

1st
Register 1885-86

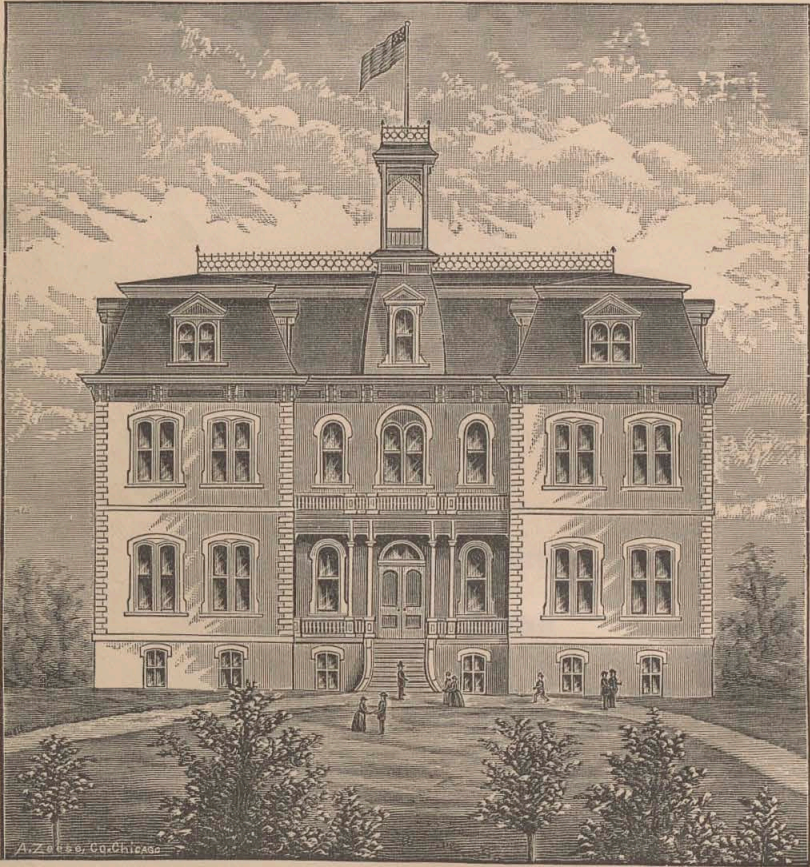
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Announcement

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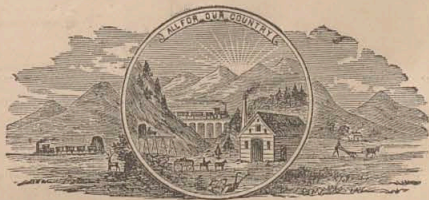
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University of Nevada

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University of Nevada.



Board of Regents.

1874--1878.

HON. ALFRED HELM.....CARSON
HON. C. C. STEVENSON.....GOLD HILL
HON. W. C. DOVEY.....SILVER CITY

1879--1882.

HON. JOHN S. MAYHUGH.....ELKO
HON. T. N. STONE.....ELKO
HON. SYLVESTER H. DAY.....CARSON
HON. C. H. SPROULE.....BATLE MOUNTAIN

1883--1884.

HON. SYLVESTER H. DAY.....CARSON
HON. E. B. HARRIS.....VIRGINIA CITY
HON. J. H. RAND.....ELKO

1885--1886.

HON. J. H. RAND.....ELKO
HON. L. W. GETCHELL.....AUSTIN
HON. H. G. SHAW.....VIRGINIA CITY

President of the Board :

HON. J. H. RAND.....ELKO

Secretary :

M. D. NOTEWARE.....CARSON

InstRuctors :

MINING, METALLURGY AND CHEMISTRY :

PROF. A. H. WILLIS, M. A.

PRINCIPAL OF PREPARATORY DEPARTMENT :

PROF. J. W. McCAMMON, B. A.

INTRODUCTION.

*T*HE State University of Nevada is an integral part of the public educational system of the State. The State Constitution, in Section 1 of Article XI., declares that "the Legislature shall encourage, by all suitable means, the promotion of intellectual, literary, scientific, mining, mechanical, agricultural and moral improvement." In Section 4 of the same Article the Legislature is directed to provide for "the establishment of a State University, which shall embrace departments for agriculture, mechanic arts and mining." In Section 6 provision is made for the levy of "a special tax of one-half of one mill on the dollar of taxable property in the State, in addition to the other means provided for the support and maintenance of said University and common schools."

