

The Municipal Observatory

Associated with the inception of most new ideas or institutions is the driving personality of a single individual. But innovations come usually in response to definite needs or a keen desire for the betterment of existing conditions, and the Drake University Municipal Observatory was no exception. Dr. Daniel W. Morehouse was its motivating spirit.

"The longer I live the more I am impressed with the value of dreamers to the world. Those who see visions are the forerunners of every practical accomplishment", wrote a newspaper columnist in Des Moines in November, 1921. "Last week at Waveland Park, Des Moines citizens dedicated the only municipal observatory in the United States, an event so noteworthy that Dean Moulton, the world's greatest living astronomical mathematician, came to speak at the exercises."

Most people who attended the dedicatory services saw little more than a "compactly built, cut-stone building surmounted by a copper dome." Close friends of Dean Morehouse, however, perceived in the structure the realization of a dream that had been cherished for more than twenty

years and brought to fruition through many long hours of careful planning and skillful maneuvering, to say nothing of other longer hours when deep anxiety and discouragement prevailed.

"Many persons have known of the professor's long treasured ambition to have an observatory out where the smoke and noise and vibration of the city would not interfere with his delicate instruments. But probably only those who have tried to look through the big telescope as a street car rumbled by the old science hall on the university campus know how well founded was the need which the new observatory fills", commented Charles Darlington in the *Des Moines Capital*.

When the old science hall was erected on the Drake campus along University Avenue in 1891, one of the architect's worries was what to do with the big telescope. A very serious problem was created by the limited view of the horizon, cut off by nearby trees and buildings. The campus, being almost as "level as the floor", offered no vantage point upon which to erect a building.

To overcome this difficulty, a solid brick pier one hundred feet tall was erected upon which to mount the telescope. This huge column of masonry, forming one corner of the science building and outwardly resembling a huge factory chimney, became the unprepossessing landmark upon

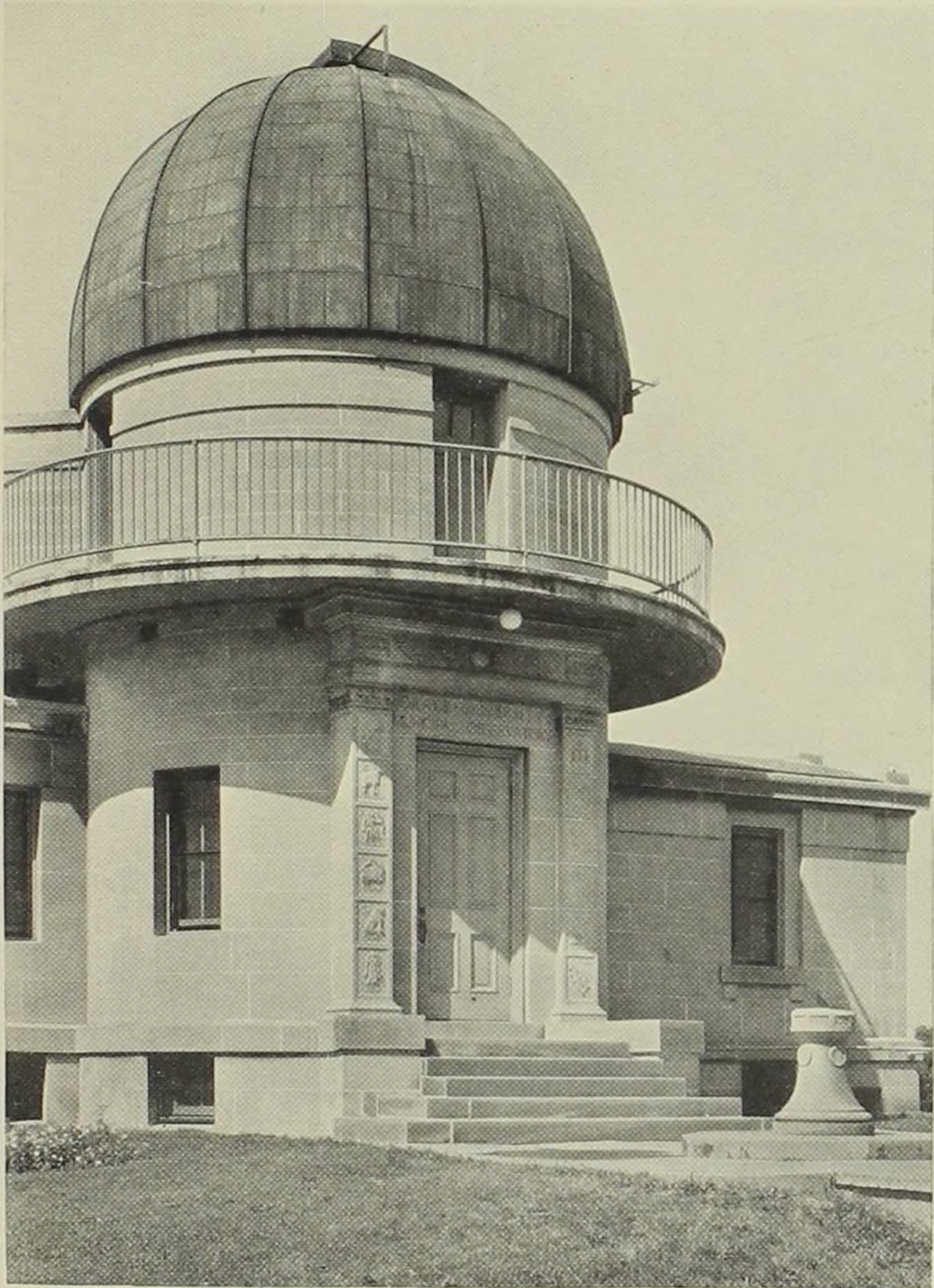
the college campus. It was the butt of many a "quirk and jibe" as well as some criticism, for it added little to the beauty of the campus.

