURG.
WHITT, ELIAS HARMAN D.	NEWFOUNDLAND.
YOUNG, IDA GLENN	LEXINGTON.
YATES, WILLIAM LEE	RICHMOND.
YATES, JAMES ANDERSON	BUSH'S STORE.

= Departments of Study. =

The Departments of Study comprise the following:

Mathematics.
Physics and Astronomy.
Chemistry, Inorganic, Organic and Applied.
Mental and Moral Philosophy.
Civil History and Political Economy.
Agriculture and Horticulture.
English Language and Literature.
Latin Language and Literature.
Greek Language and Literature.
French Language and Literature.
German Language and Literature.
Civil, Mechanical and Mining Engineering and Drawing.
Natural History—Botany, Comp. Anatomy, Geology, etc.
Veterinary Science.
Practical Mechanics.
Theory and Practice of Teaching.
Book-keeping and Penmanship.
Military Art and Science.
Architecture and Landscape Gardening.

Agricultural Course—Complete.

Mathematics.
Physics and Astronomy.
Chemistry, Inorganic, Organic and Agricultural.
Veterinary Science.
History and Political Economy.
German Language and Literature.
Practical Mechanics.
English Language and Literature.
Landscape Gardening.
Botany, Zoology, Comp. Anatomy, Geology.
Agriculture and Horticulture.
Military Art and Science.

Agricultural Course—Partial.

Mathematics—through Geometry and Surveying.
Physics, Chemistry, Inorganic, etc.
Veterinary Science, Botany, Zoology.
Practical Mechanics.
English Language—Grammar, Rhetoric.
Agriculture and Horticulture.
Military Science.

Scientific Course.

Mathematics.
Physics and Astronomy.
Chemistry, Inorganic, Organic and Applied.
Civil History and Political Economy.
Mental and Moral Philosophy.
Natural History—Botany, Zoology, Comp. Anatomy, Geology, Mineralogy, etc.
Latin, Partial Course.
French or German.
Practical Mechanics.
English Language and Literature.
Civil, Mechanical and Mining Engineering and Drawing.
Military Art and Science.

Classical Course.

Mathematics.
Physics and Astronomy.
Chemistry—Inorganic and Applied.
Mental and Moral Philosophy.
Latin and Greek Languages and Literature.
English Language and Literature.
French and German Languages and Literature.
Civil History and Political Economy.
Natural History—Botany, Comp. Anatomy, Zoology, Geology, etc.

Engineering Course.

Mathematics.
Physics.
Chemistry—Inorganic and Organic; Qualitative and Quantitative Analysis.
Civil History.
Political Economy.

Mental and Moral Philosophy.
 English Language and Literature.
 Natural History—Botany, Zoology, Geology, Mineralogy.
 Drawing.
 Practical Mechanics.
 French and German (optional).
 Civil, Mechanical and Mining Engineering.

Course of Study Required for Diploma in Normal School.

Elementary English Branches.
 Mathematics, including Geometry and Trigonometry.
 Experimental Physics.
 Descriptive Astronomy.
 Natural History—Botany, Physical Geography, Physiology.
 Penmanship and Book-keeping; Drawing.
 Rhetoric, Elements of Criticism, Composition, Logic.
 History and Political Economy.
 Theory and Practice of Teaching.
 French and German.
 Latin Language and Literature, partial course.
 Mental and Moral Philosophy.

All other departments of study in the College are open, without extra fees, to students in the Normal course. To those who do not take the course required for a diploma, certificates of qualification to teach are issued for those branches in which the required degree of proficiency is attained.

The Course of Study Required for a Diploma in the Commercial Course is as follows :

Penmanship, Book-keeping, general and special.
 English Grammar, Geography—Descriptive, Political and Physical.
 Rhetoric, Composition.
 Higher Arithmetic, Algebra, Geometry.
 Political Economy, Moral Philosophy.
 French and German.

All other departments are open, without extra fees, to students in the Commercial Course. To those who do not take the entire course of study, but confine themselves mainly to book-keeping, certificates are given when the required degree of proficiency is attained.

PREPARATORY DEPARTMENT—CLASSICAL COURSE.

JUNIOR.

First term ...	English Grammar (elementary).	Geography.	Arithmetic.	Latin Grammar, with daily exercise in writing Latin.
Second term..	English Grammar (elementary).	Geography.	Arithmetic completed, Elementary Algebra.	Latin Grammar continued, Nepos.

SENIOR.

First term ...	English Grammar (advanced).	History.	Higher Algebra.	Cesar and Latin Grammar.	Greek Grammar, with a daily exercise in White's Lessons.
Second term..	March's Philological Study and Graham's Synonyms.	History.	Higher Algebra.	Virgil and Latin Exercises.	Greek Grammar exercises, Xenophon's Anabasis.

AGRICULTURAL AND SCIENTIFIC COURSE.

JUNIOR.

First term ...	English Grammar (elementary).	Geography.	Arithmetic.	Elementary Zoology.
Second term..	English Grammar (elementary).	Geography.	Arithmetic completed, Elementary Algebra.	Elementary Botany.

SENIOR.

First term ...	English Grammar (advanced).	History.	Higher Algebra.	Physical Geography.
Second term..	March's Philological Study and Graham's Synonyms.	History.	Higher Algebra.	Physical Geography.

AGRICULTURAL COURSE.

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.
FIRST YEAR.				
First Term	English.	Mathematics.	Physics.	
Second Term.....	English.	Mathematics.	Chemistry.	
SECOND YEAR.				
First Term	Mathematics.	German.	Org. Chemistry.	Anatomy & Phys'gy.
Second Term.....	Mathematics.	German.	Agr. Chemistry.	Botany.
THIRD YEAR.				
First Term	German.	English.	Prac. Chemistry.	Practical Chemistry.
Second Term.....	German.	English.	Zoology.	Astronomy. Shop work in after- noon.
FOURTH YEAR.				
First Term	Veterinary Science.	History.	Geology.	Agriculture.
Second Term.....	Veterinary Science.	History and Political Economy.		Horticulture.

SCIENTIFIC COURSE.

FIRST YEAR.				
First Term	English.	Mathematics.	Physics.	French.
Second Term.....	English.	Mathematics.	Chemistry.	French.
SECOND YEAR.				
First Term	Mathematics.	German.	French.	Anatomy & Phys'gy.
Second Term.....	Mathematics.	German.	French.	Botany.
THIRD YEAR.				
First Term	German.	English.	Mechanics.	Mathem. or Practical
Second Term.....	German.	English.	Zoology.	Chemistry. Astronomy.
FOURTH YEAR.				
First Term	Mental and Moral Philosophy.	History.	Geology.	* Civil Engineering.
Second Term.....	Mental and Moral Philosophy.	History and Political Economy.		* Civil Engineering.

* Optional.

CLASSICAL COURSE.

FIRST YEAR.				
First Term	English.	Mathematics.	Physics.	Latin.
Second Term.....	English.	Mathematics.	Chemistry.	Latin.
SECOND YEAR.				
First Term	Mathematics.	German.	Latin.	Greek.
Second Term.....	Mathematics.	German.	Latin.	Greek.
THIRD YEAR.				
First Term	German.	English.	Greek.	Anatomy & Phys'gy.
Second Term.....	German.	English.	Greek.	Botany.
FOURTH YEAR.				
First Term	Mental and Moral Philosophy.	History.	Geology or Early English.	Mathem. or Practical Chemistry.
Second Term.....	Mental and Moral Philosophy.	History and Politi- cal Economy.		Astronomy.

ENGINEERING COURSE.

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	AFT'NOON.
FIRST YEAR.					
First Term ...	English.	Mathematics.	Physics.		Work in Shop.
Second Term..	English.	Mathematics.	Chemistry.		Work in Shop.
SECOND YEAR.					
First Term.....	Mathematics.		Organic Chem- istry.	Botany.	Use of Tools.
Second Term..	Mathematics.		Drawing.		Use of Tools.
THIRD YEAR.					
First Term	Civil Engineer- ing.		Mechanics.	Calculus.	Prac'l Work.
Second Term..	Civil Engineer- ing.		Zoology.	Astronomy.	Prac'l Work.
FOURTH YEAR.					
First Term.....	Military Engi- neering.	Right Line Draw- ing	Mineralogy.		Prac'l Sur- veying.
Second Year...	Military Engi- neering.	Drawing of Plans.	Geology.		Field Work.

= Course of Instruction. =

I. Department of Civil History.

PROFESSOR PATTERSON.

JUNIOR CLASS.

First Term—Freeman's General Sketch of European History.

Second Term—Sime's History of Germany; Doyle's United States.

SENIOR CLASS.

First Term—The Student's Hume; English Constitution; Lectures.

Second Term—The Student's Hume; Constitutional History; Lectures.

II. Department of English.

PROFESSOR SHACKLEFORD.

FRESHMAN CLASS.

First Term—Rhetoric.

Second Term—Studies in English Literature.

JUNIOR CLASS.

First Term—Sir William Hamilton's Logic, with lectures on inductive reasoning.

Second Term—Shaw's Manual of English Literature and Whatley's Rhetoric.

SENIOR CLASS.

First Term—Early English; Mediæval English.

III. Course in Mental and Moral Philosophy.

PROFESSOR PATTERSON.

SENIOR CLASS.

First Term—Metaphysics, Hamilton's Lectures.

Second Term—Metaphysics, Hamilton's Lectures; History of Philosophy, Ancient and Modern.

IV. Department of Latin and Greek.

PROFESSOR NEVILLE.

LATIN.

FIRST YEAR.

First Term—Grammar, with daily exercise in writing Latin.*Second Term*—Grammar continued; Nepos.

SECOND YEAR.

First Term—Cæsar and Grammar.*Second Term*—Virgil and Latin exercises.

THIRD YEAR.

First Term—Cicero's Orations; Sallust.*Second Term*—Livy; Exercises in writing Latin.

FOURTH YEAR.

First Term—Horace; Cicero de Senectute.*Second Term*—Tacitus; Juvenal; Exercises.**GREEK.**

PREPARATORY.

First Term—Grammar, with a daily exercise in White's Lessons.*Second Term*—Grammar; Exercises; Xenophon's Anabasis.

FRESHMAN CLASS.

First Term—Xenophon's Anabasis; Homer's Iliad.*Second Term*—Selections from Herodotus; Plato's Apology.

SOPHOMORE CLASS.

First Term—Thucydides; Exercises.*Second Term*—Demosthenes; Lysias.

JUNIOR CLASS.

First Term—Euripides; Æschylus.*Second Term*—Sophocles; Aristophanes or Lyric Poets.**V. Department of Mathematics.**

FRESHMAN CLASS.

First Term—Wentworth's Complete Algebra, chapters 15, 16, 17, 18, 20, 21, 24, 27, 30, 33 and 34.*Second Term*—Wentworth's Geometry to Book 6.

SOPHOMORE CLASS.

First Term—Wentworth's Geometry completed; Wentworth's Plane Trigonometry and Surveying.*Second Term*—Peck's Analytical Geometry and Field Work in Surveying.

JUNIOR CLASS.

First Term—Peck's Mechanics; Peck's Integral and Differential Calculus; Wentworth's Spherical Trigonometry.

Second Term—Snell's Olmsted's Astronomy.

VI. Course in Chemistry and Physics.

PROFESSOR PETER.

FRESHMAN CLASS.

First Term—Lecture or Recitation daily; Elementary General Physics and Chemical Physics, with Experimental Illustrations and Applications.

Second Term—Same, continued into Elementary Chemistry.