The University of Nevada is a State institution, established by the Legislature in accordance with the Constitution, and intrusted to the care of a Board of Regents, three in number, elected by the Legislature. To this board the State has committed the administration of the University, including the finances, care of property, appointment of teachers and determination of the interior organization in all particulars not already determined by law.

University Endowments.

BY the Act of Congress approved July 2, 1862, 30,000 acres of land for each Senator and Representative in Congress in each State is donated for the "endowment, support and maintenance of at least one college, where the leading object shall be—without excluding other scientific and classical studies, and including military tactics—to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislature of the State may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions, in life." Of the 90,000 acres of land donated in this grant 87,712.25 acres have been approved to the State, leaving due to the State a balance of 2,287.75 acres. Only the interest of the funds derived from the sale of these lands is available for the support of the State University. On December 31, 1885, the principal (irreducible) of the University fund (90,000-acre grant) amounted to \$79,292 92, and the interest or available fund thereof to \$15,192 97.

An Act of Congress approved July 4, 1866, provides "that land equal in amount to seventy-two entire sections for the establishment and maintenance of a University in said State is hereby granted to Nevada." In the legislation relating to the admission of the public land States into the Union from the admission of Ohio in 1802, to the admission of Colorado in 1876, grants of two townships of public lands, viz.: 46,080 acres each, for University purposes, are enumerated. These reservations in each case require a special act. This grant was not made to Nevada until July 4, 1866. Of the 46,080 acres of land donated in this grant the State has selected and received 39,025.90 acres, leaving due the State a balance of 7,054.10 acres. Only the interest of the fund derived from the sale of these lands is available for the support of the University. On December 31, 1885, the principal (irreducible) of the State University Fund (46,080-acre grant) amounted to \$31,227 20, and the interest, or available fund thereof, to \$9,758 37.

From the foregoing two land grants the State of Nevada has on hand

in cash or bonds (December 31, 1885) for the support of her University the following sums :

90,000-acre grant (<i>principal</i>)	.....	\$79,292	92	
46,080-acre grant (<i>principal</i>)	.....	31,227	20—	\$110,520 12
90,000-acre grant (<i>interest</i>)	.....	15,192	97	
46,080-acre grant (<i>interest</i>)	.....	9,758	37—	24,951 34
				<hr/>
				\$135,471 46

The amount of money expended for University purposes from the time of its opening to the date (December 31, 1884) of the last report of the Board of Regents was \$57,138 28, of which sum only \$17,760 20 was derived from the interest on sales of University lands ; the remainder, \$39,378 08, having been appropriated by the State out of her General Fund.

The Congressional endowment of 90,000 acres is subject to certain conditions which make it encumbent upon the State to maintain the University. A failure to do so would involve not only the forfeiture of the land grant, but the return to the United States of all sums of money derived from the sale of lands (except interest.) The sum which would have to be thus returned amounted on December 31, 1885, to \$79,292 92. Among the other conditions of the 90,000-acre grant are “ that no portion of said fund, nor the interest thereon, shall be applied directly or indirectly, under any pretence whatever, to the purchase, erection, preservation or repair of any building or buildings, except that a sum not exceeding ten per centum on the amount received under the provisions of the Act may be expended for the purchase of lands for sites, or experimental forms, whenever authorized by the Legislature.

History.

THE first Legislature that convened after the admission of Nevada as a State passed an Act entitled "An Act to establish an Agricultural and Mechanical College in Washoe county, in this State," approved March 9, 1865. No lands, buildings or funds of any character were tendered to the Board of Regents for the purpose of establishing such a college, and nothing was accomplished under the Act. The University was finally located and instituted at Elko by a law which received the approval of the Governor March 7, 1873. The Central Pacific Railroad Company donated a site covering 21.15 acres of land, and in the winter of 1873-4 the people of the town of Elko erected a brick building, the cost of which exceeded \$18,000. On October 12, 1874, the University (Preparatory Department only) was opened with seven students, D. R. Sessions having been appointed Principal. In 1875 the attendance had increased to 16, in 1876 to 23, in 1877-8 to 35. In 1879-80 it decreased to 27. In 1881 the average attendance was 26, in 1882 28, in 1883 30, and in 1884 34.

