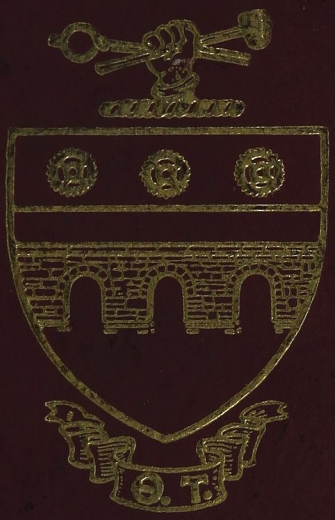
# The GEAR of THETA TAU




*January, 1925*

VOLUME XV NUMBER 1

# *The* GEAR *of* THETA TAU

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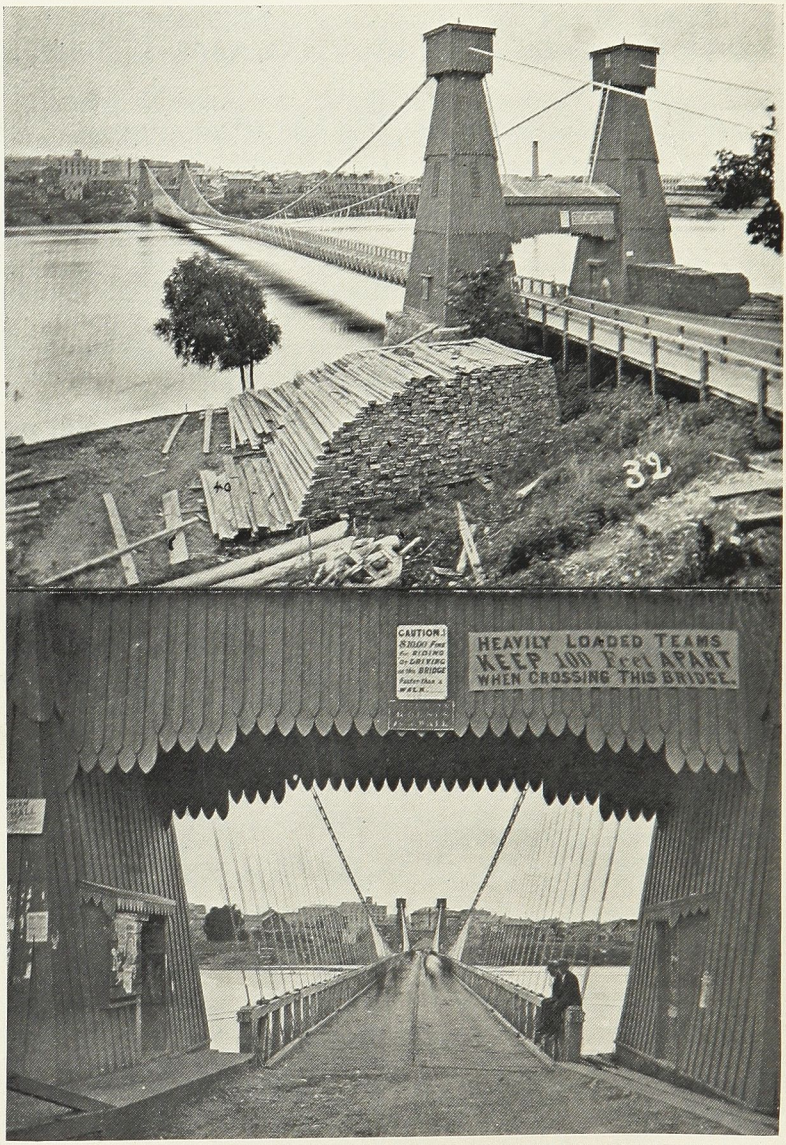



*First to Span the Mississippi, Opened in Minneapolis in January, 1855.*

# MINNESOTA BRIDGE CONSTRUCTION

## *A Master Builder Chronicles Its Progress*

By Walter H. Wheeler, Alpha '06*

THE progress of bridge building in Minnesota has naturally kept pace with the progress of this art in all the civilized world, and especially that in the remainder of the United States. However, the availability and relative costs of the various materials for constructing bridges, the ability to finance their construction, the size and character of the rivers and streams to be bridged and the volume and kind of traffic to be provided for, all exert their influence upon the progress of bridge construction.

The fact that Minnesota is comparatively a newly settled area which outgrew its position as a frontier state in only the last half-century automatically confines its progress in bridge construction to approximately the last 75 years.

Before Minnesota had emerged from its "wild west" days, many great and notable bridges had been built in the civilized world. We may even go back to the days of the Greek and Roman empires to find examples of great and famous bridges which still hold their place among the notable engineering works of the world, and were great achievements in their day.

It is said that the art of bridge design began to become an exact science about the middle of the last century, and that prior to that time there were no well recognized methods of analyzing the stresses in bridge structures. Engineers and builders of bridges relied upon experience and trial methods to attain the desired results. If the structure did not collapse, it was a success; if it did, it was rebuilt heavier than before, and this operation was repeated until an acceptable structure resulted.

The writer has been unable to find any record of the first bridge built in Minnesota which was of sufficient importance so that one might say that it was the first. It was probably a wooden structure.

In the early days of Minnesota, the finest and best selected timber for bridge construction could be had at a very low price directly from the forests and mills of the state. Consequently that was the material of which most bridges were constructed. These early bridges and many of the later ones, including some that are being built now, were of wood, either pile trestles with caps and stringers to carry the bridge floor, or wooden trusses.

Within the time that Minnesota has been building bridges, two new materials for bridge construction have been developed, namely, steel and Portland cement concrete. These two materials are used in the construction of our so-called "permanent" bridges.

It would be interesting to trace the relationships of prices of materials and labor to the evolution of bridge design and construction, but space will not here permit.

The old Wire Suspension bridge from Minneapolis to Nicollet Island and thence by wood trestle to St. Anthony is said to be the first bridge built across the Mississippi river. This bridge was in its day considered a great engineering achievement, as indeed it was. The opening in January, 1855, was attended by very elaborate ceremonies including a mile-long parade and

*Brother Wheeler is the engineer in charge of constructing the Fort Snelling-Mendota bridge.

a banquet and ball. One observer records that he saw 61 sleighs in the parade. Mr. S. M. Griffith was the engineer and designer; he was made much of at the celebration and toasted and feted very generously; he in turn toasted the mechanics who had worked on the construction and credited them with much of the success of the work.

The suspension span of this bridge was 620 feet long. The roadway was 17 feet wide. The suspension cables had a vertical deflection of 47 feet, and were carried on wooden towers. There were four cables, each consisting of 500 strands of No. 10 charcoal iron wire. There were wooden stiffening trusses along each edge of the deck. The total cost of the bridge was $36,000. The bridge was built by a corporation consisting mostly of residents of Minnesota, and was operated as a toll bridge, with charges of 5 cents for each pedestrian, and 25 cents for each team or horse-drawn vehicle. The bridge was posted with a notice which permitted only one "heavily loaded team" to each 100 feet of bridge. The Hon. H. H. Sibley was one of the speakers at the opening of the bridge.

In March, 1855, a high wind tore the deck from this bridge and broke the castings to which the cables were attached. The damage was repaired before summer, and the bridge served until its replacement in 1875.

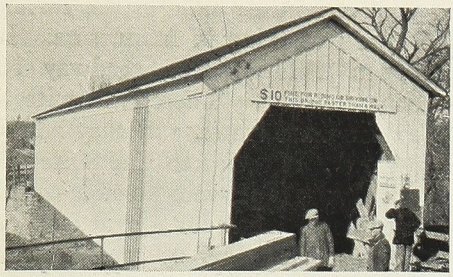
In 1858 the Wabasha Street bridge in St. Paul was completed across the Mississippi. This bridge differed widely in design from the one in Minneapolis. The length of the main span was 240 feet, and it had a clearance of 90 feet above low water to provide for river transportation. There were three through-trusses built of wood and set with the bottom cords level and the roadway sloping. They were supported on high stone piers, and the roadway was divided so that there was one line of traffic on each side of the middle truss. The writer could not determine definitely from available photographs the type of truss used, but it seems to have been built along the lines of a double-intersection Warren truss.

The bridge was privately owned, and was operated as a toll bridge until it was made free by the city in 1874. It was built by the St. Paul Bridge Co., and the city records of St. Paul show that in 1857 the City Council subscribed $50,000 to the cost to complete the bridge. This was replaced in 1875 by an iron truss bridge with a wider roadway.

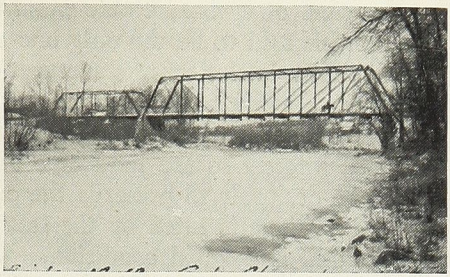
In 1875 the old Wire Suspension bridge in Minneapolis was replaced by a new suspension bridge having stone towers, a wider roadway and sidewalks; in all respects it was a considerably larger and stronger bridge than the first one; it was designed by the same engineer. This bridge later carried the street railway. It cost $230,000. It was replaced in the late eighties by the present steel-arch bridge, with a 57-foot roadway and two 10-foot sidewalks, and designed to carry the loads of modern traffic.

Iron bridges were first built in the state about 60 or 65 years ago. One unique example of the earlier iron bridges is State Bridge M-32 on trunk highway No. 20 at Preston, built 65 years ago. It is a clear span "bowstring" style of through-truss, with very light web members. The span is 120 feet, roadway 16 feet, panel spacing 10 feet, top cord built up of two 6-inch channels and two 10-inch plates, bottom cord eye bars. The bridge is posted for a safe load of four tons, is of wrought iron, in an excellent state of preservation, and the workmanship is of the best.