JUNIOR CLASS.

Both Terms—Lecture or Recitation daily, General Chemistry, with its application to Agriculture, Medicine and the Mechanic Arts, fully illustrated by Experiments.

Practical Chemistry.

Preparations are made for full instruction in Practical Chemistry under the Professor of Chemistry and Physics. Each student will be charged with the apparatus he may break, and a small additional fee for the course.

VII. Department of Natural History.

PROFESSOR CRANDALL.

To enter the Sophomore Class of this school, students must have attended at least one course of lectures upon Organic and Inorganic Chemistry, and must present a certificate of having sustained a thorough and satisfactory examination therein. Those wishing to enter any advanced class must sustain an examination upon the studies of the previous classes, or present proof of having done so elsewhere.

SOPHOMORE YEAR.

First Term—Anatomy, Physiology, Hygiene (Huxley & Youmans).

Second Term—Botany, Plant Physiology and Histology (Kellerman & Bessey); Microscopy—Lectures on the History, use, etc., of the Microscope.

JUNIOR YEAR.

First Term—Continued studies in Botany or Microscopy (optional).

Second Term—Zoology, Comparative Zoology, Text-book, laboratory, and lectures.

SENIOR YEAR.

First Term—Geology; Text-book (Dana) and lectures.

Second Term—Geology continued; Paleontology (optional).

VIII. Department of Modern Languages.

PROFESSOR HELVETI.

FRENCH.

FIRST YEAR.

First Term—Ahn-Henn's French Course, First Book and Part of Second; Ahn-Henn's First French Reader.

Second Term—Ahn-Henn's French Course, Second and Third Book; Conversation; Erkman-Chatrain; Le Conscrit de 1813, Charles XII.

SECOND YEAR.

First Term—Keetel's Collegiate French Grammar; Exercises; French Readings, W. J. Knapp; Conversation.

Second Term—Keetel's Collegiate French Grammar; Composition; X. de Maistre; Voyage autour de ma Chambre; Modern Plays; Primer of French Literature, Saintsbury.

THIRD YEAR (optional).

First Term—E. Borel's Grammaire Française; Composition and Conversation; one of Molière's Plays; one Modern Play.

Second Term—E. Borel's Grammaire Française; Composition and Conversation; one of Racine's and one of Corneille's Dramas.

GERMAN.

FIRST YEAR.

First Term—Ahn-Henn's German Course, First Book and part of Second; Exercises; Reading.

Second Term—Ahn-Henn's German Course, Second Book; Ahn-Henn's First Reader; Conversation.

SECOND YEAR.

First Term—Ahn-Henn's German Course, Third Book; Preparatory Book of German Prose, A. B. Boisen.

Second Term—Ahn-Henn's German Course, Fourth Book; M. M. Fischell's Specimens of Modern German Style, with short sketch of History of German Literature; one of Schiller's dramas.

THIRD YEAR (optional).

First Term—History of German Literature, Klemm (in German); German Composition; Lessing's Nathan der Weise; Schiller's Don Carlos or Goethe's Egmont.

Second Term—History of German Literature (concluded); German Composition; Lessing's Laokoon; Goethe's Iphigenia auf Tauris; Goethe's Prose (extracts).

IX. Military Art and Science.

LIEUTENANT PHELPS.

Practical and Theoretical Instruction in the Tactics of Different Arms; in Military Discipline, including the duties of the Guards, Sentinels, etc., in accordance with the Tactics and Regulations prescribed for the United States Army; Military Engineering; Drawing.

All students are required to wear the prescribed uniform dress (the cost of which is about \$20); and every student not physically disabled (a certificate of actual physical disability from a physician designated by the Faculty, issued to the applicant therefor upon actual examination will be required to excuse from the prescribed drill and discipline) is required to attend the prescribed drills and other military training and discipline, to which five hours of each week are devoted.

In addition to the importance of military science and training, considered in themselves, the habits of exactness and promptitude developed thereby, and the ease, grace and dignity resulting therefrom, can not be overestimated.

X. Commercial Department.—Course of Instruction.

PROFESSOR M. L. PENCE.

FIRST YEAR.

English Grammar, Composition.
Geography—Descriptive, Political and Physical.
Arithmetic, Elementary Algebra.
Book-keeping—Elements, Penmanship.

SECOND YEAR.

Rhetoric, Composition.
Higher Arithmetic, Algebra.
French, German.
Political Economy, Book-keeping continued.

THIRD YEAR.

Moral Philosophy, Commercial Law.
Geometry, Book-keeping continued.
French and German.

XI. Department of Agriculture and Horticulture.

PROFESSOR MENKE.

Instruction by lectures and recitations with demonstration and experiments. The course of study which follows is preceded by Elementary Zoology and Botany in the Preparatory Department. The lectures to the freshman class in general chemistry by Dr. Peter, form a suitable introduction to the more distinctive work of this Department.

SOPHOMORE CLASS.

First Term.—Organic Chemistry.
Second Term.—Agricultural Chemistry.

SENIOR CLASS.

First Term.—Veterinary Science, Agriculture.
Second Term.—Veterinary Science, Horticulture.

XII. Normal Department.—Course of Instruction.

PROFESSOR KIRBY, PRINCIPAL.

FIRST YEAR.

English Grammar and Composition.
 Geography—Descriptive and Political.
 Chemistry, Elementary; Drawing, Experimental Physics.
 Arithmetic, Elementary Algebra.
 Latin Grammar and Reader.
 History, Outlines of.
 Theory and Practice of Teaching.
 French and German.

SECOND YEAR.

Rhetoric and Composition.
 Physical Geography, Botany, Drawing.
 Higher Arithmetic, Higher Algebra.
 History United States, Political Economy.
 Latin—Cæsar, Cicero.
 Theory and Practice of Teaching.
 French and German.

THIRD YEAR.

Elements of Criticism, Logic, Mental Philosophy.
 Anatomy, Physiology and Hygiene, Drawing.
 Geometry and Trigonometry; Latin—Cicero, Virgil.
 Theory and Practice of Teaching.
 French and German.

XIII. Practical Mechanics.

PROFESSOR CRANDALL.

Instruction in Practical Mechanics includes such elementary Practice in the workshop as will enable the student to apply the principles of experimental physics taught in the class-room, and familiarize him with the use of tools, machinery and mechanical processes. The course of instruction is based on what is known as the Russian System, now generally adopted in the Agricultural and Mechanical Colleges of this country. It embraces mechanical drawing, the study and care of tools, work in wood and metals at the bench, the lathe and the forge. This department is under the care of one of the most skillful of practical mechanics.

XIV. Ethics and Political Economy.—Course of Instruction.

PROFESSOR KIRBY.

Calderwood's Moral Philosophy, with Lectures.
 Fawcett's Political Economy, with Lectures.

= Preparatory Department. =

The College has an excellent Preparatory Department under the charge of a Principal and a competent staff of assistants. The object of this is to provide the elementary training and proficiency required to enter the regular college classes. It goes considerably beyond the ordinary subjects of preparatory instruction, in that it includes a good deal of work, especially in the scientific course, which is usually included in the work of the college proper.

Preparatory Department.

English Grammar—Elementary.
English Grammar—Advanced.
Philological Studies in English.
Composition.
Synonyms.
Geography—Descriptive and Political.
Elementary History.
Arithmetic—Practical, Robinson's.
Arithmetic—Higher, Robinson's.
Algebra—Elementary, Robinson's.
Algebra—Higher Through Quadratics, Wentworth's.
Elementary Zoology, with Illustrations and Dissections.
Elementary Botany, with Analysis of Plants,
Physical Geography.

For those who intend to pursue a classical course, Latin and Greek are required in addition to the foregoing.

Daily written exercises, translating English into Latin and Greek, form an integral part of the instruction in these languages from the very outset. Preparatory instruction in the classics carries the student through Cæsar and Virgil, and through the Anabasis of Xenophon.

The conditions of admission into the Preparatory Department are a good knowledge of Arithmetic as far as Percentage, of elementary Grammar through Syntax, and of Geography. Those who enter at any other time than the beginning of the year will be required to pass a satisfactory examination on the work already gone over by the classes which they propose to enter.

The work done in some of the Departments will be better understood from the following:

DEPARTMENT OF CIVIL HISTORY.

Various forms of Government—Monarchy, Aristocracy, Democracy. Early History of Greece—Persian Wars, Athenian, Spartan and Theban Supremacies, Macedonian Supremacy and Conquests of Alexander. Early History of Rome—Period of the Kings, Conquest of Italy, Carthaginian Wars, Expansion of the Roman Power, Roman Constitution, Fall of the Republic, the Empire, its greatness, decline and fall; the New Rome on the Bosphorus, Rise of the Saracenic Power, the Crusades; Rise and Progress of the Frankish and German Monarchies, Feudal System, Development of the States System of Modern Europe, Era of Spanish Ascendency, French Ascendency, Rise of Russia.

Celtic Britain, Saxon Britain, Norman Conquest; the Plantagenet Kings, Relations of Normandy to England and France, the Hundred Years' War and Wars of the Roses; Freedom of the Early English, Laws of Ethelbert, Ina, Alfred and the Confessor; Early English Charters, Magna Charta, Origin of Parliament and Growth of Free Institutions, Social, Religious and Political Condition of the Early and Mediæval English; Feudalism in England and on the Continent; Accession of the Tudors, Age of Elizabeth, Reformation, Beginnings of Puritanism, Era of the Stuarts, the Puritan Rebellion, Protectorate, Restoration, Revolution of 1688; England, Holland and France, Age of Queen Anne, War of the Spanish Succession, Accession of the House of Hanover, War of the Austrian Succession and Seven Years' War; Colonial Epoch, French English and Spanish Colonial Dominions, Rivalry of France and England in Asia and America; Beginnings and Growth of British Empire in India; Revolt of the American Colonies, War of Independence, Principles Underlying the Quarrel with the Mother Country, British Constitutionalism, Relation of America to the British Constitution; Era of the French Revolution, French Republic, Consulate, Empire, Fall of Napoleon, Settlement of Europe by Treaty of Vienna; Course of Events in Europe and America since 1815; Development and Growth of Parliamentary Government in England, United States, France, Germany; Unification of Italy; Eastern Question, its Origin and Progress, Balance of Power; Commerce; Education; Naval and Military Armaments of Modern Times; Republicanism in the United States, Conditions of its Perpetuity, Influence of the American Republic upon European Politics; Literature of the English-speaking People, Probable Future of the English-speaking Stock.

DEPARTMENT OF ENGLISH.

FRESHMAN CLASS.

First Term.—Rhetoric and Composition; Diction and Sentence Construction; Punctuation; Recitations and Exercises on the Black-board.

Second Term.—Narrative Composition; Written Essays read in class and corrected; Synonyms; Prosody.

SOPHOMORE CLASS.

First Term.—English Prose and Poetry; Interpretations of Masterpieces of English Prose and Poetry; Written Essays read in class and corrected.

Second Term.—Studies in English Literature.

Each pupil is required to commit to memory and recite in class selections from the great English poets and prose writers, including parts of Shakespeare's Julius Cæsar and the Merchant of Venice; Bacon's Essays on Studies and Friendship; Milton's L'Allegro and Il Penseroso, and extracts from the Areopagitica; Bunyan's Golden City; Dryden's Alexander's Feast; Gray's Elegy; parts of Goldsmith's Deserted Village; passages from Burke's Speech on the Spirit of Liberty in the American Colonies; Burns' Cotter's Saturday Night; Wordsworth's Intimations of Immortality; Coleridge's Hymn to Mont Blanc; the closing passages of Webster's speech in reply to Hayne; Byron's Prisoner of Chillon; Shelley's Ode to the Skylark; Bryant's Thanatopsis; Emerson's Essay on Compensation; Longfellow's Kermos; Holmes' Deacon's Masterpiece; Tennyson's Ulysses; De Timbus, by Thackeray; the Vision of Sir Launful, by Lowell; Text-book: Swinton's Studies in English Literature.