In 1875 a building was erected on the University grounds at Elko to be used as a dormitory, and of sufficient capacity to board and lodge some fifteen or twenty students. The cost of this structure was \$6,697. It was subsequently furnished at an expense of over \$700. It was believed that no material increase of students could be reasonably expected until a cheap and comfortable home was provided for those coming from abroad. The experiment did not realize the anticipations of the Board of Regents. Five was the greatest number of students from abroad at any one time attending the University and boarding at the dormitory.

Mr. Sessions served as Principal until December 31, 1878, when he was succeeded by Mr. W. C. Dovey, who served until June 30, 1881. The latter was succeeded by Mr. T. N. Stone, who was Principal from April 1, 1882, until June, 1883. In September, 1883, Mr. E. S. Farrington took charge as Principal, continuing in the discharge of the duties of that office until December, 1884. Only one term of the Acad-

emic Department was held in 1885, and during that term the Principal was Mr. Stearns. During the eleven years of the existence of the University at Elko good classes were maintained in algebra, geometry, physiology, history and chemistry, besides the common English branches. On October 4, 1882, for the first time, the metallurgical, mining and assaying department was established and opened under the instruction of Mr. J. E. Gignoux. Nine students attended the course of instruction. This department during the year 1883 showed a slight increase in students. During the term beginning September 22 and ending December 31, 1884, no students applied for admission.

The question of a change of location of the University from Elko to some other point in the State created considerable public discussion in 1884.

In their biennial report for the years 1883 and 1884 the Board of Regents suggested to the Legislature that the removal of the University to a more populous neighborhood would result in placing it on a much better footing. Regent Rand, of Elko, in a minority report dissented from the conclusions of the Board, though conceding that the success of the institution had not been all that could be desired.

During the session of the Legislature ending in 1885, Colonel H. G. Shaw, editor of the "Territorial Enterprise," delivered an address before the Assembly Committee on Education and many prominent citizens interested in educational matters, in the course of which he reviewed the history of the University, the land grants, their objects, express and implied, and urged the importance of procuring such legislation as might better carry into effect the letter and spirit of the various Acts of Congress under which the Nevada University had been endowed. Later in the session a bill prepared by Colonel Shaw was introduced by Senator Poujade of Lincoln county. It provided for the reorganization of the University and its removal to Carson under certain conditions. This bill was defeated in the Senate by only one vote, but on the closing nights of the session two other bills were introduced and passed, receiving the approval of the Governor on March 7, 1885. The first Act authorized the removal of the University from Elko to Reno, provided the Board of Commissioners of Washoe county paid into the treasury of Elko county \$20,000 and to the Board of Regents \$5,000, which together with \$10,000 appropriated by the said Act, were to be expended in purchasing a site at Reno and constructing thereon buildings to accommodate at least one hundred pupils, at an estimated cost of not more than \$20,000. The second Act was to authorize the issue of the necessary bonds by Washoe county and to provide for the payment of the same.


The present Board of Regents proceeded to diligently carry into effect the provisions of the law. On June 1, 1885, the Board of Commissioners of Washoe county met and authorized the issue of bonds to the amount of \$25,000, paying over to the Board of Regents \$5,000 of said sum to

