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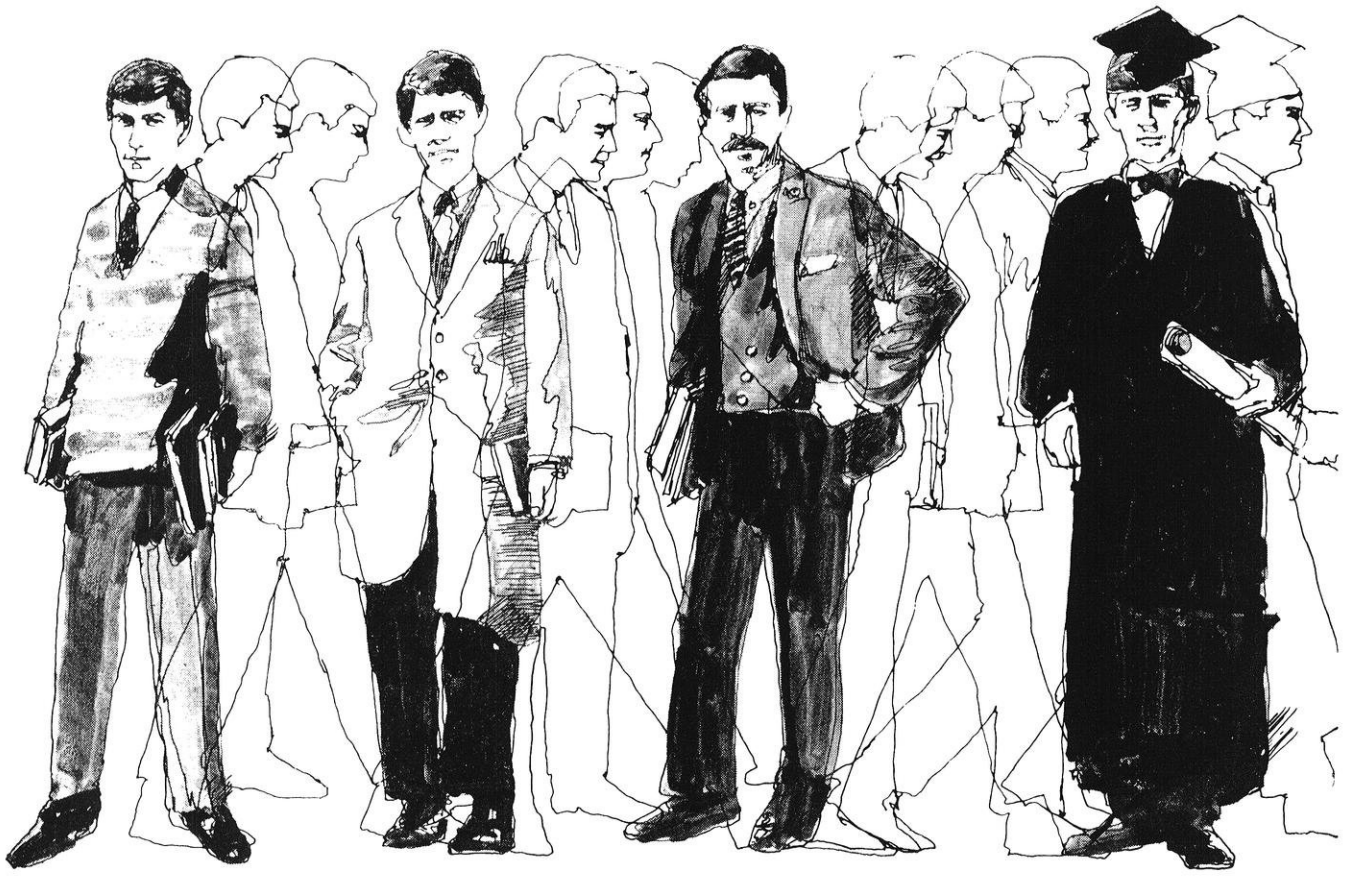
VOL. 75, NO. 8

35 CENTS MAY, 1971

wisconsin engineer



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This anniversary issue was edited by Carolyn Graff assisted by Carol Ward.

CONTENTS:

wisconsin engineer

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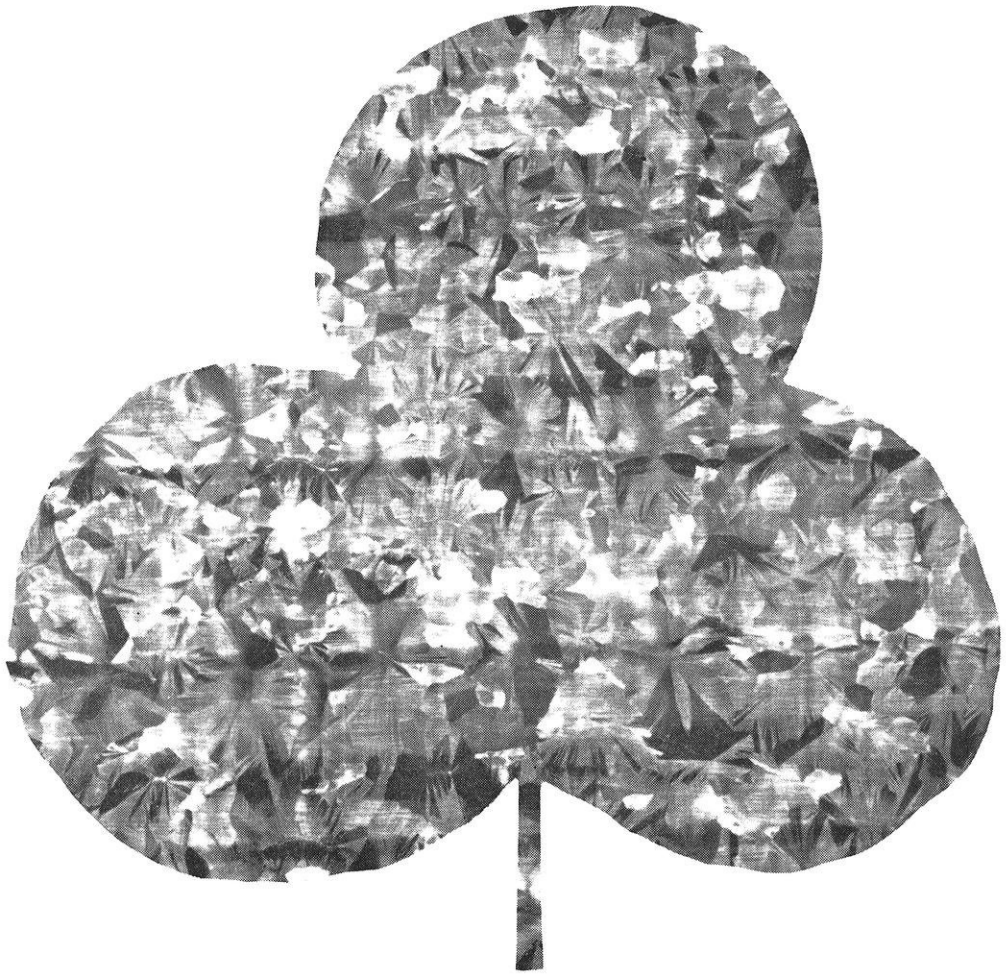

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Editorial

75 YEARS IN REVIEW

by Carolyn Graff

This special anniversary issue marks the completion of seventy-five years of successful publishing of the *Wisconsin Engineer*. Through times of war, depression, apathy, and social awareness the magazine has survived. The format has changed; the printing techniques have advanced; the articles deal with more than the technical aspects of engineering. The changes in the magazine parallel changes in the world. Progress – the watchword of the engineering world; of the *Wisconsin Engineer*.