JUNIOR CLASS.

First Term.—The Science of Logic; Lectures on Pure Logic, in which Stoichiology and Methodology are explained and illustrated; explanations and illustrations of the Analytics of Aristotle and the New Analytic of Sir Wm. Hamilton; exercises in Figure, Mood and Reduction; Lectures on Fallacies and the Sources of Error; Lectures on Inductive and Analogical Reasoning; Lectures on Evidence; Text-book: Sir William Hamilton's Lectures on Logic.

Second Term.—History of English Literature; Class Readings from Bacon, Burke, Milton, Shakespeare and other great English writers; Text-books: Shaw's Manual of English Literature and Hudson's Annotated English Classics. Advanced Rhetoric—Lectures on the elements of criticism; Text-book: Principles of Rhetoric, by A. S. Hill.

SENIOR CLASS.

First Term.—Selections from Chaucer's Canterbury Tales and Spenser's Faerie Queen; Studies of Early English words and idioms; Critical study of a selected play of Shakespeare.

COURSE IN METAPHYSICS.

Value of Metaphysics as a Mental Discipline; Objection and Subjection; Utility; Definitions of Philosophy, its Nature and Comprehension, the ends which it proposes. Principles of Classification of the Faculties; Consciousness; Presentative and Representative Knowledge; Conditions of Sense Perceptions; Views held by different schools, Idealism, Natural Realism; Qualities, Primary, Secundo-Primary and Secondary; Self-consciousness; Faculties of Conservation, Reproduction and Representation, Memory Proper, Imagination. The Elaborative Faculty, Laws of Association, Theory of Unconscious Mental Modification, Doctrine of the Conditioned. Causation, Various Theories of, Intuitive Knowledge, Theories of Time and Space, Substance and Attribute, Mind and Matter; Phenomena of the Feelings; of Will and Desire; Relation of Metaphysics to Moral and Political Philosophy; History of Philosophy; Relation of Physiology to Psychology. The text-book used is Sir William Hamilton's Metaphysics; Lewes' History of Philosophy, Archer Butler's Ancient Philosophy, Porter's Human Intellect, Bain's Senses and Intellect, Bain's Emotions and Will, are used for collateral reading.

DEPARTMENT OF MATHEMATICS.

FRESHMAN.—Text-Books: Wentworth's Complete Algebra, Wentworth's Plane and Solid Geometry. A thorough knowledge of Arithmetic and of Algebra through equations of the second degree is required for admission into this class. The first five months of the session is

occupied in completing the Algebra, beginning with chapter XVI. The remainder of the session is devoted to the study of the first five books of Geometry.

SOPHOMORE.—Text-Books: Wentworth's Plane and Solid Geometry, Wentworth's Plane Trigonometry and Surveying, Peck's Analytical Geometry. The first five months are occupied in completing Geometry, beginning with book VI, and in the study of Plane Trigonometry and Surveying. The second term is devoted to the study of Analytical Geometry and to a review of the first term's work.

Abundant facilities for field practice, with a full set of surveyor's instruments, are furnished to all who desire to learn the practice as well as the theory of surveying. Among our instruments is one of Heller & Brightly's celebrated combined transits.

JUNIOR.—Text-Books: Peck's Mechanics, Peck's Integral and Differential Calculus, Wentworth's Spherical Trigonometry, Snell's Astronomy. Mechanics (not required in the A. B. course) and Calculus occupy the first five months, being recited at separate hours. A full year in Practical Chemistry may be substituted for Calculus. Spherical Trigonometry and Astronomy occupy the last term.

Courses in Experimental General Physics and Elementary and Applied Chemistry.

FRESHMAN CLASS.

First Term.—Daily lecture in General Physics, illustrated by experiments by the Professor; the daily lecture being preceded by a review and recitation of the subject of the preceding day's lecture and illustrations. Especial attention is given to the many practical applications of this branch of Science, to Vegetable and Animal Physiology, Physical Geography, Agriculture and the useful arts generally.

Second Term.—The same method of instruction is pursued in the course on General Experimental Chemistry. Its applications to Physiology, Animal and Vegetable, to Medicine, Agriculture, and to the useful arts generally, or Chemical Technology, are carefully illustrated, and such an introduction to the Chemistry of the Carbon Compound, or what is called Organic Chemistry, is given as to include the history of the more important of these compounds.

JUNIOR CLASS.

Both Terms.—The same course of instruction in Experimental General Physics and Chemistry are continued.

Practical Chemistry

Under the immediate superintendance of the Assistant Professor.

First Term.—Will be devoted to QUALITATIVE CHEMICAL ANALYSIS. Each student will be furnished with his special apparatus, re-agents and table space.

Second Term.—This, when the student is sufficiently advanced, is devoted to QUANTITATIVE CHEMICAL ANALYSIS. Various Chemical Compounds are placed in the hands of the student for complete or Quantitative Analysis. Each student in Practical Chemistry is required to pay in advance the small fee of five dollars, to cover the expense of the re-agents, etc., which he uses; he will also be charged with the cost of the apparatus he may break or injure.

TEXT-BOOKS REQUIRED.

Elements of Natural Philosophy, by Sidney A. Norton, A. M., Elementary Manual of Chemistry, abridged from Eliot and Storer's Manual, by Wm. Ripley Nichols. Manual of Qualitative Chemical Analysis, by Chas. W. Eliot and F. H. Storer, revised by Wm. R. Nichols. Quantitative Chemical Analysis, Fresenius and others.

DEPARTMENT OF NATURAL HISTORY.

The aim in this department is to make use of such methods as will bring the student as close as is practicable to the sources of knowledge. A good beginning has been made in securing the necessary appliances to this end. A working fund is provided to meet immediate necessities for apparatus, illustrative materials and for special treatises. In this way it may be hoped that the requirements for thorough instruction may be met and the facilities for teaching steadily increased.

Text-books are used in the regular classes as a basis for the work required; but works of reference and standard treatises are provided in a special library for the department. The advanced and special studies are conducted more nearly on the plan of field and laboratory investigation. Only students taking a special interest in Natural History are expected to pursue these studies, and from them an assistant for the department is selected each year.

The branches which are taught in this department are as follows:

Physical Geography; text-book. (Maury.) Five months, first term.

Anatomy, Physiology and Hygiene; text-book. (Huxley & Yeoman) Lectures and illustrations by anatomical preparation, lantern demonstrations, etc. Five months, first term.

Plant Histology and Physiology; text-book. (Goodale.) And laboratory work. Five months, second term.

Microscopy. The history, structure and use of the Microscope, lectures and practical work. Five months. Microscopy is at present taught in connection with Histology.

Zoology; text-book. (Packard.) Lectures and laboratory work. Five months, second term.

Geology; text-book. (Dana.) Lectures and studies of the Geology of the region about Lexington, Frankfort and the Kentucky river. Five months, first term.

Comparative Zoology and Comparative Anatomy. Laboratory work through the year.

Palæontology. Special studies of Historical Geology and Palæontology with the aid of library and collections.

Drawing. The elements of drawing are taught more especially as a requisite for successful study in this department; the cultivation of the powers of observation, and the acquirement of facility in the representation of natural forms. Supervision is also volunteered to studies of a more general character.

DEPARTMENT OF MODERN LANGUAGES.

In the Department of Modern Languages it is the chief aim to impart a fair, scientific knowledge of the language taught, together with such oral practice as to enable the student, at the end of the two years' study, to express himself with some facility, read easy German or French at sight, and at the same time have a sound foundation laid for future more thorough study, if his tastes and pursuits lead him to it. A correct pronunciation and familiarity with general rather than special rules of grammar are chiefly insisted on, leaving it for a later period to master the more intricate difficulties of the language to be acquired.

German.

FIRST YEAR, *First Session*.—Ahn-Henn's First Book in German and part of the Second. Ahn-Henn's First German Reader. Daily exercises. Writing from dictation. Reciting from memory.

Second Session.—Ahn-Henn's Second Book in German (completed). Easy Reading. Grimm's *Kinder und Hausmärchen* (von der Smissen). Composition and Conversation.

SECOND YEAR, *First Session*.—Ahn-Henn's Third Book in German. Boisen's Preparatory Book of German Prose. One of the easier of Schiller's Dramas. Composition.

Second Session.—Ahn-Henn's Fourth Book in German. Schiller's "Wallenstein," Goethe's "Hermann und Dorothea," Lessing's "Minna von Barnhelm." Conant's Primer of German Literature.

French.

FIRST YEAR, *First Session*.—Ahn-Henn's Method of the French Language. Daily Exercises, using the vocabulary acquired in conversation.

Second Session.—Ahn-Henn's French Method (completed). First French Reader. Lafontaine's Fables. Conversation.

SECOND YEAR, *First Session*.—Keetel's Collegiate French Grammar. Knapp's French Readings (selections). One or two modern plays (*Le Théâtre français du XIXième siècle*, Hachette).

Second Session.—Keetel's Collegiate French Grammar (completed). Corneille, "Cinna;" Racine, "Athalie;" V. Hugo, "Ruy-Blas" and "Ernani." Composition. Reading at sight. Saintsbury's Primer of French Literature.

For the third year (optional, not required for graduation) no specified course has been laid down, as the work to be carried on depends in a great measure on the proficiency of the students in other branches of study. The course, then, will be something like the following, subject to modification, according to the capacity of the students: •

German.

THIRD YEAR.—Klemm's *Geschichte der Deutschen Litteratur*. (Extracts). Sander's *Hauptschwierigkeiten der Deutschen Sprache*. H. B. Hodges, a Course in Scientific German. Goethe's "Iphigenie" and extracts from "Faust" and "Wilhelm Meister." Schiller's Historical Writings. G. Freytag, "Die Ahnen;" V. Scheffel, "Ekkehard." Sander's Wörterbuch.

French.

THIRD YEAR.—Grammaire Française basée sur le Latin, C. Ploetz. Manuel de Littérature Française (with copious extracts), C. Ploetz. Brachet, a Historical Grammar of the French Tongue. Corneille, "Cid;" Molière, "Les Femmes Savantes" and "Tartuffe;" Racine, "Andromaque," "Iphigénie en Aulide;" Montesquieu, "Lettres Persanes;" J. J. Rousseau, "Emile;" Littré (Beaujean), Dictionnaire de la Langue Française.

COURSE IN AGRICULTURE.**Agriculture.**

Selection of farms for special purposes. Division into fields for different crops. How manures and composts are prepared and kept. Seeding for hay, grain and root crops. Selection of cows and other stock for farm purposes, with general directions for breeding the same. Farm accounts.

Horticulture.

Preparation of soils for horticultural and floricultural purposes. Management of plants, including methods of propagation. Horticultural implements. Methods of obtaining new varieties of vegetables, fruits and flowers. Arrangement and care of flower and kitchen gardens, nurseries and orchards. The construction and care of hot-beds and green-houses. Principles of landscape gardening. Practical green-house work by the student supplements the lectures.

Elementary Botany.

I. Outlines of structural botany and the rudiments of vegetable anatomy and physiology.

II. Systematic botany; general classification of plants with particular study of the more important natural orders of phænogams. Practice in analysis and field study of the local flora.