enable the latter board to begin the work of removal. Among many eligible sites the Regents selected an elevated and commanding tract of ten acres, situated north of the town and immediately adjacent thereto, the property of J. N. Evans, paying him \$1,250 for the same, with the privilege of purchasing ten additional acres at the same price, providing the Legislature at its session in 1887 should authorize such purchase. Regent Shaw prepared a rough sketch of the character of building desired and accommodations needed, which was submitted to George E. Holesworth and M. A. Curtis, architects, who drew plans and specifications for the same. The plans and specifications submitted by M. A. Curtis were adopted on July 6 by the board and proposals for the construction of the University building at Reno were advertised on July 11. The bid of Messrs. Burke Brothers of Reno (\$12,700) being the lowest, was on July 20 accepted. The contract called for the erection of the handsome building, a sketch of which will be found on the second page of this report, but of the interior only the first floor to be completed. Surveyor-General Preble and M. A. Curtis surveyed and defined the boundaries and drove the stakes on July 27, and on August 2 the contractors began the excavation for the foundation. On September 12 Hon. M. A. Murphy, Grand Master of the Grand Lodge F. and A. M. of Nevada, attended by the Grand Lodge and the Masonic fraternity generally, and in the presence of a large concourse of citizens, laid the corner stone of the new University building with the impressive ceremonies of the Order. On February 11, 1886, the contractors had finished their work and the building was turned over to the Board of Regents four days later.

Plans for the Future.

IN its new location the Board of Regents will aim to secure the hearty sympathy and earnest co-operation of the people of Nevada in making the University a credit to the State. The limited appropriations for its support will not permit of much being done at the outset beyond laying a solid foundation for more advanced educational work in the future. The immediate object will be to make the present Preparatory Department superior to the higher grades of our public schools, and thus advance the cause of education by having an institution of which the said schools are to be the feeders. The courses of instruction will be based upon the modern ideas of education which subordinates the purely classical and literary features to practical and scientific culture, and which aims to impart to the student those elements of human knowledge which can better prepare him for progress in scientific studies. The central idea will be to cultivate the perceptive faculties, the reason, the judgment and the taste, rather than to attempt to nurse into being prodigies of learning whose power is chiefly expressed in their ability to memorize and mumble dead formulas. The University of Nevada will endeavor to assist its students to acquire sound mental discipline, liberal culture and a good preparation for the practical duties of life. While there is no royal road to knowledge, and while intellectual growth is with the average man the fruit of self-denial, industry and hard work, the Regents recognize that education, like other progressive sciences, has made rapid advances, assimilated new ideas and adopted new methods of work, the application of which in the class-rooms promotes a more vigorous development of the intellectual faculties. The system of instruction will therefore be devised not so much to seek a dead uniformity of culture on some ideal grade as to discover and develop the natural capacity of each particular student, to foster his latent talent, to ascertain his purpose, aim, object and motive in life, and to meet his first and highest need, which is to have all the elements of manhood within him developed, quickened and energized.

Courses of Instruction.

 *HERE* are established in the University three regular courses of instruction :

The Literary Course

Will embody preparatory studies for the higher branches of an English education, and will embrace a period of two years. Those branches will be taught which are required for admission into the Freshman class in colleges. Special attention will be given to the English language and literature, to the ancient and modern languages, history and political science, commercial arithmetic, bookkeeping, algebra to quadratics, botany, penmanship, elocution, physiology, civil government, composition, mechanical, industrial and map drawing, and physical geography.

Scientific Course.

Algebra, including the progressions, series, logarithms, permutations, combinations, binomial theorem, general theory of equations, solution of numerical equation of higher degrees, Horner's method ; geometry to conic sections ; physics, "Picks Ganot" introductory course ; surveying, meteorology, chemistry, inorganic (including qualatative analysis) and geology.

Mining and Metallurgical Course.

The course in Mining is designed for students who wish to become mining or metallurgical engineers, or to engage in one of the many pursuits connected with the mining industries, such as the surveying and mapping of mines, the assaying and working of ores, the designing and use of mining machinery, or the exploitation of mines. As a means of instruction in this department, great reliance will be placed upon the actual seeing and handling of the substances under consideration. This fixes in the mind the theories of the science as well as the properties and uses of the various forms of matter. The personal observation on the part of the student in the laboratory is well nigh indispensable. Hence,

laboratory practice occupies an important position among the methods of instruction in this department. Lectures and recitations from the best text books are, however, by no means slighted; the main work is accomplished by these, laboratory practice being supplementary. The metallurgical laboratory is provided with assay furnaces and all the appliances necessary in assaying the precious metals, lead, copper, etc. The student will learn the method of assaying by actual practice, as well as by the study of books. Blowpipe analysis will be an important feature of this course; and the student will be afforded every opportunity for becoming a skillful blowpipe analyst and assayer. The practice in assaying will be accompanied by the study of all the common metallic ores (from specimens in the University museum), their properties, methods of reduction, etc. To receive the greatest benefit from this course the student should have some previous knowledge of chemistry. Preliminary to the purely technical studies of the course the student will receive a sufficient training in those branches of modern physical science which lie at the basis of all industries connected with mining; on the one hand, mathematics and its applications, and on the other chemistry and its allied branches.