Like the magazine the College of Engineering at the University of Wisconsin has changed. No longer housed in the Education Building on Bascom Hill the college enjoys a campus of its own. The Mining and Metallurgy Building on Johnson St. was the first building in the southwest corner of the campus now known as the Engineering Campus. Shortly thereafter the Mechanical Engineering Building was built followed by the large Engineering Building which houses Civil, Chemical, Electrical, and Engineering Mechanics. The Engineering Research Building was occupied for the first time one and a half years ago.

Likewise, the faculty and the student body on the Engineering Campus have grown immensely. Seventy-five years ago 211 students pursued engineering. Today there are 2077 undergraduates.

The faculty has climbed from 51 to 410. Some professors saw their sons return and teach on their staff. Many alumni have returned to their alma mater to teach in the same rooms in which they themselves once learned.

This month we commemorate a magazine that represents the journalistic works of engineering students from the past 75 years. We salute a school that has produced thousands of well-trained graduates well-equipped to serve the world as engineers.

The articles within this magazine tell the highlights, the ordinary life of students, professors, and staff members of the *Wisconsin Engineer* on the campus of 75, 50 and 25 years ago. Though much has been overlooked, it's easy to see the dedication of those on the staff and those in the school, both professors and students. To them we dedicate this issue.

VOL. I. JUNE, 1896. No. 1.

The... Wisconsin Engineer.

University of Wisconsin
Engineering Journal.

Quarterly. MADISON, WIS. $1.50 per year.

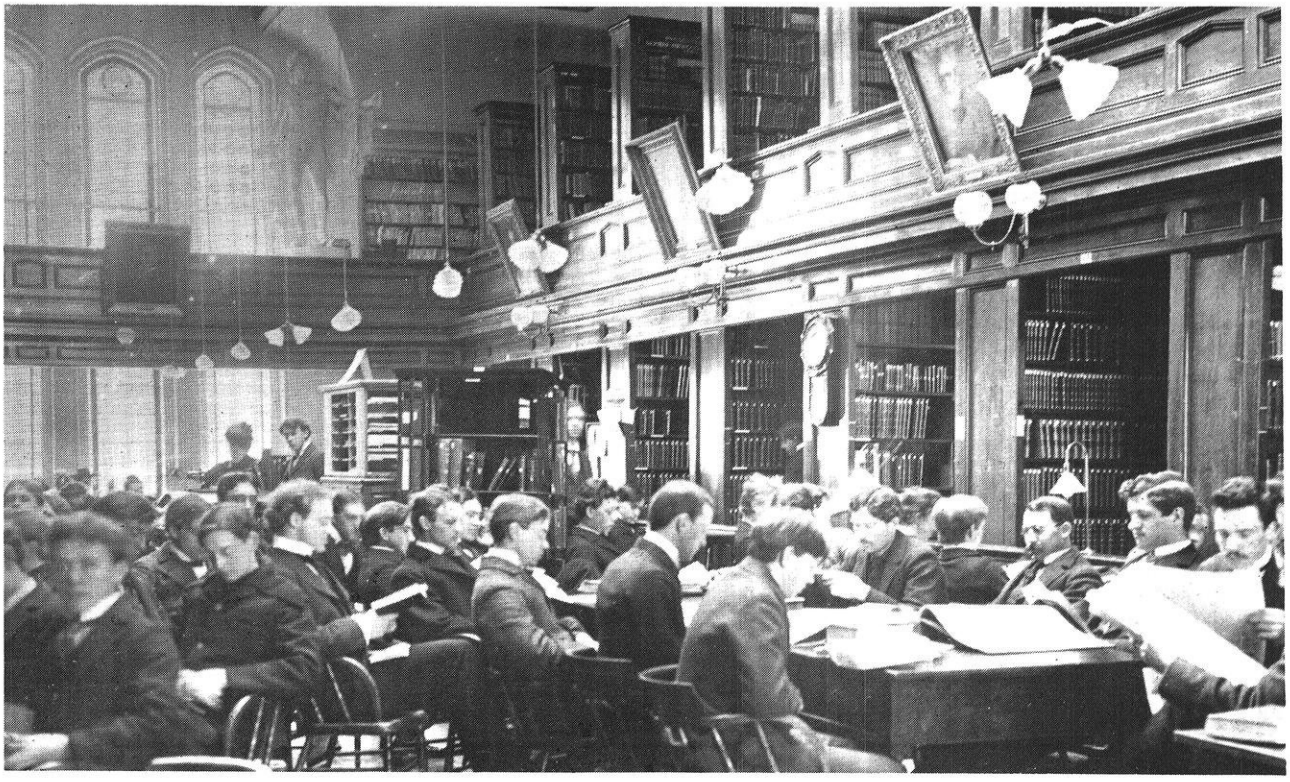
PROFESSOR MACK ADVISES "ENGINEER"

by: Carol Ward
Carolyn Graff

The following article was compiled from the first publication of the **Wisconsin Engineer,** *the "Twenty-fifth Anniversary of the Founding of the* **Wisconsin Engineer,"** *by Leslie F. Van Hagan, Wis., '04, Professor of Railway Engineering, in Vol. XXV, No. 8 of the* **Wisconsin Engineer,** *and the diary of Prof. J.G.D. Mack, one of the first advisers for the magazine. It attempts to bridge the gap between then and now with items of a historical and amusing nature.*

It all started 75 years ago– –the magazine we salute today. A sophomore in electrical engineering, R.F. Schuchardt, came up with the idea. While browsing around in the library, he ran across several technical college journals. He reflects:

"I think they were the Sibley Journal of Engineering, of Cornell, the Technograph, of Illinois, and perhaps one other. That Cornell should have such a magazine seem natural – we looked up to Cornell and Boston Tech as two colleges that we admitted might outrank Wisconsin. But that such an insignificant school as Illinois (so we considered it at the time) should be in the lists of technical journals and not Wisconsin was an unbearable thought. It was a situation that required immediate remedying. I found that Beebe and Owen, to whom I unburdened myself, agreed with this conclusion, and so the three of us went to Prof. Mack, who was so completely and sympathetically one of us. The result was a meeting to organize the Engineering Journal Association, which blotted out the disgrace and put Wisconsin on the map to technical journalism."