Elementary Zoology.

Distinctions between animate and inanimate objects; life distinctions between plants and animals; definition of general terms; development; basis of classification; characters of the various classes with a more detailed account of the porifera; actenozoa cestoda, with a description of the life history of the common tape-worm and of the form causing "staggers" in sheep; nematoda, including thread-worms, trichina, wheat anguillula, cause of gapes in chickens, etc.; lamellibranchiates; gasteropoda; cephalopoda; arthropoda; vertebrates.

Agricultural Chemistry.

Soil, air and water in their relations to the plant. The food of plants; manures, general and special, chemical principles of tillage, irrigation, systems of rotation and of special crops and farms. The

food of animals; simple and mixed rations. Discussion of the values of different kinds of fodders, of the means of determining fodder values, and of the methods of using fodders to the best advantage.

Organic Chemistry.

Constitution of organic compounds; hydrocarbon; alcohols; aldehydes, acids and their derivatives; constitution of oils and fats, sugars, starch, cellulose, albumenoids, essential oils, alkaloids, etc.

Veterinary Science.

The theory and practice of veterinary medicine and surgery. Instruction by lectures and, when practicable, by clinics.

Instruction is given by lectures and recitations and by practical exercises in the laboratories, green-houses and fields, every student being taught to make experiments, study specimens and observe for himself. The aim is to give the student a just idea of the principles upon which the arts of agriculture and horticulture depend, to teach him how to make intelligent use of the scientific literature which relates to these arts, and to enable him to put a proper estimate upon those kinds of evidence which are obtained by experiments and by the observation of natural objects.

Before a student can enter the classes in organic and agricultural chemistry it will be necessary for him to pass in Dr. Peter's Elementary Chemistry.

COURSE IN POLITICAL ECONOMY AND MORAL PHILOSOPHY.

Fawcett's Manual; distinction between money and wealth; elements of production; productive and unproductive labor; English view; French view; productive and unproductive consumption; capital, its origin; the criticism of its being the result of saving examined; propositions concerning capital; effect upon Capital by governments becoming an agent of production; the Ricardian theory of rent considered in reference to American land tenure; the law of wages. Is there a wage fund? Views of Thornton and Francis A. Walker against such theory, and those of Catone and of Jno. S. Mill, in his earlier writings, in favor of it; principle determining profit; remedies for low wages, strikes; nationalization of the land; history of the schemes; Communism in France, in the United States; Socialism in Germany, in England, in America. Is competition an evil? Money, its uses; the Ricardian law of international trade; obstructive legislation; protection and Free Trade; relation of Political Economy to legislation, to phil-

anthropy, to morals; method of Political Economy, is it inductive or deductive? Schools of; Classical and Bureaucratic; former shown to be more in harmony with the spirit and aims of American institutions.

Moral Philosophy.

Text book: Janet's Theory of Morals, with reference to Elements of Morality by the same author. Moral Philosophy shown to be a derived science, and hence its underlying principles traced either to Psychology or to Metaphysics; the supreme principle of the good investigated; examination of the various principles brought forward as the true ground of right conduct; the different schools of Moral Philosophy, Ancient and Modern, passed in review. In connection with this last topic, the student to read Mackintosh's History of the Progress of Moral Philosophy and Lecky's Introduction to the History of European Morals. Practically; Moral Philosophy considered in its relation to the individual, to society, to law, to government; Moral Philosophy shown to be a progressive science in its development, application and influence; Buckle's view examined.

THE NORMAL SCHOOL, ITS WORK AND AIM.

The question is often asked what is a Normal School? A Normal School is a training school for teachers, that is, a school in which the pupils are trained for the more efficient discharge of their professional duties, when they shall in turn take their place in the school-room. The Normal School has for its object more especially, the preparation of teachers for the graded schools—the Primary, Intermediate and Grammar, with the High School at their head—of our cities and towns, besides for the thousands of district schools scattered throughout the Commonwealth. The training of such a school is—

First.—Academic. The pupil is required to know thoroughly and scientifically the subjects, a knowledge of which he is expected to impart to others. These subjects, Arithmetic, Grammar, Geography, History, etc., are embraced in the curriculum appointed by law to be taught in the common schools of the State. Other subjects, the Languages, ancient and modern, the Mathematics up to a point within the limit demanded by practical life, the Physical Sciences, Psychology, etc., are included in a higher scheme of study, and are intended to qualify the young man for a more advanced place, as well as to satisfy the wants of the High School and the Academy.

Secondly.—But a knowledge of these matters only, however comprehensive and accurate it may be, falls short of what the position of the teacher calls for. The teacher should be made as thoroughly and profoundly acquainted with the child to whom this knowledge is to be communicated, as his talents and opportunities will permit. What Anatomy and Physiology are to the art of the physician, Psychology and Ethics are to the art of the teacher. A knowledge of a healthy Physiology must, of necessity, precede any intelligent treatment of a diseased Physiology, and just so an intimate knowledge of the mental and moral construction of the child must be antecedent to any competent dealing on the part of the teacher with his pupil.

Thirdly.—Derived from an analysis of the mental and moral powers, and from Logic, are these principles which underlie the teacher's art. The teacher's skill is best shown in the proper adjustment of the subjects taught to the mind instructed. He should be familiar with the best methods of bringing knowledge to the intelligent apprehension of the child, and, in order to do this, he should familiarize himself with the manner of the growth of the mental powers, perception, memory, imagination, the faculty of thought, and should know, too, what studies are best suited to secure their easy, natural and harmonious development. The teacher who proceeds after this manner may be said to employ a good method, not tentative merely, for it has the warrant of common sense, and has its foundation laid in something like scientific certainty. And

Fourthly.—In addition to method may be noticed the art of school keeping. The young and inexperienced teacher needs, on beginning the performance of his untried task, to have some notions of school management, government and discipline. The school is a community and, like any other community wisely controlled, must have on the part of its rulers tact, prudence and decision. The Normal School is the place where these virtues, together with zeal in the cause of popular education and a love for his profession, should be implanted in the mind and heart of the young teacher, if he should be a power when he himself comes to direct the lives and mould the characters of others.

Fifthly.—Teaching exercises take a prominent place among the duties of the Normal School. The pupil-teacher ought himself to teach others—in the absence of a model school, his fellow pupils—the lessons or parts of lessons he has himself been taught.

Sixthly.—Further, the Normal School has or ought to have for its task—so far as the individual teacher is concerned, its supreme task—the development of the future teacher of force—moral force. Its ulti-

mate aim should be to make educators, not teachers simply. He is the educator, whose influence, like Arnold's, goes with his pupils beyond the limits of the school-room into the active pursuits of life; with Clough and Tom Hughes, into literature; with Dean Stanley, into the church; with Lord Napier, on the victorious fields of battle. And, finally, the Normal School should furnish social training to the teacher, who shall, in the full sense, be qualified to make the common school what it is intended to be, a preparation for citizenship; and right here I would rest the chief value of the Normal School to the State; and right here I would rest the supreme value of the common school to the State as well. Briefly, then, to sum up the functions of the Normal School, it has for its purpose—first, to give the pupil an acquaintance with the subjects taught in the common schools; second, a knowledge of other branches fitting him for a higher and more responsible place in his profession; third, the design is to make him scientifically familiar with the person he is to teach—that is, to familiarize him with Psychological and Ethical laws; fourth, he is shown how to apply the principles thence derived to the art of teaching; fifth, school management, government and discipline are made a special object of attention; sixth, practical teaching is held obligatory, since the pupil-teacher must impart to others, either in the model school or to his fellows, the lessons he himself has been taught; seventh, the end aimed at is the evolution of character—moral character—and hence, to form the educator rather than the teacher; eighth, to educate the coming teacher in the spirit of American life, to give him a knowledge of, to imbue him with a love for, his country, its history, its traditions, its institutions, that he may the better be able to fashion the youths committed to his care for wise, honest and intelligent citizenship.

CONDITIONS OF ADMISSION.

Applicants for admission into the Freshman Class in any of the courses of study, Agricultural, Scientific, Engineering or Classical, will be required to pass an examination on the Preparatory Course preliminary to each of these courses as found on page 17.

New students must present themselves for examination and matriculation on the Monday preceding the beginning of the fall term. No one is admitted to tuition until *all his fees are paid*.

Applicants for admission into the Normal School or Commercial Department must be prepared to stand an examination in English Grammar, Arithmetic and Geography. *Normal students who receive free tuition will be required, on entering, to sign an obligation to teach within the limits of Kentucky for a period as long as that during which they receive free tuition.*

Degrees.

The degrees conferred are Bachelor of Science (B. S.), Bachelor of Arts (B. A.), Civil Engineer (C. E.), Master of Science (M. S.), Master of Arts (M. A.)

For the degrees of B. S., B. A. and C. E. an actual membership of at least one year in this College is required, and a satisfactory examination on the *entire course* of scientific or classical study.

For the degrees of M. S. and M. A. a satisfactory examination is required on a course of post-graduate studies prescribed by the Faculty, and covering a period of two years.

To those who do not complete the entire Scientific, Classical Course or Engineering Course, but only certain parts thereof, certificates of proficiency may be given for those departments of study completed.

No degrees are conferred upon graduates in the Normal School or Commercial Department; but diplomas are given to those who complete the course of study embraced therein.

Fees.

Tuition for the year	\$15 00
Matriculation	5 00
Total fees	<u>\$20 00</u>

Those who occupy rooms in the dormitory pay \$5 each (yearly) for the use of an unfurnished room. A standing deposit of \$5 is required from each student, which deposit is refunded when his connection with the College is terminated, less the amount which may be assessed against him for damages done to the buildings, furniture or premises. All damages, injuries, defacements, etc., which rooms in the dormitory sustain during occupancy, will be charged to the occupants thereof. All injuries, damages, defacements, etc., which the halls and dining-room sustain, will, unless specifically traced, be charged to the occupants of the respective sections collectively.

Location.

The Agricultural and Mechanical College of Kentucky is established on the City Park grounds of the city of Lexington, given to the

Commonwealth for this purpose. The site is elevated, and commands a good view of the city and surrounding country. A new College building has been erected, containing commodious chapel, society rooms, lecture and recitation rooms sufficient for the accommodation of 600 students. A large and well-ventilated dormitory has also been built, with rooms for ninety students, for the use of the appointees sent by the Legislative Representative Districts of the State to the *agricultural, scientific or classical* departments of the College, and containing suitable dining-room, kitchen, matron's and servants' rooms. The natural conformation of the ground, and an abundant supply of water from Maxwell Spring, render the construction of an artificial lake, with boating course a quarter of a mile in length, comparatively easy, thus providing for a beautiful sheet of water to add to the attractions of the landscape.

Lexington is now the most important railroad center in Kentucky, being in immediate communication with Louisville, Cincinnati, Maysville, Chattanooga, and with more than seventy counties in the Commonwealth. The long established reputation of the city for refinement and culture renders it attractive as a seat of learning, and the large body of fertile country adjacent, known as the "Blue-Grass Region," with its splendid stock farms, affords unsurpassed advantages to the student of agriculture who desires to make himself familiar with the best breeds of horses, cattle, sheep and swine in America.

Boarding.

For the accommodation of students sent by the Board of Examiners appointed by the Court of Claims, as beneficiaries of the Legislative Representative Districts of the State, rooms for ninety students are provided in the dormitory. To these good substantial board is furnished at \$2.25 per week, payable in advance. Students lodging in the dormitory furnish their own rooms. Good boarding, with fuel, lights and furnished room, can be obtained in private families at rates varying from \$3.50 to \$5 per week.