Instruction is given according to the nature of the subject, either by lectures and recitations, or by practical exercises. Lectures will be delivered on crystallography and the physical properties and uses of the most important ore, gangue and rock-forming minerals. Considerable time will be devoted to practice in the determination of minerals by the use of the knife, lens and streak plate. The course in mining includes instruction in the nature and mode of occurrence of ores; prospecting and exploring ore deposits; United States laws governing location of claims; open cut and quarry work; hand and machine drilling; explosives; blasting; tunneling, with methods of excavation and timbering; shaft-sinking, timbering and walling; stoping; tramping; hoisting; pumping and drainage; lighting; hydraulic and river mining; general organization and administration. The course is illustrated by drawings, sketches, data, and references to typical mines in operation on the coast. In Metallurgy instruction will be given in the classification of ores and processes; crushing and sampling ores; fuels; fluxes; refractory materials; furnaces; accessory machinery; metallurgical products. The metals selected are the ones at present most important on this coast—gold, silver, lead and quicksilver. Both wet and dry methods of reduction will be taken up and discussed in detail. The illustrations and data will be drawn, as far as possible, from actual work on the coast. The fire assays accompany each metal in the course in Metallurgy, and the instruction will be conducted, as far as possible, to illustrate the methods of reduction used on the large scale. Particular attention will be paid to the fire assays of ores of gold, silver, lead and quicksilver.

PREPARATORY COURSE.

FIRST YEAR.

	<i>Scientific.</i>	<i>Literary.</i>
First Term.	Grammar, Arithmetic, U. S. History, Physical Geography, Map Drawing, Natural Philosophy.	Grammar, Arithmetic, U. S. History, Physical Geography, Map Drawing, Latin.
Second Term.	Composition and Rhetoric, Algebra, Physiology, Bookkeeping, Physics.	Composition and Rhetoric, Algebra, Physiology, Science of Government, Latin.
Third Term.	Composition and Rhetoric, Algebra, Bookkeeping, Physics, Physiology.	Composition and Rhetoric, Algebra, Physiology, Latin (Cæsar), Natural Philosophy.

SECOND YEAR.

	<i>Scientific.</i>	<i>Literary.</i>
First Term.	Chemistry, Geometry, Latin, Science of Accounts.	Latin (Cæsar), Geometry, Ancient History and Mythology, Greek.
Second Term.	Chemistry (Analysis), Geometry, Science of Government, Latin.	Latin (Cæsar), Geometry, Greek, English Literature.
Third Term.	Conic Sections, Chemistry (Analysis), Latin, Commercial Law.	Latin (Cicero), Greek, English Literature, Botany.

UNIVERSITY COURSE.

FIRST YEAR.

	<i>Scientific.</i>	<i>Literary.</i>
First Term.	Mineralogy, Mechanical Drawing, Trigonometry, Ancient History.	Latin (Virgil), Greek (Anabasis), Botany, Chemistry.
Second Term.	Mineralogy, Assaying, Mechanical Drawing, Trigonometry.	Latin (Virgil), Greek (Anabasis), General History, Political Economy.
Third Term.	Mineralogy, Mechanical Drawing, Trigonometry, Metallurgy.	Latin (Livy), Greek (Iliad), Astronomy, General History.

Terms of Admission.

Candidates for admission to the University must be at least fifteen years of age, must produce a certificate of good moral character and pass a creditable examination in reading, writing and spelling, arithmetic, English grammar, and descriptive and physical geography. Any applicant falling below 70 per cent. as the result of the entire examination will be rejected. Tuition in the University is free. A small charge will be made for chemicals in the Chemical Laboratory. The list of text books required will be announced hereafter. Students from abroad are required to board at places approved by the Board of Regents. Applications for admission may be made to either the instructors at the University at Reno or to any of the Regents: H. G. Shaw, at Virginia City; J. H. Rand, at Elko; and L. W. Getchell, at Austin, Nevada.

