James Angell laid the cornerstone of University Hall on a visit to Ann Arbor before his presidency began. University Hall was the first building funded through direct appropriations by the legislature. It was a connecting link between Mason Hall and South College, which became known as the North and South Wing of the new complex. University Hall provided a chapel on the north side of the main floor, the President's Office on the south side with a waiting room for ladies at the east, an auditorium on the second floor seating 3000 (1700 on the main floor and 1300 in the elliptical gallery), eleven lecture rooms and offices for the Regents, the faculty, and the steward.

Angell's guidance in the selection of University personnel was one of his great contributions. Over a span of nearly forty years the staff multiplied more than elevenfold, the number of major appointments rising into the hundreds. Many outstanding scholars and administrators were drawn to the University in those years.
There was a great deal of criticism of University Hall. There were objections to making it part of the two original buildings (Mason Hall and South College), the construction materials (stucco over brick), the dome, and the “pepper boxes” ornamenting the roof. In 1879 the Regents ordered the removal of “the two circular corner turrets and the two turrets at the base of the dome” and provided for the finishing of “the said corners and said sides in conformity with the style of said dome.” The balustrade that bordered the roofs of the two wings was also removed. There was also great concern that the self-supporting roof of the auditorium would not bear the weight of the great dome, which was estimated at 112,000 pounds. During the winter break in 1896 the old dome was removed. The new dome was of iron, much smaller and much less expensive than the original (UM Encyclopedic Survey, p. 1625).

“The mighty dome which we used to point out and look at fondly on our walks about the neighboring country has gone, and its place can never be taken in our hearts by its diminutive and bubble-like successor.” (Michigan Alumnus, October 6, 1899)
The organ was dedicated on December 4, 1894, to the memory of Henry Simmons Frieze. It represented the highest achievement of the organ builder's art, and was one of the first great organs to be operated entirely by electricity. After the organ was installed, a series of vesper services were held twice a week. One hundred sang in the choir.

In the spring of 1879 a Messiah Club was formed by singers from several of the church choirs. The Club became known as the Ann Arbor Choral Union. The University Musical Society was organized in 1880 to serve as an administrative organization to stimulate musical taste in the University and the Ann Arbor Community.

Professor Henry Frieze is credited with the promotion of musical organizations in connection with the University. He was a skilled musician and wished to share his love of music with the students and citizens of Ann Arbor. It was largely through his efforts that the Choral Union and the University Musical Society were formed.

In 1894 the Columbian Organ built by Farrand and Votey of Detroit and valued at $25,000, which had been used in Festival Hall during the World's Columbian Exposition at Chicago, was purchased by the University Musical Society and installed in University Hall.
In 1875 a College of Dental Surgery was established. Jonathan Taft was appointed Professor of Principles and Practice of Operative Dentistry and John A. Watling as Professor of Clinical and Mechanical Dentistry.

Jonathan Taft served as Dean of the College of Dental Surgery from 1875 to within a few weeks of his death in 1903. During his 28 year administration the college steadily advanced in reputation at home and abroad and was ranked among the leading dental schools in the world.

John Watling practiced dentistry from 1860 until 1904 in Ypsilanti. In 1875 he was appointed a member of the original Faculty of the College of Dental Surgery. He resigned his faculty position in 1903.

Albert Prescott came to the University in 1868 as Assistant Professor of Chemistry and Lecturer on Organic Chemistry and Metallurgy. In 1876 when the School of Pharmacy was organized, he was named Dean, and from 1884 he also served as Director of the Chemical Laboratory.

As early as 1848 the practitioners and patrons of homeopathic medicine in Michigan began to pressure both the University and the legislature to include homeopathic instruction in the curriculum of the state institution. Finally yielding to this pressure, the University established a College of Homeopathic Medicine in 1875, with two professorships, one in materia medica and therapeutics and one in the theory and practice of homeopathic medicine (with the remaining curriculum taught by faculty in the Medical and Surgery Department). The new program shared one of the original Professors’ Houses on North University with the College of Dental Surgery.

Samuel Jones accepted the call to organize the Homeopathic Medical College, serving as Dean and Professor of Materia Medica and Therapeutics. He resigned in 1880 to practice in Ann Arbor.

The other professor was John Colman Morgan. He served as chair of the Theory and practice of Medicine for two years.