The students who board in the dormitory are for business purposes organized at the beginning of the collegiate year under a Chairman and Secretary of their own choice, whose successors are elected on the last Tuesday of each month, and who serve for one month. At the business meeting held on Tuesday night of each week, the weekly dues, \$2.25, are paid. The Boarding Department is managed by a Board consisting of the President of the College, the Treasurer, who is a member of the Faculty and into whose hands all the weekly dues are placed when collected, the Matron, and the Chairman and Secretary selected

by the students. It will thus be seen that the Boarding Department has no official connection with the College authorities. The College, as such, does not board the students, and is in no sense responsible for any debts created by the Boarding Department. Two members of the Faculty, in their individual capacity, assist in the management of its funds.

Expenses.

The necessary expenses of a student while at College need not exceed the following estimates. As a rule, the less pocket money allowed by parents or guardians the better it is for the pupil. When supplies are kept short, the opportunity for contracting vicious habits is correspondingly diminished. Students should not be allowed by their parents to create any debts. All moneys intended for the use of the students should be deposited with a member of the Faculty.

For county appointees occupying a room in the dormitory and boarding in the common mess, the necessary expenses are as follows:

Tuition	\$ 0 00
Room fee	5 00
Matriculation	5 00
Cost of furnishing room, about	10 00
Fuel and gas	8 00
Washing	10 00
Board, 38 weeks, at \$2.25 per week	85 50
Books, about	10 00
Total	<u>\$133 50</u>

Each room must be provided by the occupants thereof *at their own expense* with neat and comfortable bed and bedding, three comforters or blankets, one pillow, three pillow slips, four sheets, table, wash-stand, looking-glass, chairs, bowl and pitcher, water and slop buckets, blacking brush, hair brush, clothes broom or brush; some of these articles can be brought from home by the student.

The furniture bought at the outset can be sold at the end of the collegiate year or retained for further use, at the option of the owner.

For students who are not supplied with appointments from the Legislative Representative Districts of the Commonwealth, and who board in private families, the necessary expenses will be as follows:

Tuition fee	\$ 15 00
Matriculation fee	5 00
Board and lodging, 38 weeks, at \$3.50 to \$5 per week	133 00 to \$190 00
Washing	10 00
Books and stationery	10 00
Total	<u>\$173 00 to \$240 00</u>

Beneficiaries.

Each Legislative Representative District is allowed to send, on competitive examination, *one properly prepared student* each year, between the ages of twelve and twenty-five, to this College, free of tuition charge. Said students shall be selected as follows: First. The trustees and teacher of each common school taught within said Representative District shall select and send before an Examining Board appointed by the Court of Claims *one* pupil in the school managed and taught by them. Second. Any other person resident within the Representative District, and within the required limits as to age, may present himself to the Examining Board appointed by the Court of Claims as a candidate for selection; and from these persons so appearing, viz, from the pupils sent before the said Examining Board by the trustees and teachers of common schools, and from such persons within the specified age as present themselves, the Examining Board appointed by the Court of Claims shall select one student, and properly certify to his selection, who shall be entitled to remain at the College four years, or until the course of study for which he matriculates shall have been completed. Preference in such selection and appointment shall be given to energetic, moral young men, whose means are not large, to aid whom in obtaining a good education this provision is specially intended. Properly prepared students, under the meaning of the acts of the Legislature of which the foregoing is a summary, are those who can pass a satisfactory examination in Spelling, Reading, Writing, Arithmetic as far as percentage, Geography and English Grammar, and who are between the ages of twelve and twenty-five years.

All teachers or persons preparing to teach, male or female, are admitted free of tuition charge for one year, at the rate of not more than four, at the discretion of the Board of Trustees, for each Legislative Representative District. All the classes in the College are open, without extra fees, to students who matriculate in the Normal Department.

Compensated and Uncompensated Labor.

The work necessary for carrying on the Agricultural and Horticultural operations of the College is done by the students in those departments, and is paid for at rates varying from five to eight cents per hour. Its design is two fold: to put in practice the instruction received in the class-room, and to assist indigent students. The experience of this College is that of Agricultural Colleges generally—that compensated labor is not remunerative to the College.

The College holds itself under no obligation to furnish compensated labor to any students except those who enter as county appointees.

Students are paid weekly for the service rendered, and apply the money as they see proper.

No student, however, should come to this College expecting to maintain himself exclusively by compensated labor. At least seventy-five dollars per annum, exclusive of his earnings while here, should be at the command of every student who wishes to avail himself of the advantages of the compensated labor system.

No compensation is given to students in the Department of Practical Mechanics, inasmuch as no pecuniary returns are possible to the College from this Department as at present organized.

All students are liable to be called upon for occasional work upon the grounds belonging to the College, and to such work no compensation is attached.

Preparatory Department.

For the benefit of those who are inadequately prepared to enter the regular College classes, a Preparatory Department has been organized, under the charge of a Principal, assisted by a competent staff of assistants, which will provide the necessary elementary instruction. The conditions of admission into the Preparatory Department are a *good* knowledge of Arithmetic as far as percentage, English Grammar and Geography.

Certificates of Character.

All applicants for admission into any class in the College, or Preparatory Department, must bring satisfactory testimonials of good moral character.

The following paragraphs selected from the published "Regulations" are added for the benefit of intending matriculates:

Admission of Students.

24. By the acts of the Legislature each Legislative Representative District is entitled to send, on competitive examination, one properly prepared student each year, between the ages of twelve and twenty-five, to the College, free of tuition. The candidate presenting himself at the College for admission under this authority shall deliver to the President a certificate from his district Board of Examination setting forth "that the Board was duly appointed by 'the Court of Claims,' as prescribed in the charter of the College, approved March 4, 1880;

that he is between the ages of twelve and twenty-five, and that he has been selected on competitive examination from all of the students (of whom there shall not be more than one from each common school) sent before the Board by the trustees and teachers of the several common schools in the district." The candidate shall then be examined by the Faculty, or a committee appointed by it, and must pass a satisfactory examination in Spelling, Reading, Writing, Arithmetic as far as percentage, English Grammar and Geography, in order to be admitted as a "*properly prepared*" student within the meaning of the act of the Legislature.

25. The charter of the College also provides "that teachers or persons preparing to teach may be admitted free of tuition charge for one year, at the rate of not more than four, at the discretion of the Board of Trustees, for each Legislative Representative District." A person desiring admission under this provision must present to the President a certificate from the School Commissioner of his county, or from some other satisfactory source, setting forth "that the applicant is a citizen of the county from which admission is claimed, and that he is a teacher or is preparing to teach."

26. The charter also provides "that other students, without regard to place of residence or birth, may also be admitted to the College on the payment of the fees prescribed for them by the Board of Trustees or the Academic Board."

29. No applicants will be admitted who are under fourteen years of age, excepting those who, by the charter of the College, are admitted to free tuition at an earlier age.

30. *Every student on admission, and before he is allowed to recite, shall present to the President a certificate from the Treasurer showing that he has paid the sum required in advance on account of tuition or other items.*

31. As a further condition of admission, the applicant must answer affirmatively the following questions, viz: Have you read and understood the regulations governing this Institution? Do you acknowledge your obligation to obey them? He must also subscribe the following form in a book kept for that purpose by the faculty: "We, whose names are hereunto subscribed, do declare that we acquiesce in the regulations of the Agricultural and Mechanical College of Kentucky, and acknowledge our obligation to obey them."

32. Having complied with the prescribed conditions, the student shall be registered on the College roll. He shall be considered as a member of the College, and amenable to its regulations during vacations as well as during the sessions, until he shall have been graduated or formally discharged, honorably or otherwise. In the case of an

honorable discharge, he shall be entitled to a certificate in the following words:

“I certify that A B was honorably discharged from the Agricultural and Mechanical College of Kentucky on the — day of —.

“—————,
Secretary (or Clerk) of the Faculty.”

33. No honorable discharge or leave of absence will be granted to a student within six weeks of the termination of the collegiate year, excepting in cases of great emergency.

34. Every student, on entering the Institution, shall be furnished with a copy of its regulations, and no plea of ignorance shall be admissible in extenuation of any failure to comply with their requirements.

Practical Instruction and Training.

58. In addition to the theoretical study required of every male student in mechanics, agriculture and military arts, every male student who accepts the privilege of free tuition, and such others as may elect, shall pursue a course of practical instruction in mechanics and agriculture. • For labor performed in that way, that is valuable otherwise than as a means of instruction, a reasonable compensation will be allowed, the proceeds going, if necessary, first to supply the student with the prescribed military uniform, and after that, toward the payment of his rent and board account.

59. For military instruction and training, there will be a drill or other military exercise every day, Saturdays and Sundays excepted, and lasting one hour, unless the President may dispense with it. The drill will be conducted in the academic building when the weather or condition of the ground will not permit it out of doors. Special military exercises may be ordered by the President at any time.

64. Besides the means above provided for the repression of neglect and misconduct, a demerit system shall be enforced. The Commandant shall keep a register of all delinquencies for which the students are reported, and shall charge against each offense, not satisfactorily explained, a number of demerits according to the following scale:

An offense of the first class will count	5
An offense of the second class will count	4
An offense of the third class will count	3
An offense of the fourth class will count	2
An offense of the fifth class will count	1

In the first year of the student at the College, offenses will count one-third less than in the above scale. The Faculty will classify to suit this scale the offenses ordinarily committed by students. At the end of every month for which the number of demerits recorded against any student is less than 10 the difference between 10 and the number recorded shall be deducted from his aggregate record of demerit.

65. Any student whose record of demerit at the close of a session shall amount to 100 for that session, shall, *ipso facto*, be dismissed.

Discipline and Police.

68. When a student has been reported for any grave misdemeanor requiring severe punishment, the Commandant shall order his arrest, either directly or through the Adjutant.

69. In case of violent disturbance, open contumacy, or other outrageous conduct on the part of a student, the Officer of the Day, or any member of the Faculty present, may place the offender in arrest, and order him to his quarters. In all such cases the arrest must be promptly reported to the Commandant, and by him to the President.

70. A student placed in arrest is in duty bound to obey the orders of the officer making the arrest, and the conditions attached to it, on pain of dismissal. Any student guilty of breach of arrest shall be dismissed.

71. No student in arrest is allowed to exercise command, but shall confine himself to his quarters until released, unless otherwise specially ordered, except when required to be absent for the performance of some of his academic or military duties, and except on a necessary occasion, and for meals.

72. No student in arrest will make a visit to the commanding or other officer unless sent for. In case of business he shall make known his object in writing, and he shall not apply for the usual indulgences granted to the students.

73. No student will be released from arrest except by the President or by the Commandant.

74. A student placed in confinement for punishment shall be subject to the same regulations as a student in arrest; and a breach of confinement, or a failure to perform any extra duty awarded as a punishment, shall be considered an offense of the gravest nature, and treated accordingly.

75. All deliberations or discussions among students having the object of conveying praise or censure, or any mark of approbation or disapprobation toward the College authorities, are forbidden.

76. Any student who shall disobey a lawful command of the President or of any Professor, Instructor, or other superior officer, or behave himself in a refractory or disrespectful manner toward either of them, shall be dismissed, or otherwise less severely punished, according to the nature of his offense.

77. No cadet shall bring any spirituous or intoxicating liquor, or cause the same to be brought, within or near the College limits, or have the same in his room or possession, upon pain of being dismissed, or less severely punished as the Faculty may direct.