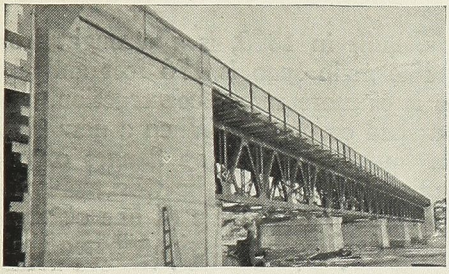
Another unique structure is the old covered wooden bridge at Zumbrota.



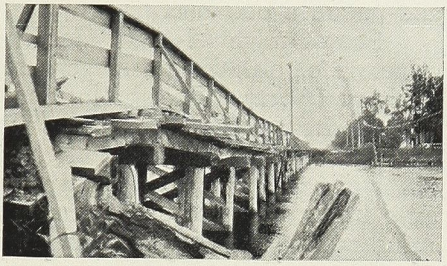
*Covered Wooden Structure at Zumbrota.*



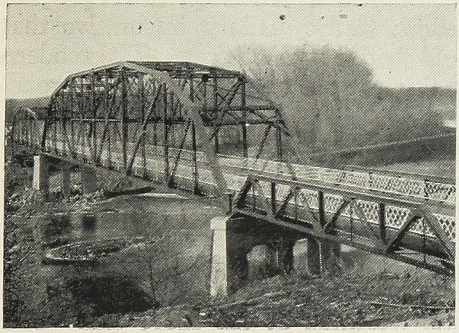
*M-49, at Garden City, Built in 1880.*



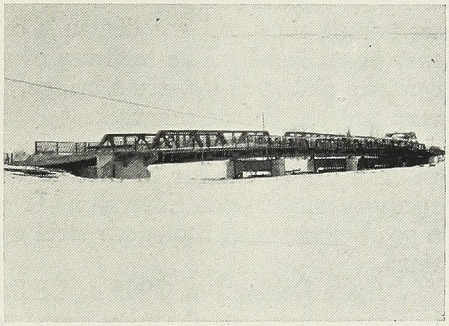
*No. 3700, in Lake of the Woods County.*



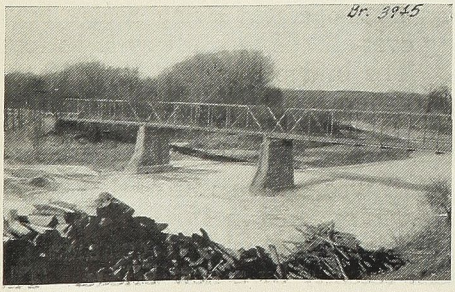
*M-203, Old Warroad Pile Trestle.*



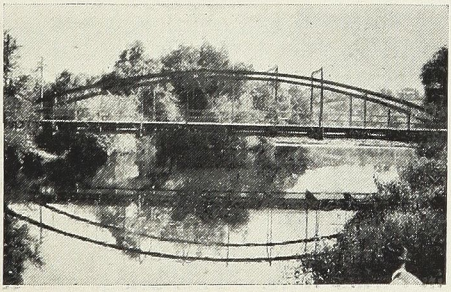
*Swing Span, Built in 1875 at Le Sueur.*



*New Warroad Concrete Low-Truss.*




*No. 3945, Replacing old Le Sueur Bridge.*



*M-32 at Preston, Built 65 Years Ago.*

It is typical of a considerable number of such structures built in the earlier days, and is said to be the only one of this type remaining in Minnesota. It is a wooden lattice-truss structure. The span is 116½ feet, roadway 16 feet, and the bridge is enclosed in a wooden housing. There are quite a number of these covered bridges in the New England states, and they add a touch of interest to the landscape and highways. It seems to the writer it would be desirable to preserve the one at Zumbrota if it were possible to do so. The bridge is rated by the state highway department for a safe load of 10 tons and is in good condition. When it was taken over by the highway department there were four layers of flooring on the bridge, totaling about 12 inches in thickness. Apparently it had been the practice to lay new floors over the old ones. The state highway department removed the old floors and put in a new one.

State Bridge M-49 at Garden City, built in 1880, is a wrought iron structure of a design no longer used. The main span is 176 feet and the roadway 16 feet. The shorter end span is of more recent construction, and seems to have been added after a washout had occurred. When a new floor was laid on this bridge recently, it was found that the top flanges of the double channel floor stringers were so badly corroded that the workmen who were laying the floor drove several nails through the flange of one of these stringers, thinking they were nailing into the wood nailing-strip. When their mistake was discovered, an examination was made at once, and the old beams replaced before the floor was laid.

The view of bridge M-203 at Warroad, shows the old wood pile trestle which is typical of many that were built in the state and served their purpose well until time and the demands of modern traffic made it imperative that they be replaced. The roadway of the old bridge was 16 feet. The modern concrete and steel low-truss bridge, replacing the old one, has a 20-foot roadway and one 5-foot sidewalk.

State Bridge No. 3700 in Lake of the Woods county replaced an old wooden bridge similar to that at Warroad. This bridge also has a 20-foot roadway and 5-foot sidewalk. It was completed about a year ago, and is a good example of a modern steel deck-truss bridge with full riveted connections.

State Bridge No. 3945 at Le Sueur was formerly a 3-span wrought iron bridge with balanced swing span, counter-weighted at the short end. The old bridge had a 14-foot roadway and was completed in 1875. It was replaced recently with a modern steel bridge shown in the cut. The new bridge has a 20-foot roadway.

State Bridge M-6 is a wrought iron hand-operated swing bridge built in 1879. The swing span is 250 feet long over-all. The roadway is 16 feet. The panel spacing is 16 feet, 7 inches. The bridge is rated for a 10-ton load, and is in good shape. It was recently refloored with 36-foot stringers which stiffened the bridge materially. The new wearing surface on the floor is Tarvia X paving.

Bridge M-341 is an example of a small wooden truss bridge, of which there were formerly many in the state. It was replaced in 1922.

Bridge M-202 is another type of wooden bridge also in common use in earlier days. This bridge was replaced recently by a new bridge. The road for the new bridge was relocated so that the old bridge could be used

as a detour. During construction of the new bridge, a venturesome 10-ton caterpillar tractor attempted a crossing on the old bridge. The frail wooden structure, frightened by such a dangerous looking animal, promptly collapsed into the bed of the stream, taking the "cat" with it. It is reported that the driver was not injured and the "cat" was rescued, but the bridge was no longer passable.

State Bridge M-157 near Motley is a 140-foot span steel truss pin-connected bridge of a general type in common use in the earlier days of steel highway bridge construction. It has a 16-foot roadway, is rated for a 10-ton load, and is in fairly good condition.

State Bridge M-131 near Wells is a type of low-truss steel-angle highway bridge built quite extensively some 20 years ago. It was found unsuitable for modern traffic conditions.

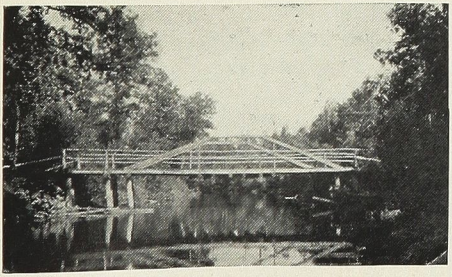
State Bridge M-139 was located near Marshall. It was typical of some of the earlier small concrete bridges, built under the old system without much engineering or supervision. The picture shows the result. This bridge was replaced by a bridge similar to No. 4233, which is representative of this type of small bridge now being built under the direction of the state highway department.

The recent bridge collapse at Albany is instructive and interesting from an engineering standpoint. The bridge was a low-truss pin-connected steel structure. A large bus traveling at high speed to make a grade beyond the bridge produced such violent vibration by its impact that one of the pins jumped out of place and allowed the bridge to collapse. The bus cleared the gap but left the marks of its differential on the ends of the stringers where it left the bridge.

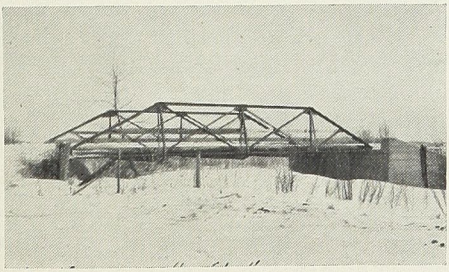
State Bridge No. 4232 is typical of the type of high-truss steel bridge now built by the state highway department. State Bridge No. 3800 is a typical reinforced concrete girder bridge. State Bridge No. 3601 is a typical reinforced concrete rib-arch bridge. Little comment is necessary on these bridges. By comparison with the older bridges previously described, the photographs tell the story.

This paper would not be complete if it failed to note the influence which the state highway department has had upon bridge building in Minnesota.

In 1905 the state legislature passed a law which created the state highway commission, consisting of three men who served without pay. The commissioners were appointed by the Governor. In January, 1906, the commission appointed the Hon. Geo. W. Cooley as secretary and chief engineer, and he served in that capacity until the winter of 1917-18. In 1911 a 1-mill



*M-341, A Type Formerly Much Used.*



*M-131, Near Wells, a Type Now Obsolete.*

tax was levied by the state for road and bridge work, a bridge department was established, and the work of the commission expanded. In 1918 the legislature changed the law to provide for a single commissioner who should devote all his time to the office and receive a salary therefor. Mr. Cooley resigned and Mr. C. M. Babcock was appointed. In 1919 the Babcock Amendment to the constitution which provided for an automobile license tax for road purposes was submitted by the legislature to a vote of the people and was carried at the next general election. In 1921 the legislature set up the machinery for the operation of the amendment. This amendment added greatly to the funds available for highway purposes, including bridges, and resulted in another expansion of the activities of the state highway department. At the present time most of the county bridge work in the state is under the general direction and subject to the approval of the state highway department.