The Reading Room in the University Library was a popular place for the 1896 student. The library contained 32,000 books and 8,000 pamphlets, of which about 3,000 pertained to the engineering profession.

That magazine that started as a quarterly publication & cost $1.50 a year consisted of several technical articles, Editorial Notes, Alumni Notes and an Index of Engineering Literature. Edward C. Beeb was the first editor, and 2500 copies were first published. Today it has lost some of its technical attributes because of increased competition in this area, and in an effort to expose engineers to other sides of life as well.

Vol. 1, No.1, June, 1896, a 6 by 9½ inch magazine of 160 pages. Literature interspersed with ads, a nine member board of editors, two Business Managers, line etchings, pictures . . . . the first *Wisconsin Engineer.*

As we turn back the pages of the very first issue we see first a greeting expounding on the purposes of the periodical:

> "With this number the *Wisconsin Engineer* comes out for its trial trip in the field of technical journalism. While, as with any new mechanism, alterations and readjustments will no doubt be found desirable, the assistance and words of encouragement received on every hand during the preparation of this number, have led us to hope for a genial reception and an interested and friendly inspection."
>
> It has for some time been the desire of many students and alumni of the College of Mechanics and Engineering that they might have a representative among the periodicals issued by technical schools for the country; and that, if possible, they might take, as an institution, some more active part in the dissemination of engineering knowledge and experience. It is the aim of this journal to fill that want in so far as it may be able. It is desired more especially to make known the results of original investigation by students and others connected with the University and to publish communications of general interest from graduates who are engaged in the practice of their profession. From time to time will appear short notices of matters of unusual interest connected with the University, and space will also be allotted to alumni notes. Let it not be understood from this that our pages will be restricted entirely to the use of those connected with the University. Articles of merit will be gladly received from any who may see fit to contribute. A general index to periodical engineering literature is designed to be a special feature of the magazine. Our reasons for undertaking this work will be given more in detail in the introduction to the department.
>
> The loyalty of our alumni and students of 'Old Wisconsin' is proverbial and it is hoped that this publication may still further strengthen the feeling of brotherhood among them and prove a source of mutual benefit, while at the same time contributing something of interest to the profession at large."
>
> Thus it began.
> Today it continues.

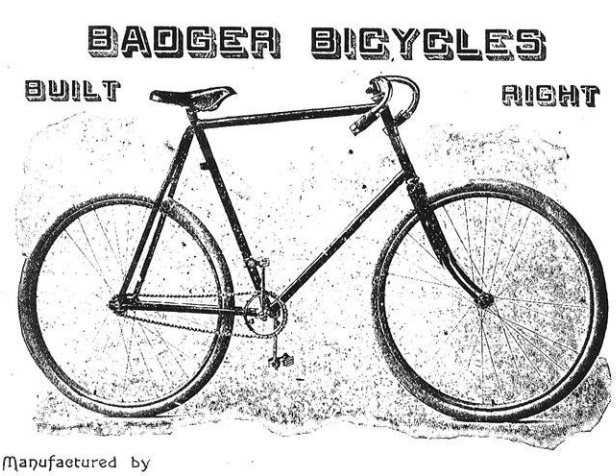
A look at the titles of the articles in the first issue, shows us the degree of technicality, as well as an indication of how far the world of engineering had progressed in 1896. "Approximate Methods for the Rapid Determination of Azimuth, Latitude and Time;" "Storage Batteries for Railway Power Station;" "The Theory of Energy in Hydraulics;" "Subways for Electric Wires;" "Tests of Centrifugal Cream Separators; Economical Heat, Light, and Power Supply for Buildings;" "New Methods of Measuring Current Variations in Telephone Transmitters" were among the first articles.

Professors, assistant professors and students combined their talents in producing charts, tables and complicated formulas to explicate their theories.

As can be seen from the titles, they were concerned not only with their own technical world, but also with the good of humanity. An article entitled "Road to Wisconsin" prescribed a method for efficient roadways in the state.

The ads, placed before and after the reading material, dealt with machine companies, insurance, Madison drug stores, photographers, and bicycle companies, special trip plans, a Chicago shoe store, Eastman Kodak ads, and numerous others.

Perhaps the "Badger Bicycle Company" found it profitable to advertise because of Prof. Mack's great interest in the bicycle. He was an enthusiast from way back, and a great fan of the bicycle races held in Camp Randall.



A peek into Prof. Mack's diary provides an insight into the University life of the day. We find a great sports enthusiast in Mack, especially of football. On Novermber 21, 1897 he writes: "This is the great football day and a great crowd was at Camp Randall to see the Minnesota game. It was one of the greatest western football exhibitions and Wisconsin won 6-0 the 6 made in the last four minutes. The hi-school beat Minneapolis HS in the morning 21-0, but I did not see it." On October 30 of the following year he writes: "This has been a great day in Wisconsin athletics . . . UW wiped out old scores by beating Minneapolis on Wisconsin grounds 39-0. The crowd went wild, fired the cannon, marched etc. I was at Library Hall and they had 20 long distance receivers. We sat around a table and heard it all called off from the field." On November 11 he declares "The football enthusiasm is at its height on account of the Chicago game Saturday." Then on the 12th he proclaims the results: "Another great day in Wisconsin athletics. The team went to Chicago and beat Chicago 23-8. About 800 went from here and those left whooped it up lively."

Not only football, but cold weather marked Prof. Mack's diary frequently. On January 25, 1898, a cold Monday morning, the drafting room froze them out. Prof. Mack went to look at furnaces. The student of today who freezes in the cold Wisconsin air on his way to class, can at least be thankful that he has warm buildings to enter, and that furnaces seldom quit because it's too cold. Of course they don't often miss class because of the weather, but in the long run they have a better life.

Classes were occasionally disbanded when something better came along. On January 24, 1898 he reports "A locomotive exploded in the NW Roundhouse this morning and we all adjourned to go see it." Later he wrote up the explosion for an "Engineer" article.

