

TRUBY

## A touch of Broadway

The engineer's sign with its evening story of news and announcements is perhaps the most distinctive sight that greets the nocturnal visitor to the Oklahoma campus. A replica of the bright flashing signs of Broadway in New York City—the engineer's sign has an interesting history and is probably the most ambitious program ever attempted by a group of students.

The open house exhibits as shown each year during the St. Patrick's celebration are due to the constant search and effort of the engineering students to demonstrate the unusual or entertaining as encountered in their daily work. The idea of constructing a small model "talking" sign for the open house program was first suggested to a group of electrical engineers who attended a regional meeting of the American Institute of Electrical Engineers at Dallas, Texas, in May, 1929. During one of the many hours spent in seeing the town a small display sign that flashed a varied message was noticed and the idea of building one like it met instant approval.

On returning to Norman a small model was laboriously constructed and demonstrated before the Engineers club. The operation was brought about by sliding a perforated paper tape over a group of insulated contacts placed in the bottom of a trough filled with mercury. As the tape moved along the mercury sagged through the holes and closed the contact to the different lamps in turn.

The first model was very crude in appearance with a heavy paper tape six inches wide and letters painstakingly carved with pocket knife and scissors. There was nothing faulty in the operation of the machine, however, and the Engineers club at their last meeting of the school year in May, 1929 voted with much enthusiasm to sponsor the building of such a sign for the coming year.

In the fall another and better model was constructed having as an outstanding

improvement the use of a hat band perforator for punching the tape. As a result of this it was possible to cut the letters much more quickly and on a smaller tape thus making it easy to prepare a large amount of copy. This new model was first presented to the people of Norman and the university authorities at the Light's Golden Jubilee banquet held in honor of Thomas A. Edison at the McFarlin Memorial church the evening of October 21, 1929. At this time most of the local program was furnished to the guests by means of the electric sign and the mechanical man, another engineering entertainer. As a result of this demonstration the university officials, who heretofore had remained a bit skeptical of the project, gave their consent to the idea of placing a large sign on a corner of the engineering building.

Work was then started on the detailed plans and analysis of the truss needed to sustain the weight of the sign on the building. Calculations were made for a wind velocity of 100 miles an hour which is somewhat higher than anything of record at Norman. The itemized list of materials amounting to over \$3,000 was drawn up and presented to the wholesale and construction companies who had promised to help in assembling the equipment.

The time needed for the actual construction arrived with the Christmas holidays and the first truck load of material from the steel companies in Oklahoma City was delivered at Norman early in the morning of the first day. During the sixteen days that followed different groups were hard at work in the laboratories on various phases of construction. A large number was at work assembling the box which constitutes the sign proper and in wiring the leads to each socket. Another group was fashioning the steel framework of the truss, welding its parts together and painting them. A third party with hammer and drills was cut-