There can be little doubt that the establishment and development of the state highway department has resulted in greatly raising the average quality of bridge design and construction, and has influenced the standardization of highway loads. It is perfectly true that under the old order many bridges of excellent design and construction were built, but they were perhaps more the exception than the rule.

No attempt will be made in this brief review of bridge building in Minnesota to deal with railroad bridges. They are in a special class; their design and construction is usually handled by the engineering staff of the railroads, and competent consulting engineers are usually employed on large work or work which requires the services of engineers having special knowledge for the work in hand.

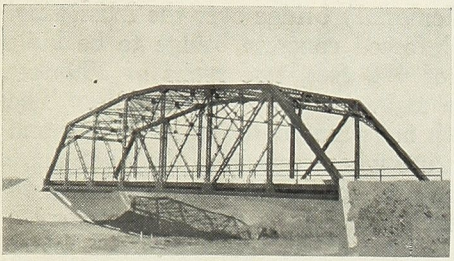
The bridge over the Mississippi at Hastings, commonly known as the Spiral bridge, was built in 1895. It is a steel structure 1,775 feet long, with an 18-foot roadway and one 5-foot sidewalk. The main span is 380 feet, and the clearance above mean low water is 73 feet. The bridge is elevated to avoid using a draw span, making it necessary to have a steep approach on the Hastings end or to use a spiral. The spiral was adopted, and it proved to be a satisfactory solution of the problem for the traffic conditions at the time it was built. The construction is clearly shown in the photograph.

The stone arch bridge over the Mississippi in Minneapolis, although a railroad bridge, should be mentioned, as it is an outstanding example of its type.

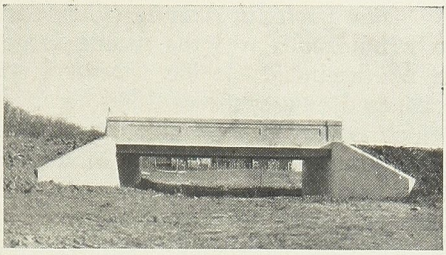
The Lake Street bridge over the Mississippi which connects the cities of Minneapolis and St. Paul, and the bridge over the Mississippi at Fort Snelling are examples of modern steel-arch construction.

The 42nd Avenue North bridge over the Mississippi in Minneapolis is a steel through-truss bridge with a reinforced concrete approach on the west end.

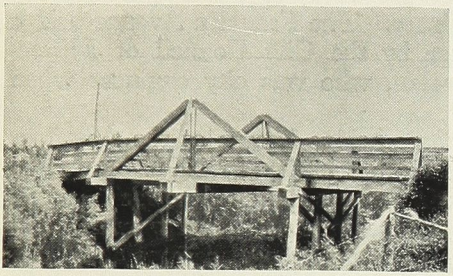
The 3rd Avenue bridge over the Mississippi, built in 1916, is the first large reinforced concrete bridge to be built in Minnesota. It is 2,260 feet long, has a 56-foot roadway, a double-track street car line and two 12-foot sidewalks. The arches are of the Melan type, reinforced with structural steel. The bridge is a beautiful appearing structure, is advantageously situated and carries considerable heavy traffic. It is reported to have cost about $887,000.



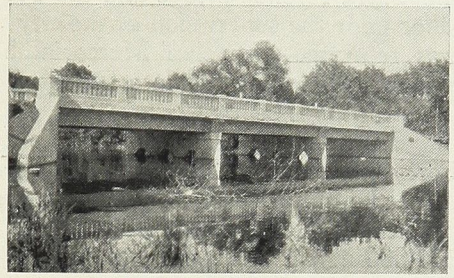
*No. 4232, Typical of Modern High-Truss.*



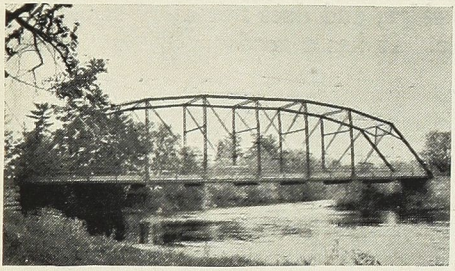
*No. 4233, Representative Present-Day Type.*



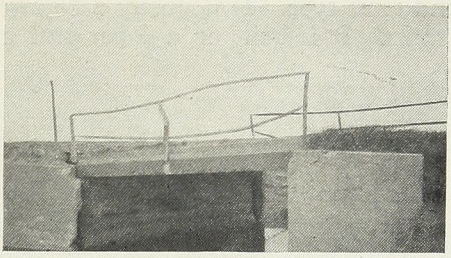
*M-202, Formerly A Popular Type.*



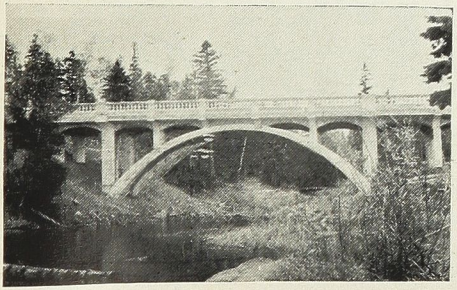
*No. 3800, Concrete Girder Now Built.*



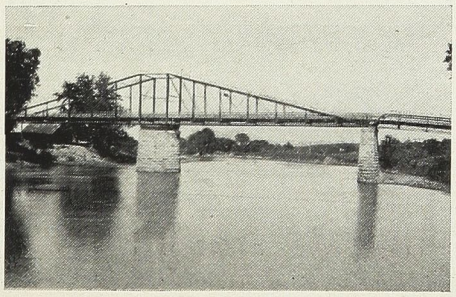
*M-157, Near Motley, An Early Type.*



*M-139, Near Marshall, No Longer Standing.*



*No. 3601, A Modern Rib-Arch Design.*

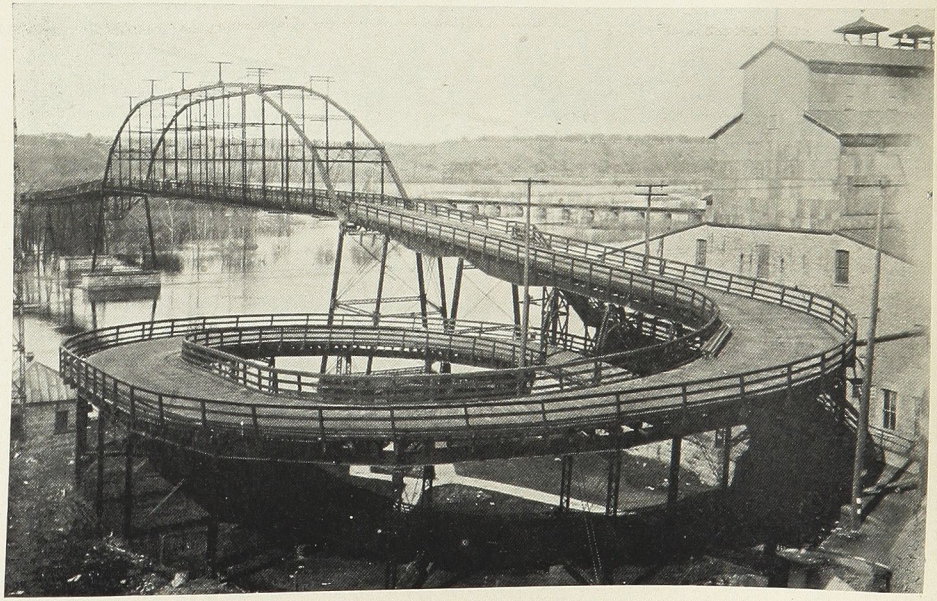


*M-6, Built in 1879, Still in Use.*

The Franklin Avenue (Cappelan Memorial) bridge over the Mississippi in Minneapolis was the second large reinforced concrete bridge to be built in Minneapolis. It has a central span of 400 feet, two spans of 199 feet each, and two spans of 55½ feet. The main span is at the middle. The bridge is very plain architecturally, which adds materially to its beauty and gracefulness, and it makes a beautiful picture when seen from the river drive on either side of the stream. It is 1,033 feet long, and has a roadway 40 feet wide, with an 8-foot sidewalk on each side. It is designed to carry a double-track street car line. The deck is about 105 feet above the water level in the river, and the foundations of the main span are on bed rock 20 to 30 feet below the water level. The design is two-ribbed arch. The cost is reported at $990,000. It replaced a steel bridge of early design. Both the Third Avenue bridge and the Franklin Avenue bridge were built by day labor undr the supervision of the city engineer. The Franklin Avenue bridge was re-named Cappelan Memorial bridge by the City Council of Minneapolis in honor of the late F. W. Cappelan, who was city engineer when the bridge was begun.

In the city of Duluth, there is a unique bridge known as the Aerial or Ferry bridge, built across the entrance to Duluth harbor in 1904. It is said to be the only one of its kind in America. It was designed to meet special conditions, and has successfully done so, replacing a steam ferry which cost $11,000 a year for operation. This bridge has transported as many as 7,781 persons an hour. The length of truss is 393 feet 9 inches. The total weight of the carrier and car when the car is fully loaded is about 120 tons.