78. Any student convicted of visiting a drinking saloon, or a gambling or other disreputable house, or of being intoxicated, or of gambling at cards or other game of chance, or who shall make, cause or procure to be made, a false official report or statement in regard to a matter of College duty or government, shall be dismissed, or less severely punished according to the gravity of his offense.

79. No student shall play at cards, or any other game of chance, within the College limits, or bring or cause to be brought within the limits, or have in his room, cards or other articles used in games of chance. All games and amusements of every kind are forbidden during study hours.

80. All conspiracies and combinations of students, with a view of violating or evading the regulations of the College, are prohibited on pain of dismissal; and any interference of one or more students with another student, or with a candidate for admission, in the nature of "hazing," shall be punished as the Faculty may direct. And no student, whether resident in the dormitory or elsewhere, shall be a party to any combination, or sign any petition, remonstrance or protest, for any purpose relating to the management, government or conduct of any department or interest connected with the College or dormitory, or under its supervision and control.

81. The use of tobacco for smoking or chewing on any duty, or in the College building, dormitories or dining-rooms, and all profanity and obscenity, are forbidden.

82. Any student may be removed from the dormitory and the mess when, in the judgment of the President and Commandant, his removal is deemed expedient in the interest of discipline and morality.

83. No student shall cook, prepare food, or give any entertainment in his room, or elsewhere within the College limits, without permission from the Commandant.

100. All permits to be absent from any duty, or from quarters dur-

ing study hours, must have the approval of the President. All other permits for absence may be granted by the Commandant of the Corps; and every permit for a brief absence will be deposited with the Officer of the Day, to whom the student will invariably report at the expiration of his permit, whether it has been used or not. No permit will bear the name of more than one student.

101. If the cadet be in arrest or in confinement, or confined to less than the usual limits, or if his name be on the *sick report*, the fact must be stated in the permit.

102. All applications by students for leave of absence must be made in writing, addressed to the Commandant of the Corps, and specify the place to which the applicant wishes to go. If the application is for a longer period than the Commandant is authorized to grant, he will forward it to the President.

103. Every student who overstays his leave of absence, must produce satisfactory evidence of his having been detained by sickness or some other unavoidable cause.

104. Every student, on returning from leave of absence, will immediately report, in person, to the President.

105. A leave of absence shall not be construed to grant the student any indulgence at the College, or to absolve him from the observance of regulations.

106. Applications to be excused from any duty must be made in ample time before the beginning of the duty.

107. Except in cases of sickness, no officer of the College will absent himself from any duty without the permission of the President, and with the assent of his immediate superior.

123. No student shall be absent from his room between taps and reveille without permission from the Commandant.

124. No cadet shall visit the room of another during study hours.

125. No student shall throw any thing from the windows or doors, nor any missile in the vicinity of the public buildings.

126. No student shall play upon any musical instrument in study hours, or otherwise disturb the quiet of the quarters.

127. Students shall walk the halls and pass up and down stairs in study hours in a soldier-like and orderly manner. Loud talking or laughing, scuffling, and all other unnecessary noise in the buildings, are prohibited at all times.

128. No student shall post any placard or notice upon any of the College buildings, fences, or other improvements or places, or affix to

the walls of his room any map, picture, or piece of written or printed paper, without permission from the Commandant.

129. Students are forbidden to take or have in their quarters any newspapers or other periodical publications without special permission from the President. They are also forbidden to keep in their rooms any books except text-books, without special permission from the President.

130. No student shall mark, cut, or in any manner deface or injure the buildings or other property of the College.

171. Any student having an explanation to offer for an offense for which he has been reported, will express it in writing according to the prescribed form, and present it to the Commandant of the Corps within forty-eight hours after its publication. If satisfactory, the Commandant will erase the report; if not satisfactory, he may refer the explanation to the reporting officer, who shall indorse upon it such remarks as may be pertinent, and return it to the Commandant.

172. No explanation will be received after the lapse of forty-eight hours, unless sickness, absence, or some other unavoidable cause, which must be fully stated, has prevented its presentation within the prescribed time, in which case it must be presented as soon as possible.

173. Whenever a student is absent from any duty, or absent from quarters after taps, or at any other time longer than thirty minutes, he will be punished as if beyond the College limits, unless his absence is satisfactorily accounted for.

174. Explanations will include only such statements of fact and of the intentions of the student as may be necessary for a correct understanding of the case, and will not be made the medium of complaint or criticism, or of irrelevant remarks.

175. Appeals to the President for the reconsideration of reports, will not be entertained after the expiration of ten days from the time they were recorded, except in cases where it was impracticable to apply for a reconsideration within that time.

176. No student shall address an officer or cadet who has reported him for an offense on the subject of such report, unless specially permitted, in writing, by the Commandant of the Corps; and no officer or cadet, having made such report against a student, shall hold any conversation with him concerning it, unless referred to with the proper permission.

= Calendar. =

First term begins	September 8, 1886.
Thanksgiving	Thursday, November 25, 1886.
Christmas holidays begin	Wednesday, December 22, 1886.
Christmas holidays close	Monday, January 3, 1887.
Intermediate examinations	January 17-21, 1887.
Second term begins	January 24, 1887.
Washington's Birthday celebrated	February 22, 1887.
Final examinations	May 16-31, 1887.
Union Literary Society Exhibition	May 27, 1887.
Philosophian Society Exhibition	May 30, 1887.
Board of Trustees meet	May 31, 1887.
Commencement	Thursday, June 2, 1887.

APPENDIX.

APPENDIX

APPENDIX.

STATE COLLEGE OF KENTUCKY, PRESIDENT'S ROOM. }
LEXINGTON, KY., December 4, 1885. }

To the Farmers of Kentucky:

In addition to the regular course of study, "embracing those branches of learning related to Agriculture and the Mechanic Arts," as required by the act of Congress, establishing Agricultural Colleges, approved July 2, 1862, the State College of Kentucky has established an EXPERIMENTAL AGRICULTURAL STATION, in close relationship with the Bureau of Agriculture at Washington, and has appointed as Director thereof Professor M. A. Scovell, late Superintendent of the United States Experimental Station at Ottawa, Kansas.

The officers of the Station are the following-named gentlemen, viz:

PROF. M. A. SCOVELL, Director.

PROF. ROBT. PETER, General Chemistry.

PROF. A. R. CRANDALL, Botany, Zoology and Entomology.

PROF. A. E. MENKE, Agriculture and Organic Chemistry and Veterinary Science.

In the Experimental Station experimental work mainly will be done. The Station is now prepared to analyze and test fertilizers, milks, waters, foods for stock, soils, etc., for the farmers of Kentucky *free of charge*.

The Director of the Station proposes to establish a Bureau of Correspondence and invites the farmers throughout the State to communicate with him in regard to all questions and problems relating to agriculture, stock, fertilizers, insects affecting vegetation, seeds, relative values of foods for nutritions, which interest the practical agriculturist.

Bulletins will be issued from time to time in *language which the farmers can understand*, giving the results obtained by experiment at the Station. These will be distributed gratuitously. All interested are invited to send to the Director the names of leading farmers in each county, to whom these Bulletins may be sent.

All communications relating to the work of the Station will be addressed to Prof. M. A. Scovell, Director Experimental Station, State College, Lexington, Ky.

W. B. KINKEAD,

Chairman of the Executive Committee of the A. & M. College.

JAS. K. PATTERSON,

President.

Kentucky Agricultural Experiment Station.

CIRCULAR NO. 2.

THE NEW FERTILIZER LAW.

The following is a copy of an act recently passed by the General Assembly of the Commonwealth of Kentucky. Persons selling fertilizers in this State will take notice.

M. A. SCOVELL,

Director Kentucky Agricultural Experiment Station.

APRIL 26, 1886.

CHAPTER 638.

AN ACT to regulate the sale of Fertilizers in this Commonwealth, and to protect the Agriculturist in the purchase and use of same.

§ 1. *Be it enacted by the General Assembly of the Commonwealth of Kentucky,* That on or before the first day of May in each year, before any person or company, shall sell, offer or expose for sale, in this State, any commercial fertilizer whose retail price is more than ten dollars per ton, said person or company shall furnish to the Director of the Agricultural Experiment Station, inaugurated by the Agricultural and Mechanical College of Kentucky (which Station is hereby recognized as the "Kentucky Agricultural Experiment Station"), a quantity of such commercial fertilizer, not less than one pound, sufficient for analysis, accompanied by an affidavit that the substance so furnished is a fair and true sample of a commercial fertilizer, which the said person or company desires to sell within the State of Kentucky.

§ 2. It shall be the duty of the Director of the Kentucky Agricultural Experiment Station, to make, or cause to be made, a chemical analysis of every sample of commercial fertilizer so furnished him, and he shall print the result of such analysis in the form of a label; such label shall set forth the name of the manufacturer, the place of manufacture, the brand of the fertilizer, and the essential ingredients contained in said fertilizer, expressed in terms and manner approved by said Director, together with a certificate from the Director, setting forth that said analysis is a true and complete analysis of the sample furnished him of such brand of fertilizer, and he

shall also place upon each label the money value of such fertilizer computed from its composition as he may determine. The Director shall furnish such labels, in quantities of five hundred or multiple thereof, to any person or company desiring to sell, offer or expose for sale any commercial fertilizer in this State.

§ 3. Every box, barrel, keg or other package or quantity of any commercial fertilizer, whose retail price is over ten dollars per ton, in any shape or form whatever, sold or offered for sale in this State, shall have attached to it, in a conspicuous place, a label bearing a certified analysis of a sample of such fertilizer, from the Director of the Kentucky Agricultural Experiment Station as provided in the foregoing sections of this act.

§ 4. Any manufacturer or vendor of any commercial fertilizer, who shall sell, offer or expose for sale any fertilizer, without having previously complied with the provisions of this act hereinbefore set forth, shall, upon indictment and conviction, be fined one hundred dollars for each violation or evasion of this act, which fines, less the percentage of the Prosecuting Attorney fees, shall accrue to the benefit of, and be paid into the State Treasury.

§ 5. The Director of the Kentucky Agricultural Experiment Station shall receive for analyzing a fertilizer and affixing his certificate thereto, the sum of fifteen dollars; for labels furnished, one dollar per hundred.

§ 6. The Director of said Kentucky Agricultural Experiment Station shall pay all such fees received by him into the Treasury of the Agricultural and Mechanical College of Kentucky, the authorities of which shall expend the same in meeting the legitimate expenses of the Station in making analysis of fertilizers, in experimental tests of same, and in such other experimental work and purchases as shall inure to the benefit of the farmers of this Commonwealth. The Director shall, within two months of the biennial meeting of the General Assembly, present to the Commissioner of Agriculture a report of the work done by [him], together with an itemized statement of receipts and expenditures for the two years preceding under the operations of this act.