In 1875 an appropriation of $8,000 was received for a larger hospital, contingent upon a contribution of $4,000 from the city of Ann Arbor. In 1876 two pavilions were added behind the original hospital.
In 1879 a professorship in the science of the art of teaching was established, the first in any American university, with William Payne as the first professor. In 1858 at the age of 22 Payne came to Michigan as principal of the Union School at Three Rivers. In 1866 he served as principal of the Ypsilanti Union Seminary, then the leading preparatory school of the State. In 1869 he was superintendent of the schools at Adrian, gaining a reputation as an administrator and educational writer.

Steam heating was introduced into the campus buildings in 1879, replacing the stoves and fireplaces that had heated the buildings prior to that time. Two heating plants were constructed. One of the structures was located just northeast of University Hall and the other was housed in a lean-to addition built at the east end of the Chemical Laboratory. With these first heating plants came the beginning of a central heating distribution system. The various buildings were connected to the heating plants by steam mains and return lines buried underground.

In 1879 the College of Dental Surgery moved to the east Professors' House on South University. Henry Frieze was the last professor to live in the house. The building was enlarged and renovated for dental education.

In 1877 the College of Dental Surgery moved to the east Professors' House on South University. Henry Frieze was the last professor to live in the house. The building was enlarged and renovated for dental education.
One of the most striking buildings on the University’s early campus was the University Museum of Natural History, built in 1880 to house the University’s collections of materials in natural history and anthropology. The building was designed by William LeBaron Jenney, Michigan’s first professor of architecture, who after a brief tenure at the University moved back to Chicago and become one of American’s most noted architects.

Although the building was architecturally prominent, its defects soon became apparent. Without a basement, the ground floor settled, and a new one had to be installed. The original roof proved too heavy and was replaced with “a makeshift affair fastened together with so curious a system of trusses and bolts” that architecture classes visited often. There was inadequate and poorly lighted exhibit space. Even an abandoned elevator shaft had to be used for storage.

William LeBaron Jenney was a civil engineer and an architect. He received his training in Cambridge, Massachusetts and in Paris, France. As a major in the United States Army in the Civil War, he built Forts Henry and Donaldson, as well as the defenses at Shiloh, Corinth, and Vicksburg. He served with distinction as Chief of Engineering on Grant’s and Sherman’s staffs. After the war Jenney opened his first architectural office in Chicago in 1868.

By 1923 at least 75 per cent of the specimens were kept in storage because of inadequate facilities for display. Some collections had never been unpacked. The risk of fire to the collections (valued in 1923 at $2 million) was serious. The result was that while the Museum was still housed in this building, the University was forced to decline many valuable collections.

These problems were solved when a new Museum was built in 1923. The old building was assigned to the Department of Romance Languages. Extensive alterations, including the construction of offices and classrooms, were carried out as far as possible with fireproof materials. The building was painted a light gray.
In October of 1881, Professor Frieze, acting president, sent for Mortimer Cooley, Professor of Mechanical Engineering, and advised him of the appropriation of $2,500 for an engineering laboratory. The money was to revert to the state if not expended before December. Mr. Cooley was asked if he could use this sum to build a mechanical engineering laboratory. The possibility of shops was mentioned, but the appropriation seemed insufficient.

The matter was dropped until November when Cooley was again called before the president and ordered to spend the money. He agreed on condition that the building cost no more than $1,500, leaving the balance for equipment. Cooley’s design for the first Engineering Shop building was a modest structure, 24 feet by 36 feet. It was constructed of bricks placed edgewise and fastened to wooden studding. It was also the first fireproof building on the campus.

A foundry was located on the first floor at the east end and a forge shop in the west end. A cupola was adjacent to the centrally placed brick chimney. The second floor housed the woodworking and machine tool shops. Cooley knew something about blacksmithing and woodworking but not the operation of a foundry. He hired Bob Winslow to teach foundry.

“Sir was Charles Kendall Adams who used to say to me daily as he walked by our first little engineering shop, ‘And how is the scientific blacksmith shop doing this morning?’ Professor Adams formerly had taught Latin, and I always enjoyed the fact that our first shop was built through the urging of one Latin professor (Acting President Frieze) and nicknamed by another, thus giving mechanical engineering a truly classical beginning at Michigan.” Mortimer Cooley (Scientific Blacksmith, p. 62)

“J found dear old Bob Winslow at the foundry on Huron Street just west of the Ann Arbor Railroad tracks, and I hired him to teach foundry practice. Foundry men in those days could mold from almost anything as a pattern. If a part from a machine was brought in, Bob used it as a pattern, trimmed up the molds a bit, and reproduced the part practically in its original form.” Mortimer Cooley (Scientific Blacksmith, p. 105)
The University of Michigan Campus circa 1880s
When Asa Gray was appointed Michigan's first professor in 1837, he was given $5000 to purchase books for the library during a trip to Europe. On his return he sent 3,707 volumes to Ann Arbor, including books on history, philosophy, classical literature, science, art, jurisprudence, and other subjects.