Any information in respect to room and board may be obtained by addressing "State University, P. O. Box 544, Reno, Nevada."

Terms and Vacations.

The school year is divided into three terms, the first term commencing on the first Monday in August and ending the second Friday in December. The second term commencing the first Monday in January and ending the last Friday in March. The third term commencing the first Monday in April and ending the last Friday in June.

The inaugural term will begin on March 31 of this year and end the last Friday in June.

Examinations.

At the end of each term all students will be examined in the studies pursued, and the result of these examinations determines their standing. Reports will be sent to parents or guardians.

Regulations.

All students are expected to devote their time exclusively to the work of the University, and no student will be allowed to remain in it who by misconduct or indolence shows himself to be unworthy of its benefits. Profane language is forbidden, and the use of ardent spirits, gambling or card playing, frequenting saloons or billiard rooms, associating with any person of known vice or dissoluteness, leaving school without special permission, riotous and noisy behavior, are absolutely prohibited. Every student will be required to obey the rules and regulations established

for the government of the University. Any damages to the buildings or other property of the University will be charged to the student through whom it is sustained.

The University Cadet Corps.

One of the conditions of the Congressional grant under which the institution has been endowed is that military tactics shall be taught. The students of the University will therefore constitute a Cadet Corps, and military discipline will prevail. Application will be made, in accordance with Section 1225, U. S. Revised Statutes, to the Secretary of War for a field piece and stand of arms with which to equip the corps. A weekly drill in infantry tactics will be held under the supervision of a competent instructor, and a rifle range for instruction in marksmanship will be built in the vicinity of the University.

The University Library.

The Legislature at its last session appropriated the sum of \$500 for the purchase of books. This will enable the Regents to establish a nucleus for a good reference library of standard works in English literature and in the arts and sciences. The leading magazines and periodicals devoted to scientific progress and discovery will be kept on file for the use of the Instructors and students. All donations to the library will be welcome and will be duly acknowledged in future University Registers.

The University Museum.

In Mineralogy a good beginning has been made, the Regents having received from Hon. C. C. Thomas, the Commissioner for Nevada to the New Orleans Exposition, and from H. M. Yerington, Esq., a choice collection of mineral specimens as a contribution to the mineralogical cabinet. Additional contributions from all quarters will be gratefully acknowledged. The Regents hope to be able by a system of exchanges with leading institutions and naturalists in all parts of the United States to secure a cabinet of natural history, containing a very satisfactory representation of the plants, insects, birds, minerals and fossils, not only of the State of Nevada, but also of the whole of North America. Mr. Frank Bell, Warden of the Nevada State Prison, has presented to the cabinet a series of plaster casts of the foot-prints discovered in the quarries connected with the prison; also, a number of remarkable rocks excavated from the quarry.

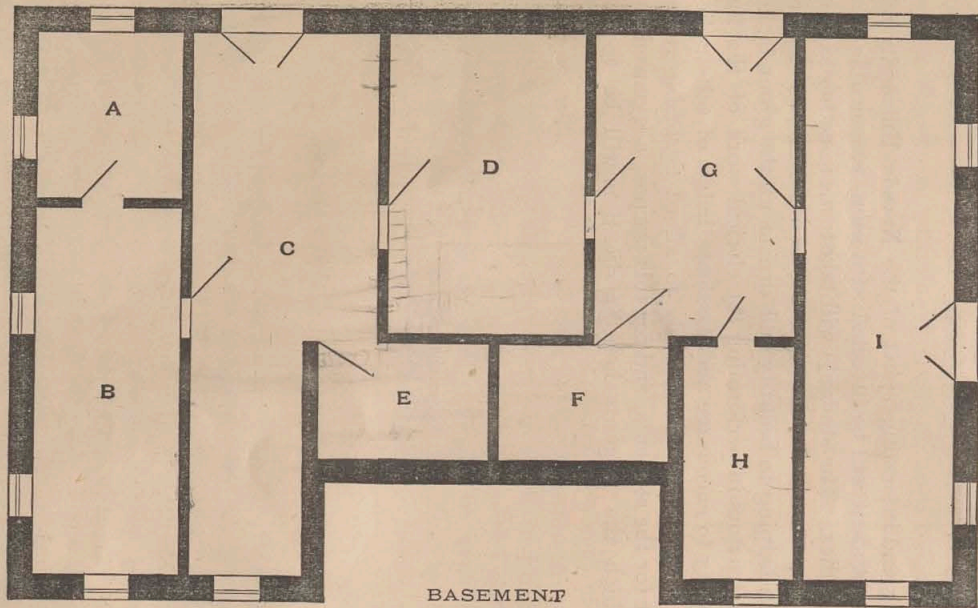
Contributions to the library and cabinet may be sent as freight or by express at the expense of the Board of Regents. The board hope in