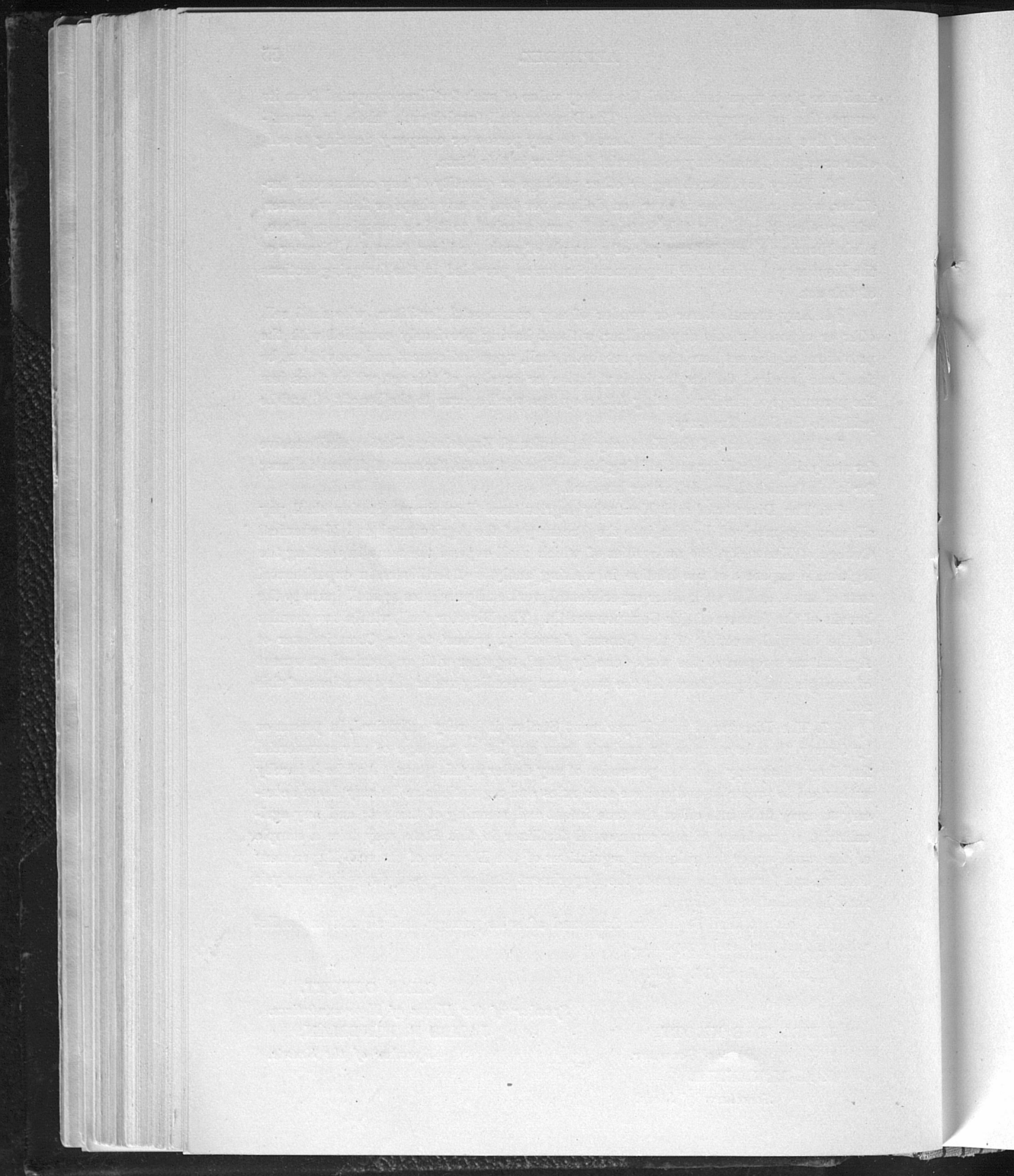
§ 7. The Director of said Experiment Station is hereby authorized, in person or by deputy, to take samples for analysis from any lot or package of any commercial fertilizer which may be in the possession of any dealer in this State. And he is hereby authorized to prescribe and enforce such rules and regulations as he may deem necessary to carry fully into effect the true intent and meaning of this act; and any agriculturist, a purchaser of any commercial fertilizer in this State, may take a sample of the same, under the rules and regulations of the Director of the said Experiment Station, and forward the same to the Experiment Station for analysis, which analysis shall be made free of charge.

§ 8. This act shall be in force from and after its passage, and all acts in conflict with this act are hereby repealed.

Approved April 13, 1886.

J. PROCTOR KNOTT,
By the Governor.
J. A. MCKENZIE,
Secretary of State.

CHAS. OFFUTT,
Speaker of the House of Representatives.
JAMES R. HINDMAN,
Speaker of the Senate.



ADDRESS ON COMMENCEMENT DAY

BY JAS. K. PATTERSON, PH. D., F. S. A.,

PRESIDENT OF THE STATE COLLEGE OF KENTUCKY.

[Published by order of the Board of Trustees.]

In the absence of Governor Knott, who was invited to address you, I propose to occupy your time for a few minutes with a brief retrospect. It is the custom with all engaged in mercantile pursuits and in manufacturing enterprise, to take an inventory of stock at stated periods, and from conclusions, based upon trustworthy data, to determine whether their business be prosperous or the reverse; whether they be holding their own, advancing or losing ground, and in the light of the information thus obtained, to determine the policy of the future.

This is not, by any means, the first time that the College has taken a retrospect of its operations. This is done by the Board of Trustees annually, but on no previous occasion have the public been taken into the confidence of the College authorities as I propose to do to-day.

Twenty-one years have elapsed since the Agricultural and Mechanical College was established. These Colleges owe their existence to the act of Congress of 1862, donating lands to the States for this purpose, in proportion to representation. The allotment to Kentucky was 330 000 acres—a magnificent endowment if it had been judiciously and economically managed. The State committed the mistake of attaching the College created under the act to one of the denominational colleges of the Commonwealth, instead of putting it at once upon an independent basis. The land scrip was sold for fifty cents per acre, the proceeds invested in Kentucky six per cent. bonds, of which the State Treasurer became the custodian, and the income from this invested fund was directed to be paid over annually to the Trustees of the Kentucky University, the institution to which it was attached, so long as the connection existed. The Legislature reserved the right to dissolve the relation at any time. The Legislature required that the Kentucky University should provide, within a reasonable time, a farm worth not less than \$100,000, for the use of the Agricultural College for experimental purposes, and a Mechanical Department for practical instruction in

the Mechanic Arts. The first condition was in part met by the citizens of Lexington and vicinity, who subscribed the money for the purchase of the farm. The second was in part met by a donation for the erection of buildings and the equipment of a Mechanical Department. The State, moreover, advanced \$20,000 to set the Institution going. In 1866, twenty years ago, the Agricultural College opened. Its matriculates increased from year to year till, in 1869-70, the maximum was reached. From that year its attendance began to decline, owing to causes the discussion of which are not appropriate to this occasion. In 1878, the Legislature of that year sent a committee to Lexington to investigate the condition of the College—its relations and its work. They found the number of students to be about 75. They found that its Mechanical Department had practically closed. They found that its Agricultural Department consisted of ordinary farming and gardening, with no attempt to do experimental work. They found that adequate College buildings had never been provided; that the title to the estate purchased as its site was vested in the Kentucky University. The committee unanimously reported to the Legislature, advising the dissolution of the relationship at the end of the collegiate year then current. When the dissolution was effected, the Agricultural College was just where it had been thirteen years before. It had its endowment fund in the custody of the State Treasurer, viz, the proceeds of the sale of 330,000 acres of land at fifty cents per acre. But it had nothing else. It had no buildings, no laboratories, library, museums or physical apparatus. It had no farm, no shop. The State found that the \$20,000 which it had advanced was irrecoverably gone. The question then came up, what shall the State do with it? The Legislature appointed a commission of eleven men to do three things: to make arrangements for its provisional existence till the meeting of the next Legislature; to advertise for and receive bids from those towns which desired to have the College established in their midst; and to prepare and present to the next General Assembly the outlines of an Institution, such as the dignity, the traditions and the educational wants of the Commonwealth required. These duties they discharged. Bowling Green and Lexington were competitors for the location of the College. The latter offered to the Legislature of 1879-80 the City Park, the present site, and \$30,000 in city bonds, to be used for the erection of buildings, which offer the County Court supplemented by \$20,000 in county bonds, to be used for the erection of buildings or the purchase of land. Bowling Green offered \$30,000, and a connection with a local institution, Ogden College, such as the State had formerly made with the Kentucky University. The commission accepted the offer of Lexington, and the Legislature accepted and ratified the recommendation.

The Legislature then proceeded to re-organize the College upon a basis entirely undenominational. It gave it a broad and liberal foundation. It provided for its internal growth and expansion. It provided for such departments as its income, present and prospective, could adequately sustain, with additions, enlargements and specializations, such as future conditions might make possible. It made provision for a board of twelve trustees, who are appointed by the Governor and confirmed by the Senate. It required that a full and complete report be made to the Legislature biennially within one week after it convenes.

The Legislature of 1879-80 also sent a committee to Lexington to ascertain and report the probable expenditure necessary for the effective operation of an Institution such as by charter they had created. It was confessed on all hands that the income from the proceeds of the land scrip was entirely inadequate for this purpose.

The committee unanimously recommended the further endowment of the College by means of a tax of one-half of one cent on each one hundred dollars of taxable property in the Commonwealth. This recommendation was embodied in a bill which passed both branches of the Legislature and received the signature of the Governor. Under these provisions, with this prospective income, the College was re-organized.

During the collegiate session of 1880-81, the following departments were constituted: Mathematics and Astronomy, Natural History, Civil History, Mental and Moral Philosophy, English Language and Literature, Latin and Greek Languages and Literature, French and German Languages and Literature, Chemistry and Physics, Agricultural Chemistry, Practical Mechanics, a Normal School Department, a Commercial Department and a Preparatory Department, with a Principal and Assistant. Contracts for the College buildings were let within the proceeds of the city and county bonds, given for that purpose. As the buildings advanced in their construction, it became painfully apparent that the estimates and contract prices would be largely exceeded, mainly on account of the failure of some of the contracting parties, and the necessity of reletting the contracts under circumstances disadvantageous and onerous in the extreme. Still the Board of Trustees and the Faculty were not discouraged.

Our embarrassments were happily known only to ourselves, and the Trustees believed that an economic management of their resources would enable them to come out all right. The departments were well filled; the attendance had more than trebled in comparison with that of the last years of our connection with Kentucky University. Every point was strained to provide machinery for the Mechanical Department, chemical and philosophical apparatus, and to lay the foundations of museums and to provide such other material appliances as were indispensable to make instruction effective.

Meanwhile a storm was brewing of which we had little dreamed. In October, 1881, it became known that the synod of Kentucky, controlling Centre College, had taken measures adverse to the State aid given by the Commonwealth to the State College. Later on it was surmised that the authorities of Central University were disposed to make common cause with Centre College, and later still, ominous indications came from another college in a neighboring county and town.

It was expected that the new College buildings would be completed and ready for occupancy late in the autumn. The Legislature was to convene on the 28th of November. Hon. Henry Watterson, of the *Courier-Journal*, had been invited to deliver the address upon the dedication of the College, and the intention was to invite the Legislature to be present. The correspondence with Mr. Watterson made it doubtful whether, on account of his business engagements, he could accept the invitation, and on the 17th of November, I went to Louisville to confer with him in person.

On the morning of the 18th, while in Louisville, I read in the columns of the Courier-Journal a manifesto issued by the denominational colleges of Kentucky, six in number, assailing the principle of State aid to the State College, and calling upon the people of the Commonwealth to insist on the repeal of the tax levied for its benefit. It is not my purpose to discuss this paper. I concluded that I could not do better than to remain in Louisville one day longer, and to answer in the next issue of the Courier-Journal the appeal of the presidents of Colleges and presidents of boards of trustees whose names were appended to the document. The arguments in favor of repeal appeared on the 18th. On the 19th the plea for the maintenance of the State College likewise appeared. The Senators and Representatives, who were expected to receive and digest the appeal of the colleges against aid to the State College in the brief interval between its reception at their homes and their departure for the seat of government, had only one day less in which to consider the plea of the State College for the continuance of State aid.