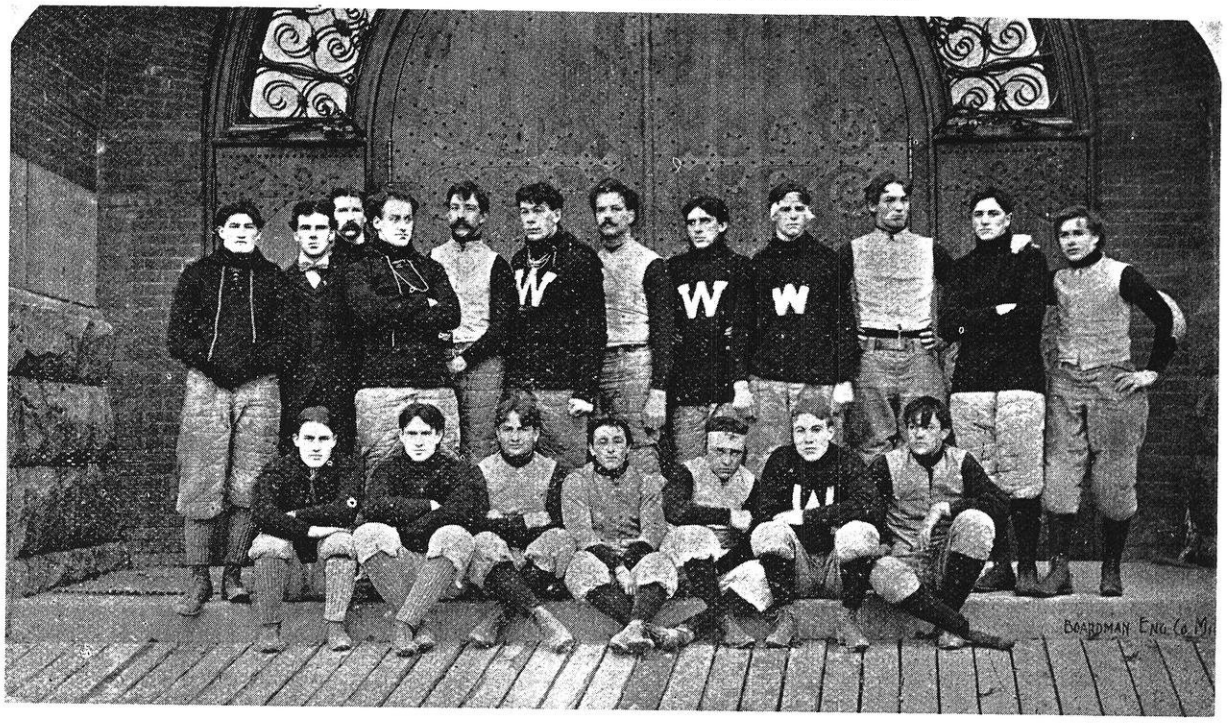
Among his favorite sports were fishing & bowling. Mack writes of "bowling with Beebe, Alex and Fosterbough. I couldn't roll any and was low." He also talks of being "High with 109," and later 122, which was his "highest yet."

Discipline problems existed then too. Mack had to attend a special faulty meeting for the purpose of dealing with two discipline cases.

Oratory contests were a common time passer on the campus. Tickets were taken, and crowds attended.

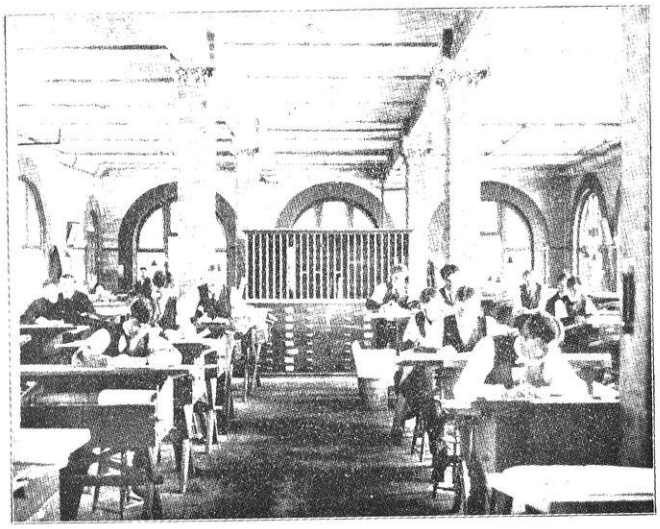
A new car line was constructed that went to Wingra Park. Mack wrote of riding on it in August of 1897.

During this time, the *Wisconsin Engineer* came into financial difficulties. They were having trouble before the end of the first volume's publication, and by the second volume they published only three numbers. C.A. Keller, a junior electrical who undertook the job of business manager when the magazine was in trouble described the outlook: "In lining up matters for the third number we found that about half of the concerns who had been carrying their advertisements in the previous two numbers asked to have their ads discontinued because the circulation was too limited and didn't pay them. In addition to this I found that the incumbent board had inherited a big debt, apparently an accumulation of deficits from the last three or four numbers."



U.W. football team of 1896

He goes on to explain: "About this time war clouds (Spanish American War) were looming on the horizon and everybody had started to economize, which added to our troubles. We were facing a crisis that gave us much concern, in fact we seriously considered the discontinuance of the publication for the time being at least. After burning much midnight oil and presenting our case to the members of the faculty who were most interested and sympathetic, we decided that we would not be responsible for a disastrous ending of the magazine and that it was up to us to pull the 'Engineer' out of the hole. We issued the third number in April. About this time war was declared which made it impossible to issue the fourth number, principally because of the military activities among the students."



Sophomore, junior and senior students in 1896 worked in the Drawing Room. According to the 1896 "Engineer", the room was "well lighted, having windows on three sides," and the room was "the largest of our three drawing rooms."

The faculty came to the rescue of the students before the April number was printed. They put up a note for $200 so that the printer would take the copy for the last issue.

An article in Vol. XXV, No. 8 on the Twenty-fifth Anniversary of the Founding of the Wisconsin Engineer" explains: "This was the first time, but not the last time, that the good ship almost went to pieces on the financial rocks, and more than once the faculty members have showed their interest in the magazine by financial support. The "Engineer" in those early days, was trying to do what many another enterprise has tried to do without success, – it was trying to run a business without any working capital. Occasionally a manager turned over a small surplus to his successor, but the usual policy, until the magazine became seriously involved some years ago, was for the staff to divide the year's profits, if there were any. The debts were passed along intact. This policy of dividing profits has been abandoned for a new one which includes the maintanance of a small working capital and the use of all other funds for the purpose of improving the magazine."

Looking into Mack's diary once again, we see the impact of the war on the University campus: April 21, 1898 – "The whole talk is war. The excitement does not seem to be so intense here as in many other places, as the Cardinal says, they have burnt no kings in effigy or walked on no Spanish flags, but it is in the quiet kind that wants when the time comes. This will probably be regarded as the beginning day of the war."

April 25, 1898 – – "This day goes down in history. The excitement of war is getting more intense. This afternoon a mass meeting was held at the Gym addressed by President Adams who advised the forming of a volunteer reserve. At 5:30 pm the flag went up on the Capitol as a signal that the National Guard had been called up. The chimes played America and the excitement got more intense."

April 26, 1898 – – "No war news today, but continues all the talk."

April 28, 1898 – – "The Governor's Guard left at 10 this morning for the camp at Milwaukee. The whole town turned out and there was an enormous crowd there. The juniors went to the train at 1 to see Ragland off. He belongs to the Missouri National Guard. The UW troops turned out tonight to receive some of the State Troops going through."