time to obtain by gift, exchange and purchase, collections for the University Museum, representing the following departments: Fine Arts, Classical Archæology, Ethnology, Zoology, Entomology, Botany, Historical Geology, Palaentology, Mineralogy, Petrography, Economic Geology, Metallurgy, Agriculture, Mechanics and Engineering (machines, models, etc.), manufactured products and textile fabrics.

Conclusion.

The animating and informing spirit of the Nevada University will be WORK. Every student will be invested with some responsible work in the line of his studies. The students will take turns in acting as curators of the different departments of the museum, as librarians, as meteorological observers, in helping to beautify and ornament the grounds, and in assisting the Instructors in performing the clerical work of the institution, the idea being to encourage and inculcate habits of self-application and industry. Every effort will be made to afford agreeable recreation and amusement for the students, and for this purpose a gymnasium will be provided, which the Regents hope in due time will be thoroughly equipped.

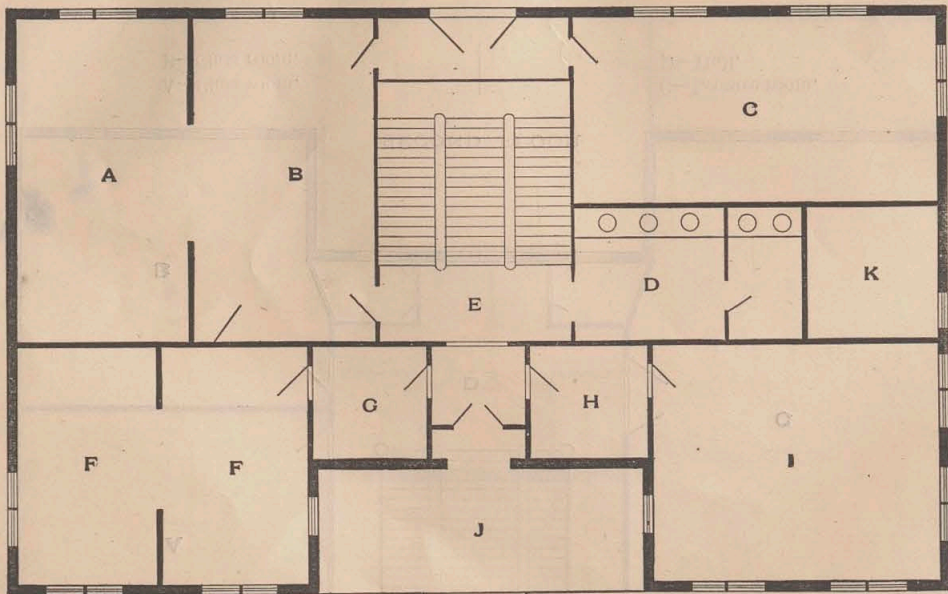




A—Janitor.
 B—Janitor.
 C—Ante-room.

D—Store Room.
 E—Apparatus.
 F—Chemicals.

G—Hall.
 H—Assay Furnaces.
 I—Quartz Crushers.