In the city of St. Paul there is also a notable bridge known as the High bridge over the Mississippi. This bridge is of steel construction of the tower and truss type. It is purely a highway bridge, and does not carry street car tracks. It is built on a 4 per cent grade. It has a roadway 24 feet wide,



*How a Steep Approach Was Eliminated on the Spiral Bridge at Hastings.*

and two 8-foot sidewalks. This bridge was partly wrecked by a tornado in the summer of 1904, but was repaired and is still in service.

There is now under construction in St. Paul a new bridge at Robert street over the Mississippi. This replaces a steel through-truss bridge which was in a good state of preservation but too narrow to carry modern traffic. The old bridge had a roadway 33 feet wide with a double-track street car line in the middle and two 10-foot sidewalks. The new bridge will have a 56-foot roadway and two 10-foot sidewalks. It will be of reinforced concrete, except the main arch which is two-ribbed, will rise above the deck at mid-span and will be structural steel enclosed in concrete. A temporary bridge provides for traffic while the new one is under construction. The foundations will be carried on piling driven in the bed of the river and capped with concrete. No movable span will be required, as the bridge is to be high enough to permit navigation on the river.

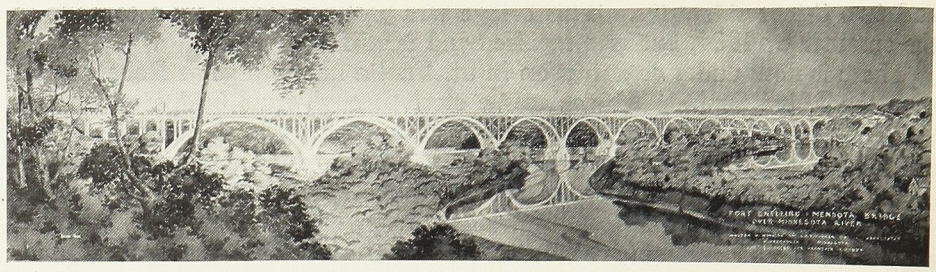
Plans are in preparation at this time for another reinforced concrete arch bridge over the Mississippi between Minneapolis at 42nd Street south and Edsel Avenue in St. Paul, just above the "high dam."

Construction has begun on the piers for another reinforced concrete arch bridge over the Mississippi in Minneapolis at Cedar avenue. The work is being handled under the day labor system.

Another reinforced concrete bridge is under construction over the Minnesota river and the valley from Fort Snelling to Mendota. This bridge will be one of the largest reinforced concrete highway bridges in the world. It is 4,119 feet long over all, 120 feet high above the water, and the foundations are being sunk to bed rock at a depth of approximately 70 feet below the water surface. The bridge is designed to carry a double-track street car line. The roadway will be 45 feet wide with a 6-foot sidewalk on either side of the roadway. The construction is two-ribbed arch with spans 304 feet center to center of piers, and there are twelve full arch-spans, one three-quarter arch at the Mendota end and a short trestle approach at the Fort Snelling end. The floor of the bridge will be flat slab construction supported on columns from the arch-ribs. This bridge will form an important link in the highway system of Minnesota, and is a long needed improvement. The contract price is $1,870,000 for the bridge complete, or about $7.50 per square foot of deck area. This is a low cost considering the height of the bridge and the depth of foundations. Designs were made for both a steel-latticed truss bridge on concrete piers with reinforced concrete floor, and for the concrete arch bridge which is under construction. The concrete bridge, according to the bids received, will cost about $100,000 more than the steel bridge, but was preferred by Hennepin county and its selection approved by the state highway department.

When the steel arch bridge at Fort Snelling was built in 1907, a bid was submitted on a reinforced concrete arch bridge, and according to this bid the reinforced concrete bridge would have cost practically the same as the steel bridge. At that time the reinforced concrete bridge was not regarded with favor, and the steel bridge was built.

Some lessons can be learned from a study of the progress of bridge building in Minnesota which it may not be amiss to mention. It is apparent that the tendency in highway bridge design has been toward increased loads, increased width and toward the more permanent types of construction. The



*To Extend From Fort Snelling to Mendota, to be One of the Largest Concrete Bridges in the World.*

present highway bridge specifications of the state provide for a 20-ton tractor with 15 tons on the rear axle. The standard width of roadway was increased in 1915 from 16 feet to 20 feet, and in 1924 to 24 feet on secondary highways and 27 feet on primary highways, except for high-truss steel bridges which hold to 24 feet. Pin-connected steel bridges have given way to riveted bridges. Steel bridges because of the higher cost of maintenance are giving way to reinforced concrete, where the cost of the reinforced concrete is not prohibitive. In England the early iron and steel bridges were riveted construction. The pin-connected bridges are coming into favor for some uses, whereas in America this tendency is reversed. It is well for bridge designers to keep this evolution in mind when planning new bridges, as it is reasonable to expect the future tendency of bridge requirements will be in the same direction as it has been in the past. Where the more permanent types of construction are used, probable future requirements must be carefully considered.

In so brief an article it is impossible to take up all types of bridges or even representative structures of all types. There are, for example, in the state movable-span bridges of different types such as swing, left and bascule and different varieties of these, some of which have been mentioned. It is not the writer's intention to overlook any bridges which may be regarded as mile stones of progress, and if he has done so he hopes to be forgiven.

The writer wishes to thank the Minnesota Historical Society, The Minnesota state highway department, Mr. J. Swan of Dakota county, and the city engineers of Duluth, St. Paul and Minneapolis for the assistance which they have so kindly given him in securing material for this paper.

# *The* GEAR *of* THETA TAU

OFFICIAL PUBLICATION OF THE FRATERNITY

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VOLUME XV. JANUARY, 1925 NUMBER 1

THIS issue heralds a new era for THE GEAR OF THETA TAU. The much-discussed and long-needed quarterly magazine is now a reality. Volume Fifteen, to be published in the months of January, April, July and October, therefore will be unique in the history of the fraternity. These numbers will include three with general articles and news, and the fraternity directory will appear in October.

The editor is working to make the magazine more valuable through the publication of a greater variety of articles than have appeared in the past, and later issues will contain also a number of departments of an interesting nature.

Expansion of the magazine into a quarterly entails more work for the entire staff, and chapter editors will therefore be called upon to furnish greater quantities of material. More care in the preparation of copy will likewise be essential. The editor will endeavor to reward the more worthy assistant editors in a way which will make sincere effort worth their while. An announcement on this matter will be made later in the year.

♣ ♣ ♣

ALUMNI and active members will be glad to know that Brother Phil J. Laurence, Alpha '15, has been persuaded to give the GEAR his attention in the important capacity of business manager. The experience of Brother Laurence as Assistant Grand Treasurer and then as Grand Treasurer has given him a well-grounded understanding of the fraternity, and the finances of the magazine could be in no better hands. The engineering practice of Brother Laurence took so much of his time two years ago that he did not feel that he should continue as Grand Treasurer, so he resigned at the Iowa City convention in 1923. A man of his capabilities, however, could not long remain out of the service of his fraternity.

♣ ♣ ♣

HOUGHTON, Michigan, will play an important part in making Theta Tau history this year, for here the next national convention of the fraternity will be held in December. The delegate from Beta chapter to the gathering in Iowa City in 1923 presented such sound and alluring reasons for selecting Houghton as the place for the next session, that this place was selected without much delay.

The reputation for hospitality for which Beta chapter is noted should assure every Theta Tau that he will be well received, and the large house this chapter has will provide ample room for convention sessions and sociable gatherings.

Be at Houghton in December!

# RECORDING CHAPTER ACTIVITIES

## *Alpha*

ALPHA chapter opened its twenty-first year last fall.

In September it passed through all the joys of moving in, going from its old quarters at 1320 Seventh street S. E. to 406 Eleventh avenue, which has been rented for a year.

A smoker given for prospective members from the School of Mines resulted in the pledging of eight men.

Plans were soon under way for the celebration of Theta Tau's twentieth birthday in the form of the annual Founder's Day banquet, and it was a successful celebration. About sixty members of the fraternity, including both alumni and actives, were present. It was held at the Minneapolis Athletic Club on Oct. 15, with Brother Walter H. Wheeler, '06, as toastmaster.

Short talks were made by the chapter alumni. Brother Wheeler gave a talk on the building of the Mendota bridge, of which he has general charge. Brother Leslie L. Halliday, '21, treasurer of the house association, discussed the building problem. Brother Edward Hennen, regent, extended the chapter's welcome to alumni. Brother Olav M. Rufsvold, '15, explained "Engineering in Alaska." Brother Phil Laurence, '16, pointed out the "Expansion and Growth of Theta Tau." The topic of Brother Alexander M. Gow, '23, was "Fraternal Relations Between Alumni and the Actives." Brother Benjamin B. Walling, '04, spoke on "The Broader Engineer." The closing feature of the meeting was the presentation by Brother William D. Timperly, '10, president of the Twin City Alumni Association, of a birthday gift of over $400 in cash from the alumni of Alpha to the active chapter. The actives were incapable of expressing their sincere gratitude, and learned with surprise of the gift plan which had been conceived by Brother Erich J. Schrader, '05. This money is at present in a strong Minneapolis savings bank as a fund for future use.

Alpha's social affairs this year, other than the Founder's Day banquet, have included a dance last November, an alumni smoker at the chapter house, and several rushing parties for men in the College of Engineering and Architecture and the School of Mines.

Although about 40 men were considered during the rushing period, only five were accepted and pledged.

The chapter's scholastic standing is up to its usual high standard. For the second consecutive year, the chapter has maintained the highest mark of all the professional engineering and mining fraternities at the University of Minnesota. In college activities, Alpha is among the leaders of the college fraternities, having a long list of representatives. The chapter letter for a later issue of the Gear this year will include these and a list of scholastic honors.