So it continued, the Spanish American War left its mark on the University and on the *Wisconsin Engineer.*

June 7, 1898 marked the beginning of Wisconsin's Semi-Centennial celebration. Mack writes: "We went downtown this morning to see the parade. The UW regiment escorted the 'University Parade.' The different departments met at 2 pm and formed. They with Band, faculty and students marched up the north walk of campus, down south walk, Park to Langdon, Frances, State and back to lower campus where the regiment gave a drill. It was a most enjoyable day and I hope it may be an annual event."

The *Wisconsin Engineer*, the University campus, an exciting climate in 1896. Not unlike today, there were problems, there was fun and there were rallies. Though the causes different, though the attitudes different, the personalities and the people on campus were the same – themselves.

Times have changed since the first publication in 1896, but there have always been people to make them what they were and are. As we look back on the magazine and campus of yesterday, let us look ahead to tomorrow – to a world made better by our contributions, as people, as engineers.

The following quip by Malt Basin, the recluse poet of 1921, also known as Prof. L.F. "Van" Van Hagen, should interest and amuse "Engineer" fans.

THE COLLEGE MAGAZINE

The world is full of magazines – I tumble for them all: the postman opens wide my door and piles them in the hall. I stumble over Rustic Life when I start off at morn and wipe my feet at evening on the Bolshevistic Thorn. I cannot read the printed stream that riots through my door for I'm too busy striving to increase my world store. I haven't time to masticate this mass of printers' ink, and if I tried to read it all I'd have no time to think. I amble gently on my way and let the flood roll by, but now and then a sparkling sheet attracts my eagle eye. I fish it out and open it and bless old Cadmus then, for he has made it possible to print the thoughts of men. And first among these choicest ones I count the magazine that comes to me with college news that keeps my memories green. The college journal that the boys so gravely labor o'er. They have my full comprendez vous, – I too have done that chore. I labored early, labored late and drained my thinkpot dry to get December's issue out e'er June exams rolled by. I wrestled with our students who were frozen to their pelt and pleaded with alumni who were centered all in self. I rustled ads around the town until the merchants there arose in righteous self defense and chased me off the square. And when I thought I had a bone hid in our treasury, the printer sent a billet due and took that bone from me. I thought my efforts would exalt my alma mater dear. Perhaps so, but the profs took stock and conned me out that year. I think of those old college days as each fall rolls around and when they ask me to subscribe I'm eager as a hound. I send that measly dollar bill akiting on its way. I know I'll get my money's worth and make some young hearts gay. I waste a plenty every year, but one investment pays, the coin I spend to buy a breath of dear old college days. The host of famous magazines lies piled up on the floor; I tear the wrapper from the little piebald two by four. I read about the happenings upon the campus where I used to hustle up and down with pals and co-eds fair. I read about the old boys first and then those campus notes. I chuckle at the law-stude squibs; we still have got their goats. From A to Z I read it through, including Eds and Ads, and then I leave a solemn sigh and say, "God bless them lads." You too, my son will bless them if you'll loosen up your roll and spend one lone simoleon for tonic for your soul.

Malt Basin.

UNIVERSITY..... CO-OPERATIVE ASSOCIATION.

If you have a want,
call and we will fill it.
A full line of Stationery,

Photographic Supplies,
Athletic Goods,
and Fountain Pens.

The only firm in Madison carrying a full line of Engineering Supplies.

Sole Agents for the Stanley Dry Plate.

T. S. MORRIS, Mgr.

Please mention Wisconsin Engineer when you write.

Our advertisement, first printed in June, 1896, is reprinted in recognition of the 75th anniversary of the WISCONSIN ENGINEER.