On the assembling of the Legislature, it soon became manifest that the State College question would be one of the questions of the session.

Shortly after the Legislature assembled, a bill was introduced to repeal the tax levied for the benefit of the College. Early in January the subject was brought before a committee of the House in an elaborate argument by Dr. Beatty, of Centre College, to which argument reply was made by the President of the College a few days later. In addition to the question of expediency and justice of State aid to an Institution owned and controlled by the Commonwealth, the question of the constitutionality of the tax was raised and argued before the committee by an ex-Chief-Justice, one of the ablest lawyers at the bar. Reply was made by counsel. For weeks and months the assault and defense went on with unflagging energy. When finally the matter came before the House for action, the motion for repeal was laid on the table by a handsome majority, and thus the famous legislative contest of 1881-2 ended. After the adjournment, however, suit was brought in the Chancellor's Court in Louisville to test the constitutionality of the act. Simultaneously a test case was made in the Circuit Court of Magoffin county. The decision of the Chancellor's Court and of the Magoffin Circuit Court both affirmed the constitutionality of the tax. Appeal was taken, and the case argued before the Supreme Court in the Spring of 1883. But no decision has yet been reached by the Court of Appeals.

The cause of the College, the cause of superior education for the industrial classes, has thus far triumphed all along the line. Three successive Legislatures have refused to disturb the settlement of 1879-80.

Let us now look at the relative status of the College in 1882 at the conclusion of the great legislative contest and to-day. Had the assailants known our financial embarrassment, it would materially have compromised our prospects and weighted us in the struggle. On the completion and equipment of our buildings we found ourselves \$35,000 in debt. Nearly half of this amount was due to the professors of the College, whose salaries remained for that year unpaid. \$7,000 were borrowed from the Northern Bank on personal security to meet the most pressing obligations and notes exe-

cuted for the balance. So stood the case at the close of the fiscal year 1881-2. How stands the case to-day? Every cent of the obligations of the College, principal and interest, has been paid. Thousands of dollars have meanwhile been expended in addition for laboratory equipments for microscopes, spectroscopes, polariscopes and other material. Three well equipped laboratories for general chemistry, organic chemistry and agricultural chemistry, and for the experimental station, have been provided. Within the last year the Normal School has been strengthened by doubling the effective work of the department proper. Within the last year, too, the most important step which has ever been taken towards realizing the idea of agricultural training and experiment was taken by the Executive Committee, viz, the establishment of an experiment station for work exclusively experimental. Under the charge of a competent director its bulletins have already attracted attention from widely different quarters and have taken rank among the best publications of the kind in the country. Under the auspices of the director a measure requiring all fertilizers used in the Commonwealth to be analyzed at this station, and by the officers of this College, with safeguards for the protection of the farmer, was passed by the Legislature. Every package sold henceforth in Kentucky will bear the *imprimatur* of the College and bring the fact of its existence and its work home to every purchaser in the State. Moreover, the effective work of the Preparatory Department an indispensable feature of the Institution, has been largely increased since 1882.

We have no controversy with the denominational colleges of the land. We bid them God-speed in their work. There is room for them and for us. We believe that the net result of the contest has done them good as well as us. It has stimulated them to provide for the necessities of the youth of Kentucky by the effort to increase their endowments, to lengthen their cords and to strengthen their stakes. Under a mistaken apprehension of injurious competition resulting from the free scholarship, cheap tuition and enlarged facilities provided by the State College, they assailed the justice, the expediency and the constitutionality of State aid to a State Institution. These fears were groundless. Their patronage instead of diminishing has grown, and they, as we, are more prosperous now than they were four years ago.

Twenty-one years is the limit of minority. The State College has attained its majority. It stands erect to-day, having passed through a struggle for existence the severity of which no one knows so well as he who now addresses you. There have been periods when for weeks at a time I did not know the satisfaction of a sound night's sleep, undisturbed by the difficulties and dangers which beset the State College. That period is past. The State College has survived all and is here to stay. Its Trustees never despaired. Its Faculty bore privation, and borrowed money to supply the want of unpaid salaries. We have survived our perils, paid our debts, enlarged our sphere of educational activity. This is the net result of twenty-one years, and with pleasure and pride I present you this balance sheet to-day. We are, so far as we know, in peace and charity with all. This much we know, we are not voluntarily, and never intend to be, a disturbing element in the educational interests of Kentucky. Our mission is to extend the boundaries of human knowledge by instruc-

tion and experiment, to aid the youth of the Commonwealth, especially the hardy, the industrious, the energetic, whose means will not provide an education elsewhere, with an education equal to the best that can be gotten within the limits of Kentucky or out of it. The State College has made a good beginning in this direction. It will, while not excluding classical instruction, address itself mainly to those branches of learning which are most nearly related to industrial enterprise. While not neglecting those sciences which relate principally to the cultivation of the mental faculties, it will address itself mainly to the work of instruction and discovery in those departments which concern themselves with Nature and natural processes, with the physical sciences, with the laws of matter, with the laws of organization, animal and vegetable. It will, moreover, endeavor to prepare its students, by means of a sound disciplinary training in civil history and in moral and political philosophy, for entering upon the privileges and responsibilities of citizenship in this mighty nation.

I can not allow this occasion to pass without saying a few words suggested by the circumstances in which we find ourselves to-day. In one form or other, questions connected directly or indirectly with education meet us on every hand. They meet us in the newspaper, on the platform, in the Legislature, and in the halls of Congress. They are discussed in the pulpit, in the class-room, by the fireside, and by the wayside.

The well-being of the present and the security of the future depends upon the views which we entertain respecting them. There never was a time in the history of the world when more depended upon the intellect and the morality of men. The aggregate of material wealth, with all the potent influences associated therewith, has grown within the present century out of all proportion to any increase which ever preceded it. The diffusion of knowledge, which is by no means convertible with education, has created hopes and stimulated desires such as never existed before. Questions have arisen and problems have presented themselves which were never dreamed of centuries ago, except in the cell of the recluse, or the study of the philosopher, and then in relations and under conditions which differ widely from the environment of to-day.

The growth of free institutions, the inalienable birthright of the English-speaking stock, has changed the whole structure of modern society. More than six centuries have elapsed since Magna Charta was extorted from King John, the "ablest and most worthless of the Angevin Kings." That piece of barbarous Latin with its rude signatures of illiterate barons has done more for the divine plant of human liberty than all the classics of antiquity. To it England owes her House of Commons, America her Declaration of Independence and her Constitution, and the States of modern Europe their dearly bought and highly prized systems of parliamentary government. To the same parentage belongs the derivative freedom of the Dominion of Canada, and the other great dependencies which form the most magnificent colonial empire which the world has ever seen, each one in various stages of development, containing the germ and the potency of an independent nationality, whose influence will profoundly affect the civilization of the future.

One hundred years ago the English tongue was spoken by 12,000,000 of people.

Now it is the language of 100,000,000, and they the noblest, the freest and the mightiest peoples in the world. Among other nations and other races, free institutions may still be said to be on trial with by no means any thing like certainty what the issue will be. But among the English-speaking stock on the other side of the Atlantic and on this, and in the far-off but thrifty and vigorous and ambitious young States of the South Pacific, well-grounded hopes exist that the roots of a genuine, healthy freedom have struck so deep, and the plant has attained, under circumstances of great trial, such healthy, vigorous growth, that the question of the capability of man for self-government is now, under proper conditions, no longer a problem but a certainty. I have said "under proper conditions," and I use this language advisedly. No people can long be free unless on these conditions—*intelligence* and *morality*—that is, they must know their rights, and they must, in their action, be guided by a sense of duty. There are fanatics, whose zeal outruns their intelligence. There are hypocrites, who simulate a sense of duty in order that they may trade upon the credulity and patriotism of their fellow men. When these in any considerable numbers are invested with the privileges of the franchise, they endanger the existence of the fabric of society and of the nation. When these constitute a majority of those who are invested with the privileges of the franchise, they make self government impossible.

Now, I believe the English-speaking stock to be capable of self government. Why? They have been addressing themselves to the solution of this problem for seven hundred years. During the age of Henry and Frederick Barbarossa, while the Emperor of Germany was on his way to Canossa to place his crown in the hands of the Roman Pontiff, the barons of England were extorting civil freedom from their kings and refusing to allow the intervention of the Pope in the religious affairs of the kingdom. While Louis XIV was exhausting the treasure and wasting the blood of his people and abolishing their parliaments, the English parliamentarians and the Scotch Covenanters were bringing one Stuart to the block because he encroached upon the privileges of Parliament, and sending another into exile because he overrode the barriers of the Constitution.

And later still, when the French republic, having exhausted itself under the ruthless tyranny of Robespierre, Danton and Marat, was handing itself in weariness and despair over to the victor of Marengo, bound hand and foot in chains of its own forging, the American people were putting their Constitution into working order, and consolidating the great Republic under George Washington and Alexander Hamilton. Why this difference? The French republic owed its existence to the principles enunciated by Diderot and Rousseau and Helvetius and Thomas Paine; the American Republic to the rights of man, as evolved in Magna Charter, Habeas Corpus and the Bill of Rights, and to the duties of man as evolved in that greatest of all books, the Bible.

But the enemy is coming in like a flood. The Socialism of Most and Fischer and Spies is akin to the Nihilism which assassinated Alexander of Russia, and to the Commune which attempted to wrap Paris in conflagration, while the French people were

writhing in the agony of mortal conflict. This is an un-English and an un-American doctrine. How shall we counteract it? By educating the head and the heart of America. If we cannot assimilate and make good citizens of the Socialist and the Communist when he comes to our shores, we must tie his hands that he do no mischief. We must make the lump of such quality and character by building on the basis of intelligence and religion and morality, that the mischievous leaven which these enemies of society and of mankind seek to infuse shall be harmless. To this end the school-house and the church must exist in every district and township, from the pine forests of Canada to the orange groves of Florida. This magnificent tongue of ours, the tongue of Shakspeare and Milton, of Burke and of Webster, of Byron and Tennyson, the noblest development of human speech ever spoken on this planet, must be in the future as it has been in the past, the vehicle for thoughts, noble and virtuous and loyal. It must continue to be the tongue of a people who inherit the spirit as well as the traditions of Runnymede and Bannockburn, of Saratoga and of Waterloo.

In these schools our youth must be taught to know themselves; they must be taught to know Nature, of which they form a part; they must be taught to know God, the author of Nature and of man. We owe it to ourselves and to posterity, so to educate the children of this generation that the lamp of intelligence shall be transmitted with a brighter light and a ruddier glow, that the ideas of obligation and of duty may be strengthened and enlarged, and that power and wealth may be subordinated to beneficence. No country in the world has made more rapid progress in providing all the requisite conditions for a broad, liberal education than these United States have done within the last forty years. This is especially true since the close of the late civil war. Her great institutions of learning have within that period "gone forward by leaps and bounds." Within the limits of this Commonwealth substantial progress has been made. But what has been done is only an earnest and an augury, I trust, of what is to follow.

Ere long we shall follow the example of the older States, and cultivate science and literature, not for their money value only, but for their own sake, to expand the faculties, enlarge the range of mental vision, and widen the domain of human knowledge. In this auspicious present, I see the promise of a yet more auspicious future. May it be ours to aid to roll away the stone in order that intelligence, enabled by virtue and inspired by duty, may rise to rule the world.