Actives spent their summer vacations in decidedly professional activities. The miners and engineers obtained practical experience.

Alpha chapter has held one initiation this year, and announces as new members: Stuart L. Bailey, Millard M. Garrison, Frederick C. Teske, Clarence C. Wentz, and Philip F. Hartmann. These men are all Engineers.

## *Beta*

WITH the opening of school in October, 19 active members of Beta chapter, 16 of whom were seniors, once again gathered around the fire and discussed prospects for the coming year.

Few of the entering class were of the type which has stamped Theta Tau as the leader in campus activities at M. C. M., but seven men were pledged, and in the second week of January, six were initiated. These were: R. C. Brophy, Red Lodge, Mont.; C. B. Robb, Redwood City, Calif.; Lloyd Seestedt, Romulus, Mich.; Clinton Westin, Newberry, Mich.; R. J. Paquette, Lake Linden, Mich., and C. E. Moore, Muskegon Heights, Mich.

Beta holds her usual place in the undergraduate activities, both scholastic and non-scholastic. Tau Beta Pi, with only six active members on the campus, has Brothers Haga, Warner and Drier. Brother Brophy is secretary of the student body. Brothers Warner, Neff and Moore represent their respective classes on the student council. The football team had Brothers Anderson, Nelson, Warner, Haga, Krueger and Seestedt in its lineup. Brother Haga is manager and center on the basketball team. Nelson manages the hockey team and also plays, together with Zryd.

M. C. M. suffered severe losses in the deaths of its president, Fred Walter McNair, and Mrs. Francis Hanna Scott, registrar and librarian. Dr. Charles McDonald Carson, professor of chemistry, is acting president, while Mrs. V. C. McKinney has been chosen to fill the vacancy in the registrar's office.

Construction of the new metallurgy building is progressing rapidly under supervision of Brother Homer Guerin. The school has felt the need of a metallurgy building for two years, and by the beginning of the summer it will be enjoying the use of one of the most up-to-date laboratories in the country. With the completion of the new building, two new courses are to be added to the curriculum, electro-chemistry and metallography. A separate research laboratory is to be maintained.

Beta has had many social activities this year. In the fall two informal dances were given. Founders Day was observed by a banquet at the house, and nearly all alumni in the vicinity were present. After the holidays an informal house dance was held. On the second Wednesday of the winter term, initiation was held, followed on Saturday by a banquet in honor of the new brothers. On Feb. 6, a formal dance was given in conjunction with the other fraternities on the campus.

Beta chapter suffered a severe shock and a very decisive loss in the death of Robert E. Kime on Oct. 10, 1924. He is survived by his wife, Marie Maas Kime, and an infant daughter, Mary Anne. Originally a member of Nu chapter, he became one of the most influential and best-liked men at Beta, and it is with keen grief felt at the passing of a true brother that the chapter extends its sympathy to his wife.

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## *Gamma*

THE chapter began the 1924-1925 school year with 26 active members, consisting of three post-graduate students, 16 seniors and 7 juniors.

Following its usual custom of pledging seniors only in the first semester of the school year, Gamma chapter offered bids to eight men, all

of whom accepted the pledge. Their names are: Joe G. Stanford, F. Layton Teale, John L. Hutton, Howard C. Renken, Burton F. Amsden, Elliott V. H. Bauserman, Frank E. Delahunty, and William L. Jude. All these men have been initiated.

Fifteen men in the sophomore and junior classes have been voted upon for pledging in the second semester. Gamma chapter does not pledge any freshmen, and does not pledge sophomores during their first semester's work.

Theta Tau is well represented in all activities on our campus. Charles E. Stott is president of the Student Council, and sitting on the council with him are Brothers Frank J. Laverty, Fred M. Nelson, Frank E. Delahunty, Ahlia T. Ehrlick, and Kenneth W. Powers. Brother W. Donald Weimar is king of Tau Beta Pi and he has quite a few subjects among the members of Theta Tau. Brother Delahunty was captain of the Mines football team during the past season, and, with five other members of Theta Tau, earned letters for their work in this sport. Brother Bauserman is coach in wrestling. Brother Leroy T. Brown has made an enviable reputation for himself as a high jumper. He won second place in the high jump in the Olympic games last Summer and won second place in the recent Milrose games. Brother M. Parke Huntington is editor of this year's Prospector, and Brother Homar L. Johnson is assistant editor of our weekly paper, The Oredigger. We have three members of Theta Tau on our school faculty.

Gamma chapter is to give its annual dance soon. This is always one of the most prominent social functions on the Mines campus, and its advent affords satisfaction and pleasure to the members of Gamma chapter and to the general student body.

We of Gamma chapter look forward to a prosperous year, and extend to all chapters and brothers our best wishes for their success.

## *Delta*

THE chapter opened the college year with nine of last year's men back. However, we soon augmented our members with fourteen Juniors, who were initiated on Dec. 11. The new brothers are: J. Frease, R. H. Gordon, K. U. Wirtz, K. H. Meyer, K. R. Van Horn, H. C. McArt, J. F. Skillman, M. F. Crass, T. B. Focke, C. O. De Witt, H. C. Douda, P. F. Yost, and C. A. Dauber.

The new initiates are all well up in scholarship and very active in campus affairs. Among their number are five football letter men, including the captain of next year's team, one basketball player, four track athletes, and the editor of the school year book.

Brothers Bates, Wirtz, and Meyer were recently elected to Tau Beta Pi. This makes seven active Theta Taus who have been honored with the Bent.

## *Epsilon*

THE fall semester of 1924 was a crucial one in the history of Epsilon chapter. For the first time in its history the chapter was faced with active competition, the result of the installation of a chapter of Sigma Gamma Epsilon at the University of California last May. In order to insure the perpetuation of the high standards which Epsilon chapter has always used in selecting its members, the election procedure was subjected to a thorough revision. This resulted

in the appointment of a membership committee which is to review the scholarship records of all students eligible for the fraternity and report to the chapter the names of those students whose scholarship records suggest that they are good Theta Tau material. Twice a semester, special meetings are held to which these possible candidates are invited, the purpose of the meetings being to acquaint these men with the general nature and purpose of Theta Tau as well as to afford the members of the chapter all opportunity of getting acquainted with them. When half of the active members have signified in writing that they favor the election of a man, he is invited to one of the weekly luncheons so that any member who does not know him may get acquainted. In this way all the actives are familiar with a man's qualifications when he comes up for election.

It has not been the usual policy of Epsilon chapter to pledge men before the first semester of their junior year; the membership committee, however, is expected to call the attention of the chapter to those men who show exceptional promise during their first two years.

The members of Epsilon meet for an informal luncheon every Tuesday noon. These have served to create a stronger bond of brotherhood in the chapter, and have proved to be valuable supplements to our regular meetings.

At the opening of the fall semester, the roll of Epsilon chapter contained the names of nine active members; now they number 23.

At the fall initiation, which took place Sept. 9, we welcomed the following into the fraternity: Brothers Charles Anderson, '24, Francis B. Bulman, '25, J. D. Gilboe, '24, Kenneth Gow, '26, Harold Horton, '24, Charles Lake, '24, Eliott Mitchell, '24, Alan Probert, '25, Louis Waterfall, '23, Gordon White, '25, and Edward Wisser, '17. The initiation was followed by a banquet.

The spring initiation was held on Jan. 31. At that time the membership of the chapter was further augmented by the reception into Theta Tau of Brothers Robert Ebaugh, '26, Harold Heide, '25, Lloyd Lowrey, '26, William Maguire, '25, William Rand, '26, and L. L. Tabor, '25. Following the initiation, the customary banquet was held in San Francisco. Epsilon chapter feels that these new brothers will insure the perpetuation of the ideals of Theta Tau on the University of California campus.

The importance of keeping our alumni informed as to the progress of the chapter and of getting their assistance in the solution of our present problems has not been lost sight of. The semi-annual alumni letter was mailed in December. The chapter has already received numerous replies from brothers whose work has called them to distant places as well as from those who are nearer. It is always a pleasure for us to hear of the experiences of our alumni.

The members of Epsilon chapter have maintained their usual high scholarship records during the present academic year. Brother "Jack" Olmstead, '25, was awarded a Rhodes scholarship for the coming year.

## *Zeta*

DURING the past five months, the chapter has accomplished much. The prestige of Theta Tau was firmly established at the University through the capable leadership of last year's officers, and at the opening of school in September we found ourselves in a position to take a prominent part in progressive programs in

the interest of the engineering school.

A number of prominent Theta Taus, leading figures in the life of the University, returned to continue their work last fall. Among those who stood out particularly are: Brother Wallace James, president of the Men's Student Council, the most influential position in the entire University, Brother Lynn Hibbs, representative on the council, Brother Alex Kennedy, vice-president of the council and formerly regent of Zeta Chapter; Brother Tusten Ackerman, All-Valley basketball man and captain of this year's team; Brothers Bob and Bill Patterson, editors of the Kansas Engineer, and Brother R. M. King, president of the K. U. Society of Industrial Engineers. There were many others holding one or more offices in the engineering school. We are very proud of the fact that practically every man in the chapter is engaged in some special activity.

At the present time, the principal offices held by Zeta men are the following: president, secretary and vice-president of the council, secretary of the engineering school, president of the Poetry Society, chairman of the editorial board of the Oread Magazine, editor of the Engineer, vice-president of the senior class, president and secretary-treasurer of the student branch of the A. S. M. E., vice-president of the Industrial Society, secretary of Tau Beta Pi, president of the local chapter of Sigma Nu, and president of the local chapter of Pi Kappa Alpha. We have, furthermore, about half the governing board of the Engineer and most of the staff positions, five Tau Beta Pi men, and the prospect of three or four more in the coming elections.