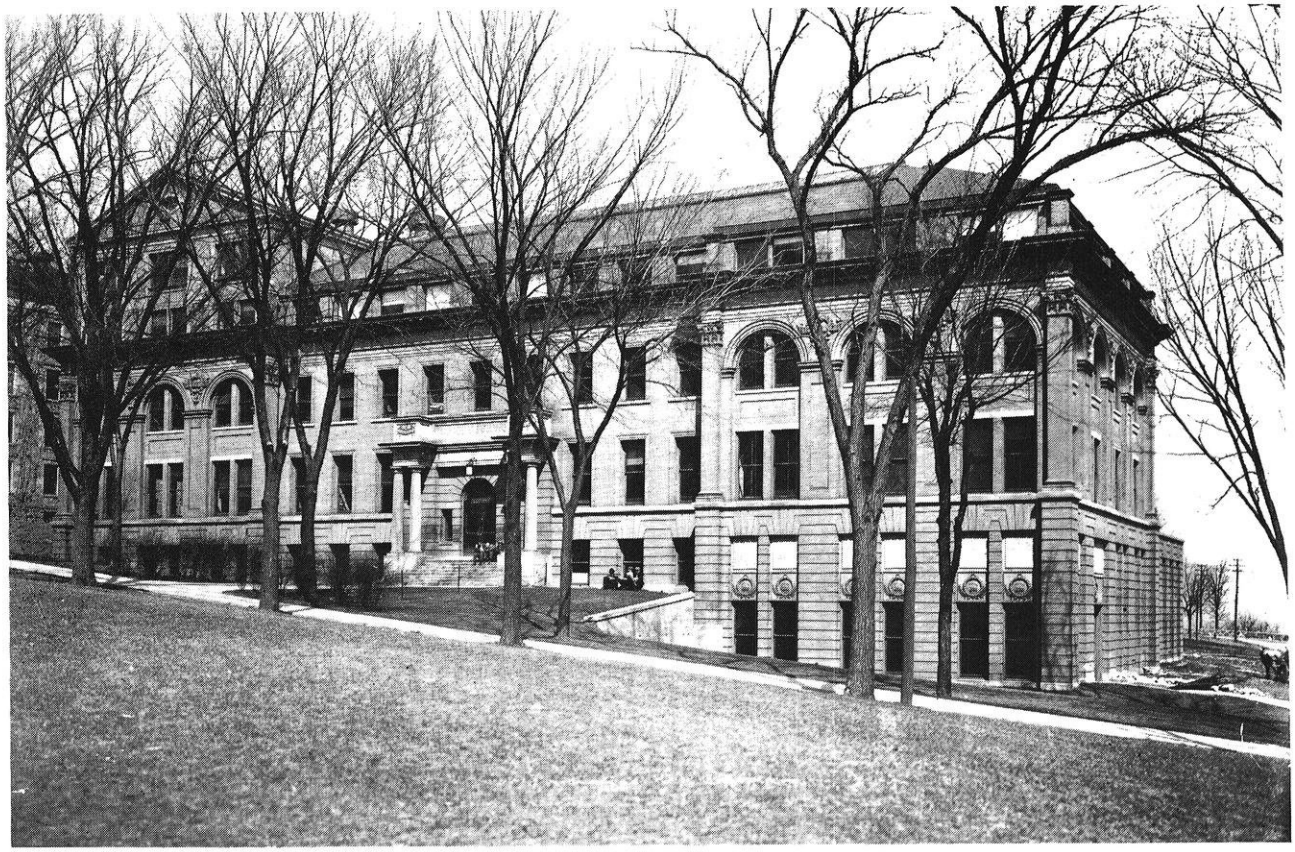
THE UNIVERSITY BOOK STORE

REFLECTIONS OF 50 YEARS AGO

by W. A. Kates

The **Wisconsin Engineer** *and the engineering campus of 50 years ago had progressed considerably from their 1896 counterparts. W.A. Kates '21, editor of the 1921* **Wisconsin Engineer,** *reminisces about campus life in 1921 in the following article. Mr. Kates is with the W.A. Kates Co., Direct Acting Flow-rate Regulators, in Deerfield, Illinois. He commented that "revivifying 1921 to a present day college audience presents as much difficulty as writing about the surface of the moon. Though 1921 is much nearer and written knowledge of it is abundant, to most moderns it is covered with as much dust and is about as lifeless." It is our belief that the following comments of W.A. Kates, who refers to himself as a "pastronaut," help span the years with a bit of interest and amusement.*

Today we hear much of the exponential increase of scientific and engineering knowledge and wonder what tomorrow will bring. To look backwards then, let's make an exponential curve, with the horizontal scale as time, and the vertical scale 100 convenient knowledge units. We start at time zero and calculate the knowledge ordinate at 50 years to the left of zero. That ordinate is the midget relative sum total of the knowledge of 1921!



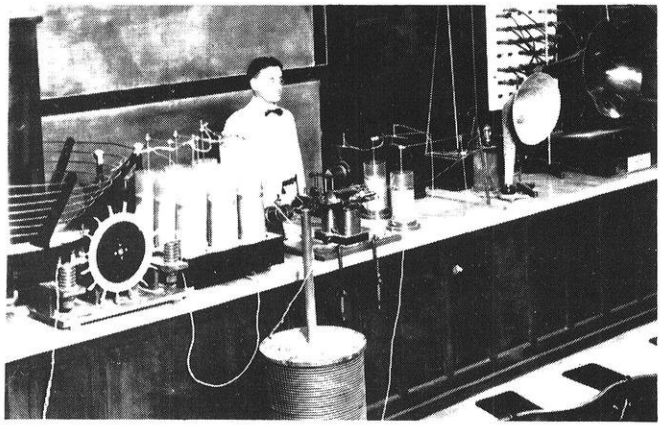
The present Education Building on Bascom Hill used to be the Engineering Building.

As additonal background, the October, 1920 "Engineer" notes a record undergraduate enrollment in the College of Engineering of 1140. Figures on graduate students are not given but in the writer's recollection, these were few.

The surge toward chemical engineering had not yet started. The large interest of electricals was the power field. They were aware of the vacuum tube, but not too seriously. Broadcasting had not been attempted. Television was unknown. The final two hour exam in Professor Terry's "wireless" class consisted of three questions: Discuss transmitters; Discuss receivers; Discuss vacuum tubes.

A large single shaft stream turbine was rated 45,000 kw. The gas turbine was a rare speculation. Aeroplanes were still neck-craning attractions, although Junkers in Germany had made them of metal. Strides had been made in automotive development, but travel to most people implied train or boat.

Engineering classes were housed in the present Education building, the WHA administrative offices, the Hydraulic and Sanitary Lab on the lake shore and the recently demolished Chemical Engineering and Electrical Engineering buildings. Math and English classes were held in Bascom Hall and physics in a building partially devoted to commerce. The Memorial Union housed oratory and fund raising events. The present engineering buildings existed only as dreams.



Just following the completion of Sterling Hall in 1918, Professor Terry poses with "modern" radio equipment used for demonstration purposes in his physics classes.

Though not as pre-packaged as today, extracurricular activities were many and varied. No TV, but the university wireless station was a pioneer in radio broadcasting. Receiving equipment, however, was almost unknown among students.

During Christmas vacation in 1921, an energetic group of Norwegian engineering students built a ski slide on Muir Knoll. A demolished Camp Randall bleacher supplied the material, the Norwegians supplied the labor, as well as the energy to enjoy it afterwards.

Forensics and debating attracted many. Engineers participated "on the hill' some, but mostly among themselves. Student branches of the national professional societies were groping for members. They replaced the all-discipline Engineers Club.

The Engineers' Minstrel Show attracted amateur talent. The promoters completed with the weekly vaudeville diet offered at the old Orpheum. The show contributed its profit to the fund for the Memorial Union, which at that time was a "someday" architects' dream drawing.

Programs for getting acquainted ranged from the more violent annual frosh-soph "rush" on the lower campus to the jovial mixer. The annual engineers mixer included faculty and students in a program of skits, songs and speeches, followed by a semi-formal tour of the Engineering Building and laboratories. Engineers and Tau Beta Pi dances provided the usual boy-meet-girl atmosphere.

The 1921 *Wisconsin Engineer* presents some interesting contrasts with its present day counterpart. In appearance, the present issues score heavily because of the advances in the typographic arts. As to the overall size, however, score one for the ancients! The first three issues for 1920-21 averaged 30 pages each, as compared with 26 for the corresponding 1970-71 issues.

Only three of the stalwart regular advertisers have survived the 50 years: General Electric, Westinghouse and Western Electric. A few pages of other national advertisers have replaced a myriad of fractional page ads from Madison merchants anxious for student business.

Editorial content of the ancients' is evidence that there has been an information explosion since that time. It also presents a picture of the technicalities themselves:

"Submarine Detection," a three part series by Professor Max Mason tells about submarine detectors developed during the pre-electronic era of World War I.

"Concrete Ships," a five part series by various authors, is a history of eighty years of attempts at designing and contructing ships of reinforced concrete. Wisconsin men were there!

"Housing and Town Planning" in two parts, by Professor L.S. Smith. Wisconsin men were there too!

"Conservation of our Coal Resources," by Francis S. Peabody, president of Peabody Coal Co. Even in that day a business man, part of "the Establishment," was concerned about improving the management of our natural resources.

"Twenty-Fifth Anniversary of the Founding of the *Wisconsin Engineer*," by Professor L.F. Van Hagen. A real story of conception, infant

struggle and maturing, by one who was there when most of it happened. Not mentioned therein is the loyal and untiring labor of "Van" himself during and after the first quarter century. "Van" filled that void which showed unexpectedly in the "make-up." It was "Van" whose news sense pointed to the possible source for a story. He led the "Engineer" to membership in Engineering College Magazines Association. Editorials, shorts, even rhythm under the pseudonym of Malt Basin, flowed from his typewriter, pounded out in forefinger woodpecker style. He was an inspiration to all the staff and his contributions were numberless for many years.