Drake University had devoted much attention to astronomy for almost a decade before D. W. Morehouse joined the faculty when he graduated in 1900. The telescope was a gift of F. M. Drake, the patron for whom the University was named. Other persons had donated additional equipment in the old observatory. Indeed, the early interest in astronomy which had been manifested by the citizens of Des Moines deepened as the work of Professor Morehouse attracted international attention.

He labored under severe handicaps during the many long years when, almost nightly, he climbed the half dozen flights of wooden steps encircling the tower. The worst feature of the old observatory was, perhaps, that the telescope was not sufficiently elevated above the smoke and grime of the surrounding city. Neither did the heavy masonry on which it was mounted prevent troublesome vibrations from the street traffic below, which indeed seemed to be magnified by the movement of the tall tower resting on a base apparently too small for its height. Every tremble seemed to grow as it proceeded upward through the structure, changing "to a miniature earthquake which

caused the telescope to shake like a great palsied finger pointing at the sky. Many a night when the astronomer has been photographing or observing some heavenly phenomena through the telescope, a passing street car or a heavily loaded truck has put a stop to the proceedings and caused the images in the field to dance a veritable shimmy."

Almost from the beginning of his association with Drake University, D. W. Morehouse had visions of the project that was to culminate in 1921. The need was definite, if not desperate, for an improvement that would furnish him with "better equipment with which to carry on his investigations, and at the same time the citizenry of Des Moines with the opportunity to avail themselves of a new cultural tool which heretofore had been denied them." Twenty years before the observatory was completed, Dr. Morehouse had already chosen the slightly knoll in the middle of the Waveland Park grounds as the ideal location. There, all the shortcomings of the old observatory would be eliminated, for no street car approached within half a mile, and the telescope could be mounted on a foundation which could "tremble only with the movement of some mighty cataclysm in the bowels of the earth". There also the air would be clear and "the 'seeing' fine".



COURTESY OF DRAKE UNIVERSITY

DRAKE UNIVERSITY MUNICIPAL OBSERVATORY

On the eve of the dedication of the new observatory in 1921, an editorial in the *Des Moines Tribune* admitted that when Professor Morehouse was forming these visions, "probably nothing was remoter from the municipal thought of Des Moines, and probably nothing was further from the financial program of Drake University. And yet today, that knoll in Waveland Park is surmounted by one of the most complete astronomical observatories in the United States. Professor Morehouse is fixed for a life career as official astronomer of the city, Drake University has an outstanding feature among American schools, and the average citizen has something to point to, as creditable to Des Moines as it is unusual in cities like Des Moines."

In the fulfillment of a conception such as this one, however, there must always elapse between the inception of the idea and its final realization many long years of constant planning, hoping, and praying. "Not everybody has the talent for organization, the sense of timeliness, and the quality of persistence in defeat and delay, but occasionally someone appears upon the stage of human affairs who can plan a work of twenty years and stick to his job."

Dr. Morehouse had to convince both Des Moines and Drake University of the feasibility of

the project. He had to convince citizens of the utility of a municipal observatory, showing how it was to be operated, and how it would benefit not only the university students but the high school students and the citizens of Des Moines. In addition, there was the usual financial problem — how to raise the money for construction and maintenance. Dr. Morehouse worked quietly but effectively, and he had the support of certain influential persons who shared his enthusiasm and foresight. Then, just at the moment when success seemed assured, an economy movement in the city council threatened to extinguish the hopes that had been buoyed so high. This was but the dark moment before the dawn, however, for the city authorities finally acted favorably on the project.