Although at present we stand well in activities, competition is becoming more noticeable with the passing of each semester. Last spring a chapter of Kappa Eta Kappa, electricals, was installed here, and it is beginning to display some virility. A few weeks ago a local civil engineering fraternity, calling itself Gamma Epsilon, was organized, and rumor has it they are petitioning Triangle. However, we have yet to experience a refusal of our bid because of competing organizations. Our chief problems lies in getting acquainted with the good man before he accepts another's bid. Brother "Clif" Davis, as chairman of the pledging committee, is doing great work in getting in touch with prospective pledges.

Last fall open house was held for all engineering freshmen, at which time a number of desirable men were met, who will be eligible for affiliation with the chapter at the end of the year. It is planned to have a similar affair some time in March for the purpose of advertising Theta Tau and meeting more good material.

As professional engineers we cannot afford to overlook the social aspect of engineering education. We believe that social training is as essential to us as it is to most other professions. Last fall two dances were given at the house, which were as successful functions as any one could desire.

Zeta is keeping in closer touch with alumni this year than ever before. Two letters have been sent out, and a third will be on its way in a couple of weeks. Our policy is to maintain close relationships with the older men of the chapter, who have been out in professional work for a number of years. Brothers Rose, Hawley, Brotherson, Edwards, Smith, Sinnard, and Janes came back recently to talk with the boys and meet the new pledges.

There are at present 26 active members and 11 pledges. Three or four more men will be pledged next

month and six or seven at the end of the year. Eight men will be formally initiated on Feb. 15.

## *Eta*

Because of the fact that school did not open for us until Oct 6, we did not hold the first meeting of the chapter until Oct. 30. At this gathering, we had a most interesting talk on the "Development of the Sailing Vessel and its Future." This lecture was delivered by Professor Owen of the navel architecture department. He is an authority on sail boats, having designed a great many. The talk was followed by an informal discussion.

At our next meeting, on Oct. 13, two undergraduates in the chapter, Brothers Hoxie and Boardman, each gave a talk on "Concrete Road Construction." They had spent the previous summer working on some new road construction principles, which caused considerable discussion.

On Dec. 4, the chapter gave its annual smoker, attended by about 75 students. This affair is sort of a rushing party for us. Each chapter member invites not more than three prospective candidates. We hold a regular open meeting. This year one of our honorary members, Professor Miller, delivered a talk on "Elasticity of Pipe Bends." With the talk, there were supplied typewritten notes. This was followed by a talk by Brother Lund, '18, on "A New Household Refrigeration Machine." The meeting was then adjourned, and informal discussion continued while refreshments were served. On Dec. 8, the chapter elected 18 men, most of whom were present at the smoker.

Sixteen out of the 18 men elected accepted the bids, and were initiated on Jan. 15. The initiation took place at the Riverbank Court Hotel. The ritual ceremony was followed by the costumary banquet, at which Professor Jack, one of our honorary members, gave a speech of welcome.

With the 35 active men in the chapter at the present time, things look bright for the future. We are planning to have most of the meetings for the rest of the year lead by active members, believing that by so doing the members will derive the greatest benefit.

## *Theta*

THE chapter returned under the leadership of Brother Brinckerhoff with but one man missing, Brother Dudley South, '26.

We have with us this year Brothers Albert Dunyon of Lambda, Harold Peterson of Gamma and Arthur Hyde of Kappa, who are taking the mining and industrial courses.

After a most successful rushing season, during which Brother Severinghaus, '25, acted as chairman, we take pleasure in introducing to the fraternity Brothers Edward Atchinson, '26, Kelly Johnson, '27, Henry Sherman, '27, Walter Remy, '27, and Alfred Hinckley, '27, who were initiated on Jan. 16.

Our campus activities, although somewhat limited because of the fact that practically only the first year men are eligible, the others having completed four years in college, are varied and fairly numerous. Brothers Marshall, '26, and Wascheck, '26, coxswain and stroke of last year's varsity crew, have been appointed assistants to head-coach Fred Miller of the crew squad. Brother Hyde, '27, won the varsity "C" playing end on the football team, and Brother Ince, '26, is captain of the water polo team.

Brothers Theobald, Hinckley, Sherman, Remy, Severinghaus and Howell are out for the various crew squads, Brother Hinckley also is manager of the varsity rifle team.

Brothers who have offices in the school include, of the Engineering Society: Brinckerhoff, '25, president; Guedalia, '25, vice-president; Grimmesoy, '25, secretary; and Severinghaus, '25, treasurer. The Honor Committee has Brother Severinghaus as chairman and Brother Harold Work, '25, as secretary.

Brothers who are class officers for the year include: 1925, Severinghaus, vice-president, and Devlin, secretary; 1926, Winckler, president, Howell, vice-president, and Ferreira, secretary-treasurer; 1927, Hyde, president, and Hinckley, treasurer.

The chapter is represented in Tau Beta Pi by Brothers Severinghaus, Devlin, Harnett, Work, Guedalia, and Wascheck. The 1924 Phi Beta Kappa delegation included Brother Wascheck, and the honorary electrochemical fraternity, Epsilon Chi, has Brothers Harnett, Severinghaus, Work, Porske, and Wascheck. Dumbells, the honorary senior society, includes Brothers Grimmesey, Dunyon, Brinckerhoff, Guiness, Ferguson, Merritt, and Guedalia.

The custom of gathering Tuesday noons for lunch has been extended so that Friday lunch and occasionally dinner are eaten at the Stockton Inn. Any alumni or visiting brothers, who may by chance be in the vicinity and can possibly arrange it, are cordially invited to come either of those days and meet the active chapter.

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## *Iota*

THETA Tau under the guidance of Brother Atkinson, Regent, has been the most active of any of the school organizations.

We have held a number of open meetings at which members have given interesting talks on their experiences in their work.

Brother Hasselman was our representative on the football team. This makes the third year of football for "Swede." He is recognized as the best player of the year.

Brother Cunningham is our representative in basketball. "Clem" plays in most of the games and always gives a good account of himself.

The chapter has initiated Professors Mann and Guiteras as honorary members.

♣ ♣ ♣

## *Kappa*

DUE to a return of a large number of members from last year, Kappa chapter did no pledging during the first semester of this year. The chapter roll at the present time contains 40 names. The rushing committee is preparing for the second semester pledging, and, although handicapped by the lack of a house, anticipates a successful season.

Kappa chapter has been widely represented in all fields of activities during the past semester. Those who have maintained Theta Tau's standing on the University campus are here mentioned.

Brother McIlwain has just completed his third and most successful year as halfback on the University's football team.

Brothers Wickhorst and Winkler were on the football squad all fall, and participated in some of the games.

Brother Dingeldy is editor of the Technograph, the College of Engineering magazine, and also a member of Tau Beta Pi.

Brother Ponzer was on the varsity cross country team.

Brothers Ponzer and Rehm are

veteran letter men of Coach Gill's championship track team, and great things are expected of them this spring.

Brother Broderick is on the basketball squad.

Brother Simonich is out for baseball and is holding down his old position of last year on the varsity.

Brother Quackenbush is playing his second year on the varsity waterbasketbill team.

Brother Trissal is University intramural manager, and is a member of Ma-Wan-Da, senior honorary society.

Brother Anderson is doing good work on the University Y. M. C. A. cabinet.

Brother Quade is president of the A. S. C. E., and is president of the engineer's council. He also holds an office on the Illinois Union staff.

Brother Pierce is one of the main campus politicians, and is chairman of the Illinois Union Committee.

Kappa chapter feels that it has had a successful season thus far this year, and with the aid of an energetic house committee and the anticipation of a great bunch of new members, feels that even greater things can be expected of it next semester.

## *Lambda*

LAMBDA CHAPTER has had a successful year thus far. Twenty-one members returned to school, all active and full of pep and anxious to have Theta Tau the best fraternity on the campus. To the original number, 10 have been added (eight were initiated and two members returned to school to start the winter quarter). There are now six pledges. The total number of members of Lambda is 173.

The chapter is still without a fraternity house, but finds that it is not handicapped to any great extent. Regular weekly meetings of one hour are held, and a good attendance is generally reported unless there is some particularly good excuse that is detaining a large number of the men. These regular meetings are made interesting by a half-hour talk delivered by one of the alumni members of the International alumni association, the subject matter of which is some topic of vital importance to the engineer and his profession.

The alumni have also co-operated with the active chapter in obtaining a Lambda directory and also in making arrangements for the initiation of worthy members of the U-Tech Club, the organization that obtained the Lambda charter. To do this, a registered letter has been sent to every U-Tech man whose address was obtainable, with the understanding that failure to reply would be taken as a negative answer, and no further solicitation would be made. Good response has been obtained.

The chapter passed two rulings last spring concerning pledging which have been found to be good in maintaining a high standing in the fraternity. One was that no seniors may be passed upon after the fourth meeting of the fall quarter; the other was to the effect that at least five sophomores and freshmen should be pledged starting with the winter quarter prior to the pledging of any additional juniors, and further qualifying this by the limitation that only under exceptional conditions can a freshman be pledged. The first ruling may seem unnecessary to other chapters, but since Lambda has very little competition it may happen that good Theta Tau material may be overlooked until the senior year, which does not leave much time for the person to get an understanding of the most important

things, to say nothing of the details, of Theta Tau. The reason for the second ruling is that the confining of pledging to juniors and seniors leaves a possibility of a temporary slump in the fraternity as a result of not having well-seasoned men within the organization to carry its spirit. The limitation regarding freshmen probably does not seem severe, since the fraternity is intended to function as a professional unit, and the high professional mortality among freshmen, and to a great extent among sophomores, has led the chapter to be very cautious in its selection of such students. The chapter has therefore taken this point of view: If in doubt, wait.