Some interesting local ads read:

"REGULAR DINNER 35 cents including meat, potatoes, vegetable and pudding, bread and butter, coffee, tea or milk at the W cafe."

"Mints Bros. Make Suits – $25 and up."

"Christmas Cards 1 cent to 35 cents, at the Co-op."

"$5.50 Meal Ticket for $5." Boarding-house fare was $6-7 per week.

"Student Canoes Across the Lake. Boats Leave Foot of Park Street at 8:00 p.m. and Every Half Hour after."

"Skating Time is Token Time. When you take her for the exhilarating whirl around the ice, she will need a VEIL PIN. We have these in sterling silver set in white stones at $1.00 and up."

Working on the staff of the *Wisconsin Engineer* provided engineers, then as today, with an opportunity to express themselves in words. The best of intellects is useless unless it can correspond and cooperate with other entities. Excellence in the communicative abilities enhances both keenness and the extent of possessing intellect. Be the occupation research, teaching, selling, or other, communicative ability is fundamental to intellectual fullness and/or more material progress as well.

The engineering student en masse must realize the opportunities in applied communication afforded by the "Engineer." Here is a "laboratory of applied communications" with an opportunity not presented in any of the more formal courses.

As more appreciate this, let's hope that the coming 50 years of the student and "Engineer" can be better for the experience.

'After College, What?' takes on a new meaning when viewed by "Bill" Mantonya, ME 1919, famous poet of Campus Notes. Bill has certainly retained his old facility at making words rhyme, and we are grateful to him for the following contribution:

AFTER COLLEGE, WHAT?

They gave me my degree last June
And started me in life,
My motto was "excelsior"
To lead me in the strife.
And while I buckled on the sword
With which to make things hot
The question which confronted me
Was, "After college, what?"

I started out to get a job,
"Oh, this is soft," said I,
"My little old B.S. Degree
Will surely get their eye.
And when it comes to picking jobs
It sure will help a lot,
In answering that little quiz
Of "After college, what?"

I filled out application blanks
I filled 'em by the score,
And then, just for variety
I filled a dozen more.
They gave me much publicity
But cash they brought me not,
I still was groping in the dark
For "After college, what?"

"Excelsior" was slipping fast,
My sword was on the ground,
In fact, the battle was a bum,
When, lo, I got a job.
The working hours were long and hard
The shop was awful hot,
This could not be the answer true,
To "After college, what?"

But better things loomed up ahead
Which always is the rule,
And now I rate a tilting chair
And not a big high stool.
The working hours are very good
And quit, I sure will not.
I guess I've settled chapter one
Of "After college, what?"

You can't buy this piece in a steel warehouse

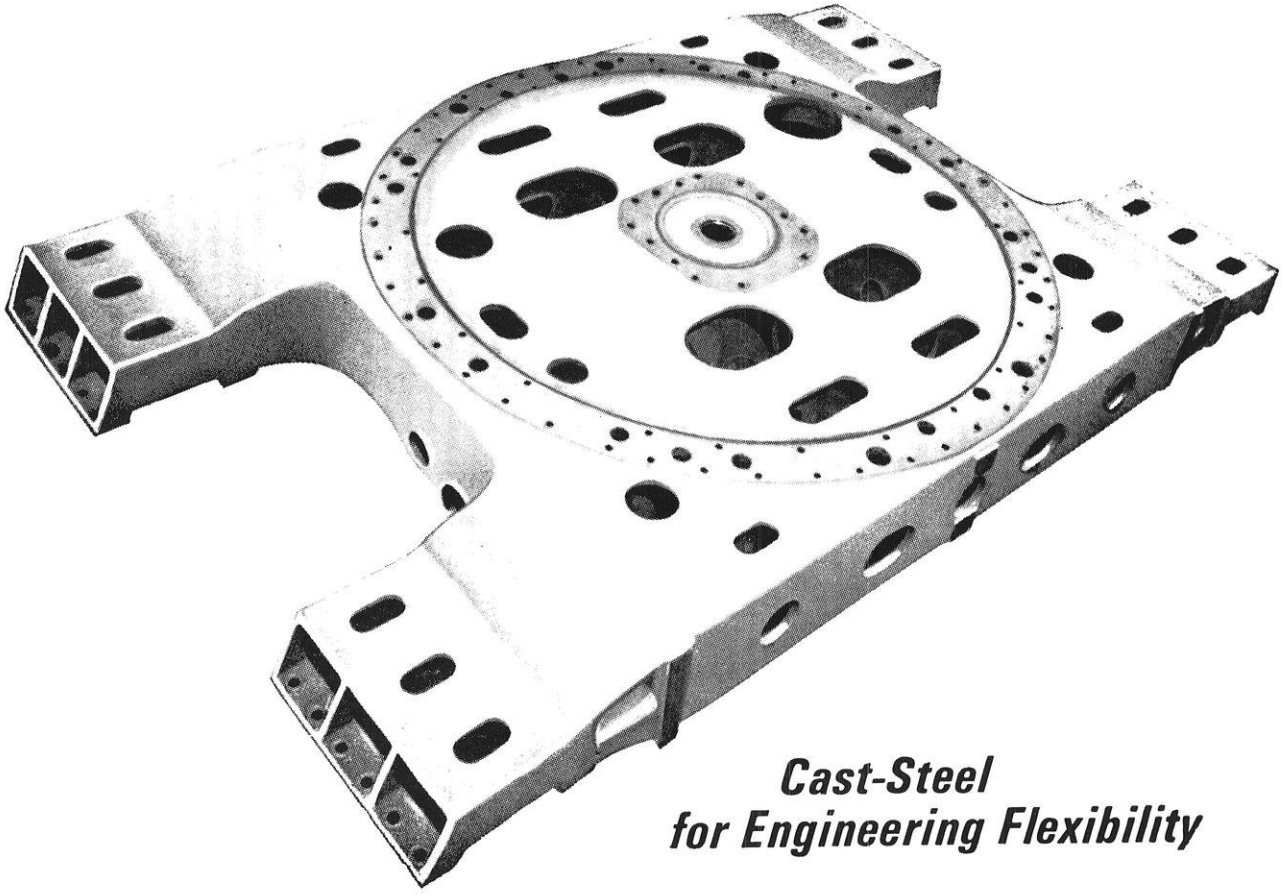
How do you accommodate multiple functions, high non-uniform stresses and complex configuration in a single component made of standard steel shapes? You don't . . . That's why this power shovel body had to be *cast-steel.*

Only with the correct steel composition, and integral one-piece construction, could the designer be sure that the equipment would take the punishing loads and shocks of heavy construction work while maintaining the precise alignment of critical shafts and bearings.

Cast-steel means design flexibility. In addition to offering an unlimited range of shapes, it allows the engineer to put the metal where it's needed for load-carrying ability... Then too, *cast-steel* permits streamlined design —design that minimizes stress-concentration at sharp radii and corners. Can you match such versatility with assembly methods? Don't try.