In the early years no special room for the library existed, and books were kept wherever convenient. It is believed that temporary shelves were provided in one of the Professors' Houses. The east house on South University was vacant in those early years, and it could have been there that the books were housed. In November of 1841 the Library was moved to one of the large rooms in the University Building. In 1856 the University Building (Mason Hall) was renovated to provide more adequate accommodations for the Library and the Museum. A reading room was provided.

Henry Colclazier was appointed librarian on June 5, 1837. His salary was to begin when some books were accumulated. He held the office until 1845. From 1845 until 1856 various members of the faculty assumed the duties of the librarian at various times.

In 1863 the Library was moved to the new Law Building and remained there for twenty years. There was much concern, however, that the Department of Law was being deprived of the use of a large portion of the building used by the Library.

John Tappan, the son of President Tappan, was put in charge of the library in 1856. When President Tappan was fired in 1863, John was also removed as Librarian. Datus Chase Brooks, Assistant Professor of Rhetoric and English, and Andrew Ten Brook both served in the position temporarily.

In 1880 the Library Committee reported that with the large increase in the number of students and in the number of subjects taught, the Library was “so crowded as to cause great inconvenience and discomfort to both students and faculty.” In 1881 the legislature appropriated $100,000 for a combination library and art gallery. When the University Library was completed in 1883, it contained 43,366 books, and shelving in the stacks for 80,000 volumes. In 1898 the book stacks facility was doubled in size by duplicating the original fireproof room. Accessions were accumulating at the rate of 7,000 volumes per year, and it took only four years to reach the capacity of the new stacks. In 1902 temporary shelving was placed along the side walls and in the windows, where the sun caused damage to the bindings and paper and caused great concern about fire.

1883

The New Library
The Reading Room of the new Library was furnished with reading desks and swivel chairs. Women sat on one side and the men on the other. (left)

When the swivel chairs became worn and unstable, they were replaced with tables and chairs. (right)

**Jimmy Otley “The Hat Man”**

“When ‘Uncle Jimmy’ came to the University there were but four buildings—the two wings of University Hall, the old Medical Building, and the old Law Building. In those days one of his duties was to carry firewood to the halls to feed the great box stoves, which furnished heat to the buildings. For the past eighteen years he has been custodian of the cloakroom at the General Library. During his years of service, always with small pay, he had accumulated over $14,000 which had been carefully hoarded in a small iron safe.”

*(Michigan Alumnus, February, 1910)*

The Art and Sculpture Galleries were located on the second floor. The sculpture gallery was eventually taken over by books, and this room became known as the Whispering Gallery. Faculty portraits were hung in the Reading Room. A book bindery was housed in the basement.
By 1885 additional space was needed for the Engineering Department. The first unit of the permanent brick Engineering Shop was built on the east side of the original laboratory and connected with it by a passageway at the second-floor level. The sketch below shows the new Engineering Shop with the Scientific Blacksmith Shop (center) and the Wood and Pattern Shop (right).

The addition contained offices, classrooms, drawing rooms, and a laboratory for testing machines, steam engines, water motors, and strength of materials. The tower held a water tank of one hundred barrel capacity for hydraulic work and a thirty-foot glass tube mercury column for standardizing gages.

Within two years after completion, an addition was needed, the removal of the “Scientific Blacksmith Shop” and Wood and Pattern Shop. The “Scientific Blacksmith Shop” was sold and moved to North University and Observatory for a private residence. The completed building consisted of the original east building, the central part and tower, and a west wing, one-story foundry and forge shop.

Special training in physics for engineering and medical students made imperative a Physics Laboratory. The red brick building was completed in 1887 and became the headquarters for work in electrical machinery. The third floor housed the Hygienic Laboratory.
With the growing importance of the basic sciences in medicine, particularly anatomy and histology, the available laboratory space in the Medical Building became inadequate. A new building to house the Anatomical Laboratory was built in 1889 to relieve the crowded conditions of the department. In 1883 a new heating plant was constructed to heat the buildings in the southeast section of the campus. The heating plant in the Chemical Laboratory was abandoned.