The observatory was truly the result of "cooperation between a city, a university, and the taxpayers". The cost, about \$55,000, was borne by the city. Drake University purchased the municipal bonds issued to raise the money. The equipment and the staff were furnished by the University. The observatory was to be open to the public, without charge, on specified evenings, and visitors would be entertained with lectures, explanations, and actual observations. These plans worked out as Dr. Morehouse anticipated. During the first month of its operation, seven hundred

persons visited the observatory which was open on Monday and Friday evenings from 7:30 to 9:00 o'clock. The citizens of Des Moines thus demonstrated their active interest in astronomy, which Professor Morehouse, through his ability and popularity, had done so much to cultivate. The success of the observatory was the practical vindication of his vision.

On August 24, 1920, the ground breaking ceremonies for the new municipal observatory took place. Work on the construction proceeded smoothly. The building was completed and the equipment installed in just a little over a year. Invitations were issued by the University and the city of Des Moines to a list of patrons to attend the dedicatory ceremonies on November 5, 1921.

On entering Waveland Park, the visitors perceived the observatory situated on an elevated spot to the right of a small grove of trees. It was said that the site of the building was the highest point in the city. The observatory itself was described by Dr. Morehouse in the *Popular Astronomy* magazine for February, 1922. "Two of our leading firms of the city coöperated most effectually in giving to it more significance than is usually found in a building of this character. Its design presented a problem consisting of elements different from those usually confronting an archi-

tect. . . . The building is a massive structure of gray Bedford stone and the architecture is classic of the severe Grecian type." The article goes on to describe the sun dial before the main entrance and the hand-carved signs of the zodiac on the sides of the door, as well as other details that recall the contributions made to astronomy by the ancient civilizations from Egypt to Rome.

The building itself is so constructed as to assure the utmost efficiency, convenience, and comfort. It is moisture-proof and fire-proof. In the basement are rest rooms, a photographic room, a room for a seismograph, and the automatic heating plant. The ground floor entrance leads into the beautiful rotunda surmounted by a copper dome. Off the rotunda are a transit and clock room, an office, and a public lecture room and library. "The observing room is just above the rotunda. The telescope is mounted on reinforced concrete beams resting on the extra heavy stone wall and insulated from possible vibration by compressed cork." Around the exterior of the observing tower is a balcony with an iron balustrade, and the roof of the lecture room serves as a promenade.

"The equipment of the observatory consists of a nine-inch Warner and Swasey equatorial with optical parts by the John A. Brashear Company;

a five-inch photographic doublet, a nine-inch photographic lens of 120 inch focal length and a standard spectroscope, all by the same firm; a transit instrument by an English firm, chronograph, chronometer, sextants, and, in short, practically all of the usual apparatus used in Astronomy." What more could any astronomer desire?

On the day of the dedication, Dr. Morehouse was indeed a very happy man as he introduced the principal speaker, Dr. Forest Ray Moulton of the University of Chicago. Dr. Moulton emphasized the spiritual benefits of astronomy, in which "there has never been anything that is mean, or low, or sordid . . . Its object has been only the truth . . . I congratulate you on having completed and equipped so splendid a building. It is an ornament to your city. But I congratulate you more for having made easily accessible to your citizens larger worlds, physical, intellectual, and moral."

The key to the building was then presented to Dean Morehouse, who said, on accepting it: "I hope that this key which you have put in my hand shall never pass from me. I hope, sir, I shall be able to keep this key with some degree of honor to the institution and to the state and to you. As has been here stated so wonderfully, it is our faithfulness to our duty that counts, and it is my purpose,

friends, that this building, so long as anything may emanate from me with regard to this work, shall be held open to the public of Des Moines . . .

“My friends, I want to say to you that this observatory is not a mercenary scheme. It has been a long time in building and the methods that have been pursued have been the very best. So it seems to me it speaks of the thought of that old, biblical statement, and I think there has been no time in the world when we need to have a better realization of this fact. ‘Hold fast that which is good and that which you have proved.’ I have come to believe that the general public wants to know something about astronomy, and that they want to know the *truth* and that they want it in no bizarre way . . .

“The days have come and gone and twenty years ago this spring I stood here by a windmill which at that time was pumping water from a well; I looked over these hills, and I said, ‘What a place for an observatory; is it possible?’ And from that day to this it has never gone from my vision. Oh, friends, with all modesty, I want to say to you that today has crowned in this way a lifelong dream, and I am grateful beyond expression of words to the city of Des Moines, within whose confines I hope to live the rest of my life. I am grateful.”

The Drake University Municipal Observatory has throughout all the intervening years fulfilled the most sanguine expectations of its founders. At the time of its construction it was unique in America for, though other cities had municipal observatories, Des Moines was the first to "plan and erect a public observatory in a public park for the primary purpose of giving to its citizens an opportunity to know the beauty, dignity, and high moral value of Astronomy." The observatory belongs to both the University and the city and is properly a part of the educational system of both.

How fitting that the ashes of the astronomer now repose in an urn placed in a niche in the rotunda of the observatory for which he gave so much of himself and which was so much a part of him. It is a beautiful thought to realize that Dr. Morehouse and his observatory, so intimately associated in life, are likewise now associated in death.

BEN HUR WILSON