As a result of the foregoing resolution, during the first four weeks of school, much time was spent getting acquainted with prospective seniors, with the result that two were selected. Five juniors were pledged.

A highly successful Twentieth Anniversary Founders' Day banquet was held jointly by members of the Intermountain alumni association and the Lambda chapter, October 17. Many interesting and valuable points of common engineering material were discussed. The banquet was well attended, and a good fraternal spirit made the evening enjoyable.

In order that the fraternity could get better acquainted with the pledges, and for rushing purposes, a smoker was held during November. It consisted of a few short talks on engineering, with musicians and comedians to give variety to the entertainment. A super-abundance of good things to eat finished the social. It was a success, and aided in obtaining an acquaintanceship with prospective Theta Tau men.

Initiation of eight men (three seniors and five juniors) was held December 5.

The personnel of Lambda is composed of engineers who are leaders, and only those men are chosen who can be expected to maintain high professional standing. The chapter is proud to say that its men are chosen leaders of campus activities, both professional and social. Some of the present honors held are: president of A. S. C. E., A. I. E. E., A. S. M. E.; vice-president of A. S. C. E., A. I. E. E. and A. S. M. E.; president and treasurer of the Utah Society of Engineers (a society of all engineering students); president of a national literary fraternity; member of Publications Council (a council for selection of men to fill publication positions); members of committee for Engineers' Day (Saint Patrick's Day; chief and four members of the Vigilance Committee (a student police corps); member of central committee for the Union Building drive (to raise money for a union building). All, with the exception of the Sophomore class president, have attained these marks since becoming Theta Tau men. Scholastically the men are all above the average, and over 90 per cent have had actual experience in engineering work during summer vacations.

The chapter is now working upon an initiation to be held at some future date. There are now six pledges, and several more are expected to be pledged in the near future. Plans for the installation banquet to be held early in April are well under way.

## *Mu*

MU was particularly fortunate this year in having 11 men return. This may seem a small number, but when compared with last year's six it shows a great improvement. Besides these 11 men, we

have an honorary member and two brothers from Alpha, B. W. Gandrud and Fred DeVaney, who are connected with the United States Bureau of Mines experiment station here. So with this number Mu has been able to hold meetings which were, and still are, full of enthusiasm and that fellowship for which Theta Tau stands.

Last spring we took a step which has since proven of great benefit to the chapter. Mu can now boast of an honorary member, Prof. Hugh D. Pallister, director of the School of Mines, of whom we are justly proud. His stabilizing influence and excellent advice have done much towards building up a great chapter. His record in his profession as well as his success in professorial duties at Penn State, Texas University, and here, speak for themselves. Without exception, all alumni who responded to our letter calling for a vote congratulated us highly upon the selection of our first honorary member.

The first meeting of the year was turned into a "welcome back" affair. Every brother was called on for a short speech on the manner in which he spent his summer vacation. This was particularly interesting in the cases of Brothers Wingard and Nason, who took a trip to the Arizona copper region. Their experiences in the Great West were enlightening to the rest of the chapter. However, their conference beforehand robbed us of many interesting personal experiences, for they had promised each other not to divulge any secrets.

During the first half of the previous year, we had a room in a private residence situated on the campus. This room served not only as a place for meetings, but also for a lounging place between classes. The financial strain, however, proved to be an excessive burden on the treasury, so this was abandoned in favor of a room in the mining wing of the engineering building. This latter place has turned out to afford more privacy, especially at initiations. The biggest disadvantage is in not being able to entertain there.

An entertainment in the form of a smoker, to which prospective members were invited, was given the earlier part of the year. Having no place of our own in which to hold an affair of this sort, a social fraternity kindly offered us the use of its house. In this manner, we were enabled to become better acquainted with the group of men from which the new members were to be chosen. This proved very successful, and it is hoped that the smoker will become an annual function.

Following the smoker came the initiation of the year. This was held the earlier part of December.

A circular letter was sent to all alumni just before the Christmas holidays, requesting information about their work, social activities, marriages and future prospects. They were rather slow at first about responding to our earnest entreaty, but now many replies are coming in. We will be able to combine all this interesting information into the best chapter letter yet sent out. The editor is now hard at work preparing it for publication, and it should be in the hands of the alumni within another month.

In connection with the alumni, we have begun a card index system of their addresses. This should be a big asset when the time comes for establishing postal relations with them.

For the first time in the history of the engineering school, Saint Patrick's day is to be celebrated. We have been granted a holiday, and every organization in the school is

planning to have at least one float in the parade which is to be a feature of the celebration. Mu has reserved a place for her float, and has also invited five of the largest firms in the Birmingham district to participate as our guests.

At the last meeting it was decided that Mu has not been getting the recognition from the other departments of the University that she deserves. We began the organization of a basketball team, and as soon as we have had the necessary practice we will challenge the other professional fraternities, legal and medical, to games. We hope to report victories over all opponents in the near future.

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## *Nu*

NU chapter began the year with 20 men lost through graduation.

In October a smoker was held to look over possible candidates. It was featured by a talk on "Giant Power" by Dr. W. F. Rittman, head of the commercial engineering department and member of the Pennsylvania Giant Power Commission. Movies and refreshments completed the entertainment of the evening. Twelve were later pledged, the ceremony taking place at Science Assembly.

The chapter is represented in all branches of campus activities, with men on the student council, including the president, the science senate, and the president of the senior class. We also have men on the football, cross country, and basketball teams.

The plan of conducting the meetings is being modified. Instead of having an outside speaker at every regular meeting, certain of the meetings will be devoted entirely to discussions by the members of the chapter. This will bring about a better exchange of ideas among our own men.

Nu extends heartiest greetings to all chapters of Theta Tau, and wishes them success in all their endeavors. We want to see and welcome personally any brothers who may at any time be in the Pittsburgh district.

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## *Xi*

WITH about half of the school year completed, Xi chapter feels that it has had its share of success. A fortunate rushing season was conducted in the usual manner, with smokers and a dinner to help us get acquainted.

Though the chapter lost heavily through graduation last spring, it is now in a condition to go ahead with plans which have been formed during the last semester. We hope to add considerably to the reputation of Xi chapter when the new men become acquainted with the work.

We consider with pride the pledge and initiation of Dean A. V. Millar, whose counsel we expect will aid materially our progress in time to come.

We feel that the graduation of Brother William E. Schubert of Milwaukee, has created a vacancy in our ranks, not to be easily filled. He worked in a practical field for a number of years before returning to finish school, doing research for the Milwaukee Electric Railway and Light Co. on powdered fuel. He became an authority on that subject. He is a member of Tau Beta Pi and Pi Tau Sigma, and is a junior member of A. S. M. E. He is now chief engineer of a subsidiary plant of the Milwaukee Electric Railway and Light Co. at Appleton, Wis.

It is reported that Brother Bentson

will be back in school this semester. He was awarded an all-conference medal last year for his work in football, water basket ball, and crew.

The last initiation was held in the new Loraine hotel, and was followed by a banquet for the new men. The new members are: Clarence G. Wollaeger, George F. Liddle, William H. Davidson, William B. Frachelton, Charles A. Lawton, Noel H. Miller, Grant O. Gale, Charles D. Highleyman, Joseph W. Hanzel.

Xi chapter wishes for an opportunity to welcome any brother who may come to Madison, and extends best wishes to all.

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## *Omicron*

OMICRON chapter started its third year with 27 actives and pledges. The following brothers, who were elected to office at the end of last year, soon had the machinery running smoothly: Ned Ashton, regent; Harold Phelps, vice repent; Ralph Van, steward; and E. T. Schuleen, scribe.

The first occasion of any particular note was our observance of Dad's day, Oct. 11. This was a University holiday, so those of our members who had folks in town got together and planned a party in honor of the dads and mothers of Theta Tau men who were here. We had about eight guests that evening, and everyone had a good time.

Our annual homecoming was on Oct. 25, and the house was packed with our alumni who were back for the day. It was about as close to a reunion as we have ever come. Brothers George W. Mork, Robert Kranzfelder and Russell Sorenson of Alpha also dropped in for a short visit. The following day the alumni who could remain witnessed our first initiation of the year. At that time we took into membership James Burdette Bowen, Richard Carl Aussieker, Claude Maxwell Stanley, Wendale Folwell, Marshall Blackington, Arthur Gunderson, and John Howard Hurd.

Soon after the beginning of the year the scholarship reports came out, and Omicron chapter was number 13 on the all-University list as well as first in its own college. We are rather proud of this report, and proud of Ned Ashton and Dale Brockman, who were elected to membership in Tau Beta Pi.

One of the surprises which awaited us on our return to school in the fall was the stack of wedding announcements in the mail box. Nine of our alumni were married, so we feel that Theta Tau men make good in more ways than one when they get out in the world.

When time came for the fall elections, Theta Tau men were represented on the executive lists of all the classes as well as in the offices of the student societies. Brother Phelps was elected president of the senior class and also president of the student branch of the American Society of Mechanical Engineers.

On Nov. 29 we held our first and, so far, our only party of the year. This was at the Red Ball Inn, just outside the city, and was by far the best party that Omicron chapter has ever held. We are planning at least one more party for the year, but will probably not have it until in the spring.

We have leased a new house for next year. After September first, our address will be 715 Iowa avenue.

Ten of our actives will graduate this spring, but with a few more pledges like the ones we have we shall not need to worry any about the

work here on the campus in the near future.