The main anatomical laboratory was on the second floor where the men worked. It was lighted by small windows in the sidewalls and by several skylights in the roof. A small dissecting room for women and washrooms were located on the first floor. At this time in the history of the University, on the southeast corner of this once classical campus could be found, working side by side, the engineers at their foundry and forge and the medical students in their laboratories.
In 1890 the medical course was lengthened to four years. With the increase in the requirements for graduation and the additional clinical courses, a new hospital became necessary. The state provided $50,000 for the two hospitals; one for Homeopathic Medicine and one for Allopathic Medicine. The city of Ann Arbor contributed $25,000.

The two buildings provided 104 beds: forty for the Homeopathic Hospital and sixty-four for the Allopathic Hospital. These were known as the Catherine Street Hospitals. The complex would eventually expand to include some twenty buildings, large and small. These were enlarged and added to until the completion of the University Hospital in 1925.

In 1891 the Dental College moved into the vacated Pavilion Hospital on North University, and its former home on South University was given to the Engineering Department. The Dental College had the distinction of occupying three of the four original Professors’ Houses.

The former building of the Dental College was enlarged by the addition of a third floor and renamed the Engineering Building. The entrance was moved to the west side of the new part and the word “Engineering” was placed over the doorway. There were fifteen classrooms and several offices. The building continued in use until 1922, when it was removed to make way for Clements Library.
In 1893 an addition with a tower was added to the Law Building. This allowed for more class and lecture rooms.

In May of 1894 the Regents named the new recitation building used by the College of Literature, Science, and the Arts in honor of Henry Tappan. A large lecture room on the second floor was devoted to the special use of classes in history and economics. President Angell taught his class in International Law in this room. For many years sections of Tappan Hall were used for courses in education, while parts of the building were assigned to various departments of the Literary College.

The administrative offices of the School of Education, as well as the Appointment Bureau for Teachers, were housed in Tappan Hall until the new Education Building was finished in 1930. In 1930 Tappan Hall became the home of the School of Business Administration and its library. The School moved into its own building in 1948 and the Fine Arts and German departments of the Literary College occupied most of Tappan Hall.

In 1894 a new central heating and power plant was built. Known as the Boiler House, it was a renovation and enlargement of the 1883 Heating Plant. A tunnel system connected all of the University Buildings, and a 125-foot brick chimney was also erected. The Engineering Department took sole responsibility for operating the plant.
In 1891 Joshua W. Waterman of Detroit gave a gift of $20,000 for a gymnasium, on condition that other donors should contribute a like amount. In 1894 Waterman Gymnasium opened. Due to the Depression the University was unable to begin the wing for the use of women.

“The men with their outdoor games have, even without the Gymnasium, larger facilities for healthful exercise than the women. The building will be given up at certain times to the women. But separate provisions should be made for the latter.”
President’s Annual Report (Michigan Alumnus, Oct. 24, 1895)

The men and women students were left with a most unsatisfactory arrangement of dividing various hours during the week in Waterman Gymnasium. Barbour Gymnasium was completed in 1902 as a result of the generosity of Regent Levi Barbour. Barbour gave property in Detroit to the University, and income from the sale of this land with an addition from the general fund, made the building possible.

For many years the Barbour Gymnasium was the center of all women’s activities. The first floor, with its oak-paneled walls and beams and dramatic staircases opening onto the large gym, was the scene of the calisthenics and volleyball classes, while the smaller gym was used as a lounge. The marble floored basement was the scene of many suppers and picnics, and gallons of fudge were cooked on the smoky old stove in the kitchen.
The assembly room (small gym) was named in honor of Sarah Caswell Angell and became the center of dramatic life and social events. Women’s societies gave plays on the small stage, and many class stunts, parties, receptions, recitals, and dances took place in the hall.
In 1898 a second addition was made to the Law Building. The exterior of the building was completely altered. It was faced with sandstone on the first story and light-pressed brick on the upper stories. The tower was removed, and a new wing was added which provided two lecture rooms in addition to the old lecture room on the first floor.

The law library occupied the entire south wing of the old building. Lecture rooms, offices, and consultation rooms made up the remainder of the second and third floor. The Regents’ Board Room was in the south wing, where they met for more than thirty-five years until they moved to Angell Hall.