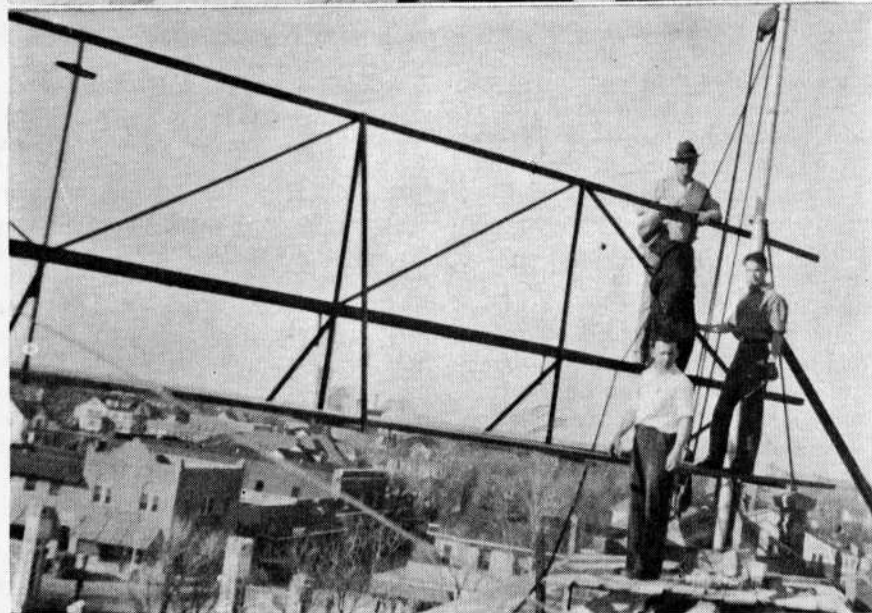
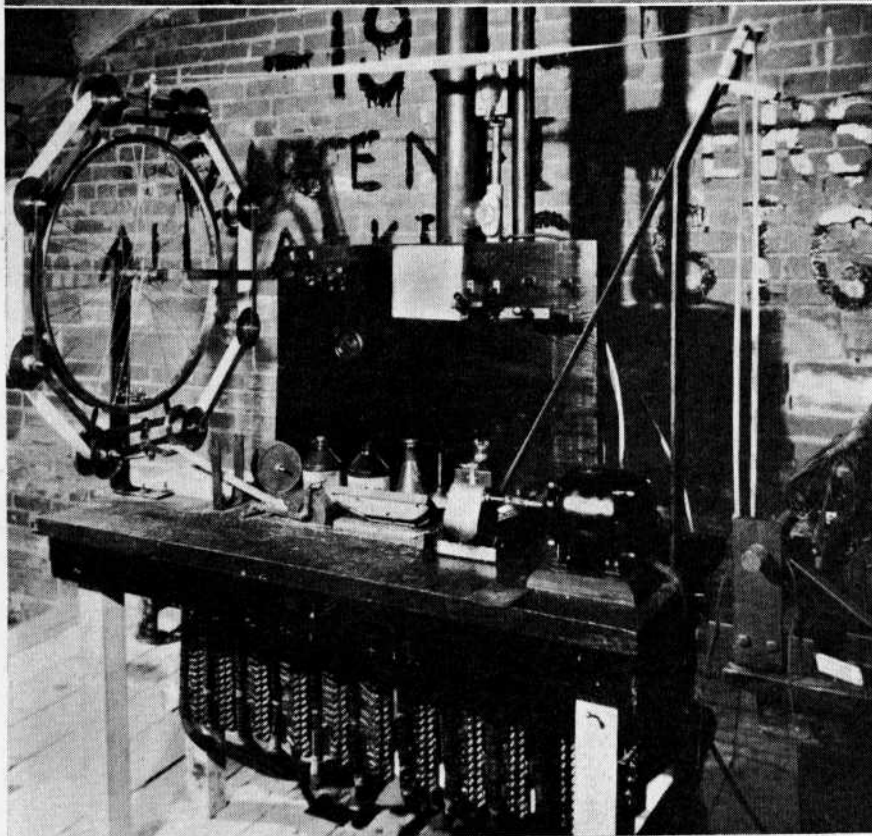
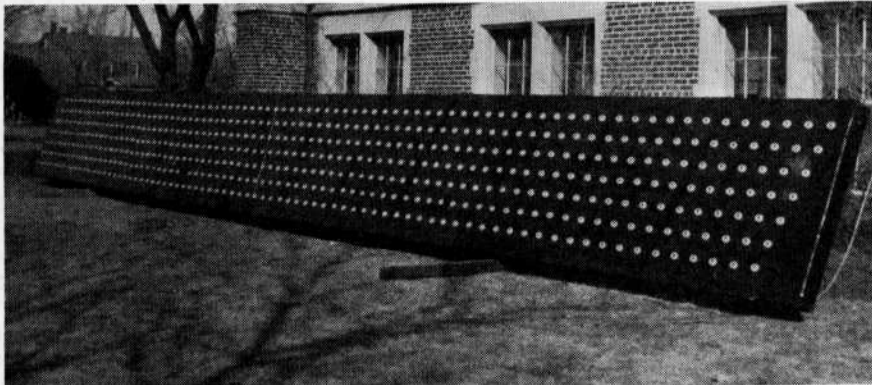
The engineer's sign flashing the news of the world nightly from the engineering building is one of the outstanding features of the campus. Untiring work of Charles Ittner, '30 eng., below, and others, resulted in its building and erection by engineering students. At the left is the sign, flashing its nightly salutation. On the opposite pages, students are seen erecting the framework, while another view shows the length of the sign itself. The center photograph reveals the mechanism that operates the sign, as explained in the article that follows



ting holes for the foundation bolts through the brick parapets on the roof of the engineering building; fifty-two holes in all through a thirteen inch brick wall. Then the derrick for raising the parts was placed and securely anchored near the west wall. It was hoped that the heavy construction would be completed by the end of the holidays but the recess ended one day too soon, just before everything was in readiness.

Along with the resumption of studies came the winter's snow, one of the worst in history, that remained for a full month.

It took but little time to wire up the 546 circuits and everything was in readiness for the first test. Only a small group was on hand at midnight Saturday, February 15, waiting and shivering



CHARLES ITTNER AND HEFFNER

in the cold near the end of a temporary telephone line laid to the Varsity corner from the engineering building. This tired group mustered up a cheer however when the first words "Erin Go Bragh" flashed over the front to be followed quickly by those other famous words, the first to travel over telegraph wires, "What hath God wrought?"

Regular operation did not begin until the start of St. Patrick's week in order that small operating difficulties might be cleared up. The program of the annual fireworks display was announced by means of the sign and from that time on until the end of the school year the operation was continuous with scientific news and short sketches from the *Oklahoma Daily* in view nightly.

The original plans had included neon border decorations but these were not in place at the end of the school year due to delay in receipt of the apparatus from the factory. Working with the neon tubing under the hot sun of July was a different story for a few of the fellows from that of the January snows. July 8 marked final completion as on that evening the sign was seen for the first time in formal dress. Since that time the sign has assumed its place in student life, accepted in matter-of-fact manner by those on the campus who read its nightly story and wonder but little at the unusual possession of the university.

A few of the physical characteristics of the sign might be interesting. The solid front supports 546 lamps while the word "Engineers" above contains 132 more. The overall measurements are forty feet by four feet. Over 40,000 feet of wire make up the control circuits. Another feature of the original design by the students is that of the reel which holds the paper tape on which the messages are cut. In order to handle a long endless roll of tape, this reel, nearly three feet in diameter, is constructed so that the tape is pulled from the inside of the roll through the mercury trough to again roll up on the outside of the same reel. (See illustration on this page). The actual mechanism governing all of the operation is only eleven inches long and three-quarters of an inch wide—not much larger than a wooden ruler but made with watchmakers' accuracy.

The successful completion of this project was due to a great extent to the untiring efforts of Charles Ittner, E. E. '30, president of the Engineers club at that time, and a group of senior electrical engineers. The sign has been formally dedicated with the expectation and hope that its operation will always reflect credit and distinction to the University of Oklahoma.