Something we are trying to accomplish this year is the circulation of alumni letters. We have sent the last two or three letters to the other chapters of Theta Tau as well as to our own men. We believe that the time spent in such work is well worth all the work it takes, and our alumni seem pleased to hear from us regularly.

We feel that our place on the campus is becoming well established, and it is our desire and purpose to uphold the ideals and traditions of Theta Tau so it will become known in its true light as a professional fraternity of the highest order.

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## *Pi*

PI CHAPTER began the year with only 14 active members, because of the loss of such brothers as Kiener, MacDavitt, Rawls, Bauserman, Pitz, Ward, Martin, Voight, and Edwards, who were active members at the chapter's inception.

Classes having been started, the consideration of new men next demanded attention. The chapter takes pleasure in introducing to the fraternity the newly initiated Brothers: M. G. Walten, J. D. Lee, R. M. Small, S. T. Martin, Jr., J. W. Cowhig, A. W. Holt, and P. A. Beck.

We are fortunate in having back with us this year Prof. W. S. Rodman, Pi honorary, head of the electrical engineering department. It will be remembered that Professor Rodman was instrumental in the establishment of Pi chapter at Virginia.

The brothers on the University of Virginia Journal of Engineering are: Mayers, business manager; Parker, circulation manager; and Lee and Mathiasen on the business staff. The editorial department has brothers Hawkins and Glick as the assistant editors, and Brothers Cowhig, Beck, and Montfort, associate editors.

Other campus activities also hold the attention of the brothers from the chapter. Brother Holland is captain of the wrestling team, Brother Holt is on the boxing team, and Brother Montfort is on the track team.

Brother Linville is advertising manager of the Virginia Reel, and Brother Mathiasen is on the business staff. Brother Walten is business manager of the Virginia Magazine. Brother Dorsey is a member of both Tau Beta Pi and the Ravan Society. Brother Mayers is president of the Radio Club, and Brother Cowhig is president of the A. S. C. E. student branch.

Now as to the officers of the Engineering School, Brother Dorsey is president, Brother Glick is vice-president, Brother Parker is secretary, Brother Holland is historian, and Brother Beck is treasurer. This includes the whole of the lists of the officers of the department, and it is fitting that Theta Tau should have all of the school's officers as members.

We are rather unfortunate in that we are located off the beaten path between the other chapters, and therefore we miss having many brothers from other chapters visit us. However, if any should stray down this way we would be more than glad to have them visit the chapter.

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## *Rho*

RHO CHAPTER is yet quite young, as it is just now preparing to celebrate its first birthday. Nevertheless the activities of the chapter acquired a considerable amount of momentum from the very

beginning, possibly due in part to the marked success of the Founders' Day social, held during the first part of October, and attended by the then 12 active members and three alumni members. The social was opened with a regular meeting, after which Brother George W. Wray proved himself to be an excellent waiter as well as an efficient regent. The social was served in the following courses: cakes, candy, fruit, nuts, smokes, and speeches.

In spite of the fact that the active membership of Rho at the beginning of the fall term numbered only 12 and that because of the crowded condition of all buildings on the campus at that time, we were unable to obtain a chapter room until after Christmas. The chapter has been quite active from the very beginning, and has done much work toward the improvement of itself. Meetings have been held regularly every Wednesday evening at 6:30, and they have been well attended. At several of these meetings we had the pleasure of listening to some very interesting and instructive talks by various engineers and engineering professors, all of whom were well versed in their special phases of engineering. Probably the most instructive and the most interesting of these talks was on "Ceramic Industries," given by Prof. A. F. Greaves-Walker of the ceramic department of the college at the first meeting in November. This talk was much more instructive than the others because of the fact that this is a new course in the college and also because the industry is possibly the least developed of any in the state and none of the students knew but very little about it.

As soon as the brothers were back in school from the summer vacation, they began looking over the junior and senior classes for men of Theta Tau calibre. This was rather a hard matter, but the brothers were equal to the task and finally selected nine men to be initiated on the evening of Jan. 28.

About the middle of December, the brothers of Rho were greatly rejoiced by the arrival of the charter and shingles. This time had long been looked forward to with great interest by all the brothers.

At the last meeting before the Christmas holidays, the chapter elected officers for the following term. These were Brothers: J. M. Potter, regent; W. H. Fox, vice-regent; Mark Sumner, treasurer; R. D. Beam, scribe; J. B. Dotterer, martial; E. A. Robison, outer guard; and J. L. Robertson, inner guard. After the election of officers, as there was no more business to attend to, the brothers visited with each other, an occasion which was greatly enjoyed by all. The brothers then bade each other goodby and good luck for a Merry Christmas and a Happy New Year.

During the year we have been constantly trying to get a chapter room, but were not at first successful. However, with the completion of the new gymnasium, there was a room vacated in the Y. M. C. A. building, and we were fortunate enough to get this. We were fortunate because several other fraternities and organizations were trying to get the same room, and also because it is unusually well situated on the campus for a fraternity like Theta Tau, in which many of the brothers are members of social fraternities and are living on all parts of the campus.

There are 11 active members and 30 alumni members, with a total number of 50 initiates. We are plan-

ning to have an informal dinner some time early in the spring, when we hope to have all the alumni back with us. We feel that the chapter is in excellent condition, and are looking forward to a very successful spring. Rho wishes all its brothers good luck, and invites any brother who finds it convenient to do so to visit it at any time.

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## *Sigma*

SIGMA chapter of Theta Tau was installed at Ohio State University on Saturday afternoon and evening, Nov. 29, 1924, the members assembling at the Chittenden shortly after 4:00.

The charter members of Sigma chapter were assembled in the anteroom and conducted to the inner chambers, the ceremony porceding under an installing team composed of Brother Jamison Vawter, professor at University of Illinois, acting as Grand Regent; Brother Frank R. Van Horn, professor at Case School of Applied Science, as Grand Inner Guard, and Brother Fred Coffman, of Davidson, North Carolina, as Grand Outer Guard.

Following the installation, the first initiation of Sigma chapter was held. The charter members were privileged to observe the procedure of the initiation as conducted by the grand officers.

At the conclusion of the initiation, the gathering adjourned to the first banquet of Sigma. James Anderson was toastmaster for the evening, and called upon Claude H. Wall to return thanks. Friendship was renewed during the meal with several of the charter members who had been away from our midst in engineering work since last June.

Smokes followed the desert, and as they are never enjoyed without words of good advice we heard some interesting and pointed remarks upon Theta Tau in general by Brother Vawter. Brother Van Horn from Case entertained us with further remarks upon Theta Tau, and reminisced upon the days when Case used to beat Ohio State in football, a number of years ago. Brother Hopkins of Chicago and Brother Coffman spoke further on ideals of Theta Tau.

Brother Nold, professor at Ohio State University, directed his talk toward the insignia of the former Engineers' Club, Sigma's predecessor, which rested on an easel at the further end of the room, tracing the success of the organization from its inception and concluding his remarks by displaying the door plate of Theta Tau for the house.

Brother Ott, Brother Wall and Regent Wittman made short speeches. Some of the alumni also were heard from.

The following men were initiated as charter members of Sigma chapter: Merrill B. Wittman, J. Ernest Taylor, Henry A. Brevoort, Charles R. Ross, Gordon M. Amstutz, James Anderson, Jr., Elmer L. Marshall, Harlan H. Mace, Claude H. Wall, Harry E. Nold, Percy W. Ott, Mervin F. Devine, William C. Krumm, Pearle E. Masheter, Garrett J. Kane, Russell G. Glass, Reed D. Achauer, Frank J. Murray, George E. Zeigler, Ernest F. Keyerleiber, Charles E. Cole, H. A. White, Cecil C. Covert, Raymond Sperr, C. Raymond Hanes.

The men taken into Sigma chapter at the first initiation are: Cassius H. Makeever, Alvin M. Mock, Vance Le Roy Duncan, Ely G. Fenton, John W. Wilson, Emmett E. Knorr.

# *Theta Taus are Everywhere*

## ALABAMA

*Alexander City—*

JAMES H. WINGARD
Mu '22
Engineer
Dixie Construction Co.

## ARIZONA

*Jerome—*

WILLIAM V. DE CAMP
Gamma '08
General Mine Superintendent
United Verde Copper Co.

## CALIFORNIA

*Venice—*

DON C. BILLICK
Epsilon '13
Consulting Mining Engineer
15 Avenue 42

## COLORADO

*Denver—*

ORLANDO G. McDONALD
Epsilon '23
Geologist
Roland Oil Co.

## MASSACHUSETTS

*Boston—*

ROBERT J. ANDERSON
Delta '14
Consulting Metallurgical Engineer
P. O. Box 111, Fenway Station

## MEXICO

*Magdalena, Jalisco—*

LINCOLN EHNBOM
Gamma '17
Stores Manager
Cinco Minas Company

## MINNESOTA

*Minneapolis—*

WALTER H. WHEELER
Alpha '06
Engineer and Architect
1112 Metropolitan Life Building

## NORTH CAROLINA

*Davidson—*

FRED COFFMAN
Lambda '22
Resident Engineer
W. H. Booker, Construction Engineer

## OHIO

*Cleveland—*

CARL E. DAVID
Delta '17
Engineer
Bailey Meter Co.

## OREGON

*Portland—*

PAUL F. CUTTER
Delta '18
Mineral Examiner
U. S. General Land Office

## PERU, S. A.

*Goyllarisquisga—*

RALPH R. WIGGINS
Beta '14
Assistant Superintendent
Cerro de Pasco Copper Corporation

## SOUTH DAKOTA

*Lead—*

ARTHUR B. YATES
Epsilon '22
Geologist
Homestake Mining Co.

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