As early as 1895 it had become apparent that the growing enrollments in Engineering required more space. Mortimer Cooley finally persuaded the University of the importance of a new building, arguing that “If you could but see the other engineering colleges with which we are forced to compete, you would not hesitate for one minute to appropriate a quarter of a million dollars.” In 1904 construction was completed for a large building known for years as the New Engineering Building and later renamed West Engineering.

When the New Engineering Building was under construction, there was a serious problem of how to site the building without interfering with the diagonal walk. Professor Denison prepared a sketch showing the diagonal walk passing through the building. The Archway was named in his honor.
A new medical building became essential to keep pace with the rapid growth of medical science. The new Medical Building opened in 1904 and housed the departments of Anatomy, Histology, Pathology, Bacteriology, Physiological Chemistry, and Hygiene. In addition to the spacious laboratories of these departments, the building contained two large amphitheaters, two large recitation rooms, and a suite of rooms for executive purposes. Space was also provided for the anatomical and pathological museums.

After being moved about the campus for 32 years and occupying three of the original Professors’ Houses, the Dental College was finally provided a permanent home in 1905. The new building on North University had two stories and a basement. It was heated with steam by a system of fan heating and ventilation, designed by the Engineering Faculty. Male students had a locker room, which also served as a rest or recreation room in the basement. On the first floor was a room especially designed for the women students, containing lockers and facilities for resting or studies.

On the completion of the new Medical Building, the Hygienic Laboratory was moved out of the Physics Building, leaving much-needed room for the Department of Physics. However even with the added space, it was still inadequate, and in 1905 an addition was made to the building, providing a well-equipped lecture room accommodating 400 students, and space for lectures, recitations, and laboratory classes in general physics. Storage for demonstration and laboratory apparatus, a physics instrument shop, and a glassblower’s shop were also provided.
In recognition of Angell’s 38 years of service, the Board of Regents took the following action: Resolved: “That the Board of Regents hereby tenders to James B. Angell the appointment of Chancellor of the University of Michigan, the duties of the office to be such as, at the request of the President, he may be willing and able to perform; the salary for such office to be $4000 per year, with house rent, light and fuel, as long as he sees fit to occupy his present residence; said appointment to take effect at the close of this academic year.” (Michigan Alumnus, March, 1909 p. 222)
Mrs. Angell died in Ann Arbor, on December 17, 1903. President Angell continued to live in his home on South University. He died April 1, 1916 at the age of eighty-eight. Private services were held on April 3, at 2:30 in the afternoon at the President’s House. At the end of the services, the Glee Club, standing in the yard just outside the door, sang “Laudes Atque Carmina.” His funeral procession was an occasion of general mourning. The procession journeyed up State Street, North University, Washtenaw and Geddes Avenue. The streets were lined with a double row of students, standing in close order with bared heads to pay their last tribute to Michigan’s great President.
In the early 1900s, the publishing firm of Littig and Company commissioned Richard Rummell, the landscape artist, to create watercolors of the nation's colleges and universities. It is speculated that the artist used a balloon at an altitude of 300 feet to create these paintings.
Harry Burns Hutchins '71, '21, Dean of the Law School, was named interim president in 1909 at the age of 63 to succeed President Angell. After several candidates, including Woodrow Wilson, declined to accept the Michigan presidency, the Regents decided to make Hutchins president for a three-year term, which was later extended to five and then ten years. Hutchins largely continued the Angell agenda, with the first significant additions to the campus from private gifts. Hutchins made the first concerted effort to pull together Michigan's growing alumni body, traveling around the country speaking to alumni about the importance of their involvement with their University.

His tenure was characterized by numerous building projects, several of which continue to define the campus today: Alumni Memorial Hall, Hill Auditorium, the Martha Cook Residence Hall, and the Michigan Union. Hutchins also faced the difficult challenge of leading the university through World War I, which rapidly exhausted his remaining energy and led to his retirement in 1920. During Hutchins' ten-year administration, enrollments at the University almost doubled, from less than 5,000 to more than 9,000, while the faculty increased from 427 to 618. Hutchins was very instrumental in organizing the alumni and engaging their support to complement state funding.

After Commencement (1912), Governor Chase S. Osborn, President Hutchins, and Dean Mortimer Cooley stroll across the campus.

A new Chemistry and Pharmacy Building was completed in 1909. It was built on the site of the first University Hospital, which incorporated one of the four Professors’ Houses, the first buildings on the campus.

In 1908-09, the last year in which all the chemical work was carried on in the old Laboratory, 2,599 students were enrolled in the class work in chemistry, pharmacy, and chemical engineering.