17

FIRST-FLOOR

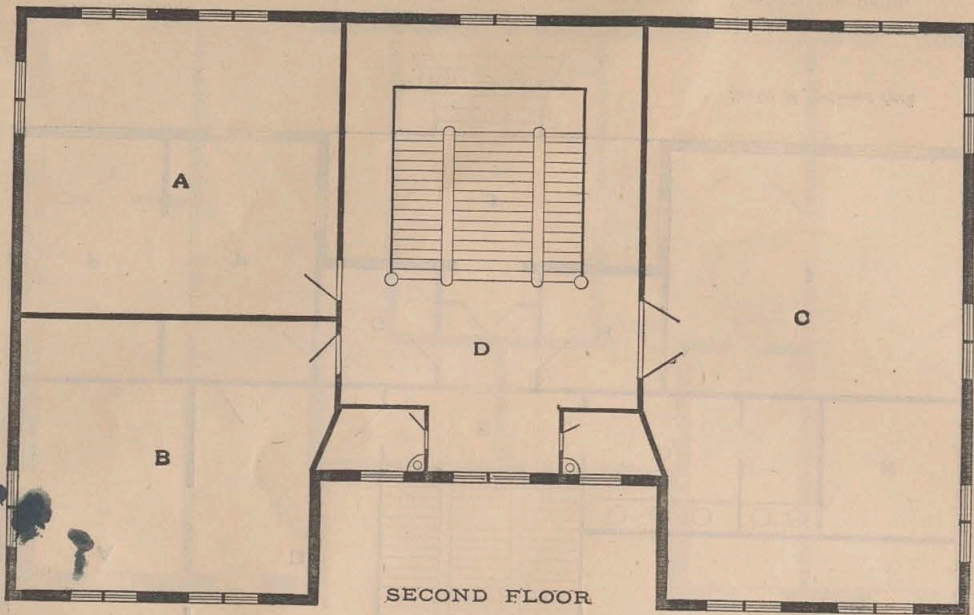
Scale: 16 feet.—1 inch

A—Museum.
 B—Library.
 C—Gymnasium.
 D—Lavatory.

Libra
Museum

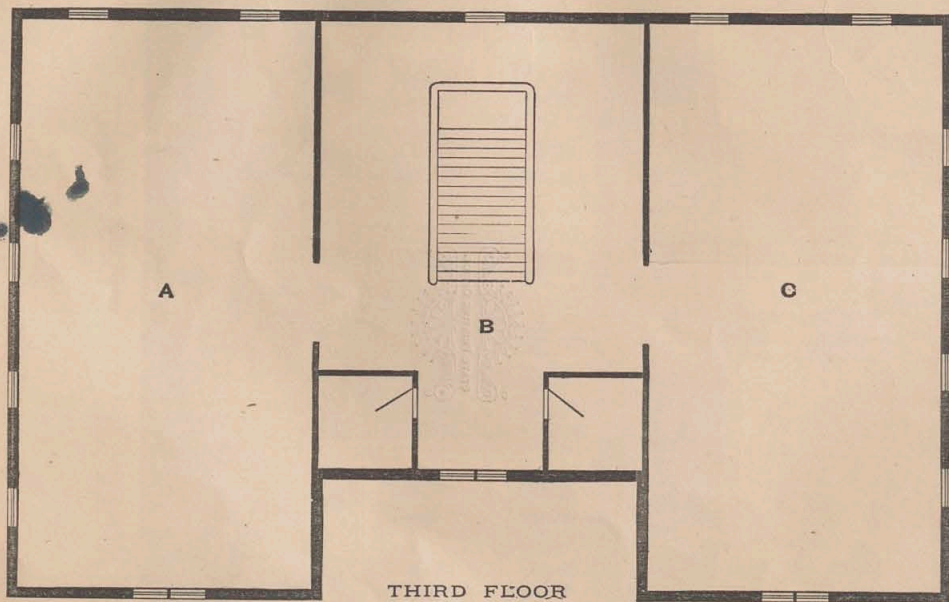
E—Hall.
 F—Reception room.
 F—Regents' room.
 G—Principal's office.

H—Assayer's office.
 I—Assaying room.
 J—Porch.
 K—Weighing room.



A—Class room.
B—Class room.

C—Lecture room.
D—Hall.



A—Cadet Armory.

B—Hall.

C—Hall for General Assemblies.

OFFICE OF THE GOVERNOR

OFFICE

OFFICE OF THE ATTORNEY GENERAL

RECORDS ROOM



A