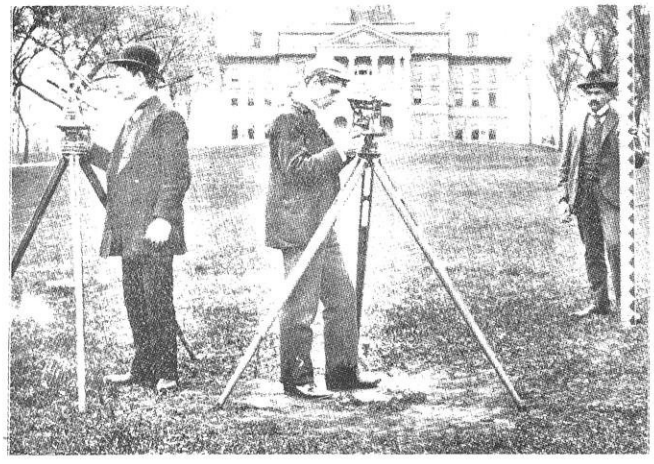
Want to know more about *cast-steel?* We're offering individual students free subscriptions to our publication "CASTEEL". . . Clubs and other groups can obtain our sound film "Engineering Flexibility." Write Steel Founders' Society of America, Westview Towers, 21010 Center Ridge Rd., Rocky River, Ohio 44116.

STEEL FOUNDERS' SOCIETY OF AMERICA



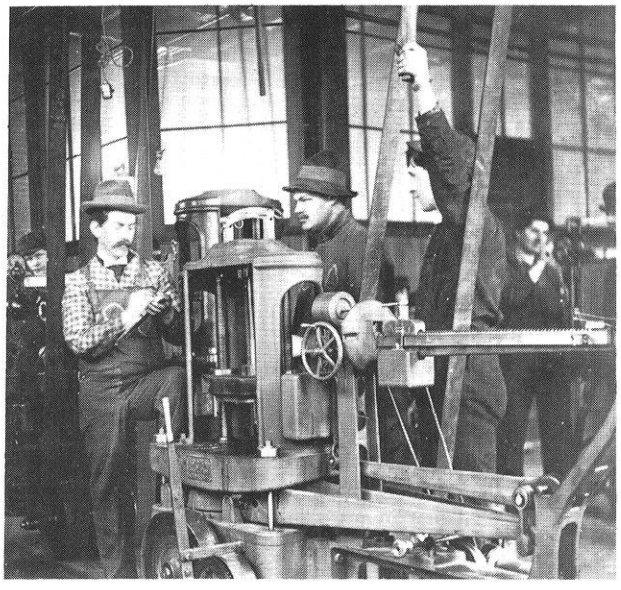
Cast-Steel for Engineering Flexibility

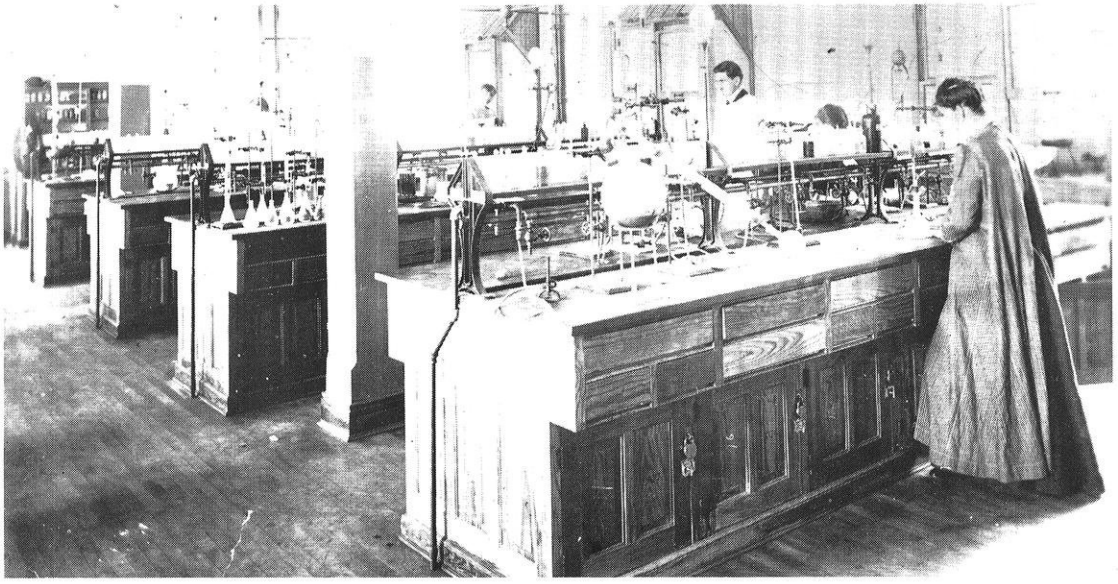
Laboratories of 1896



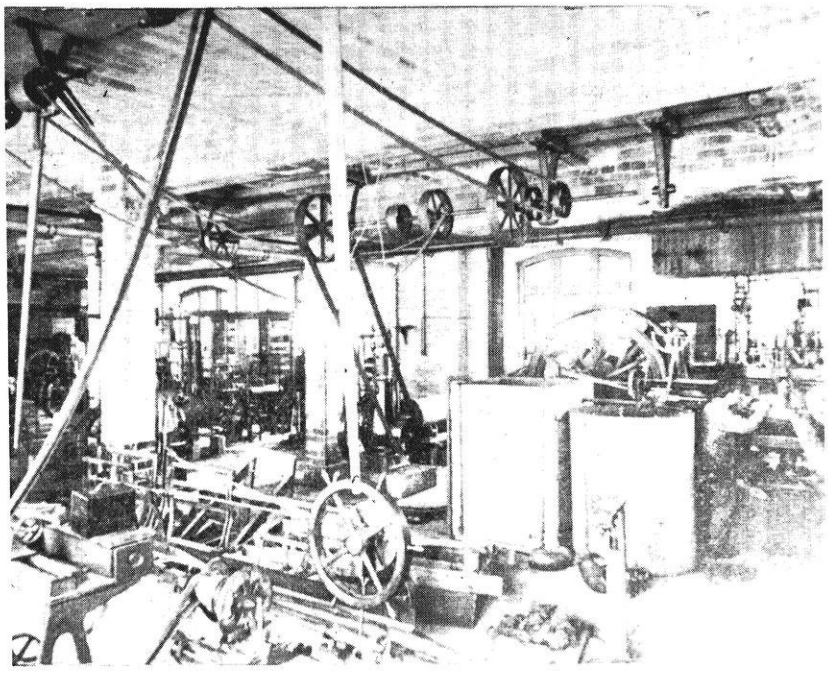
Practical experience in surveying was done on Bascom Hill in 1896. Today's students would be hard-pressed to find room on the crowded hill to erect their transits.

Mechanical Testing laboratory

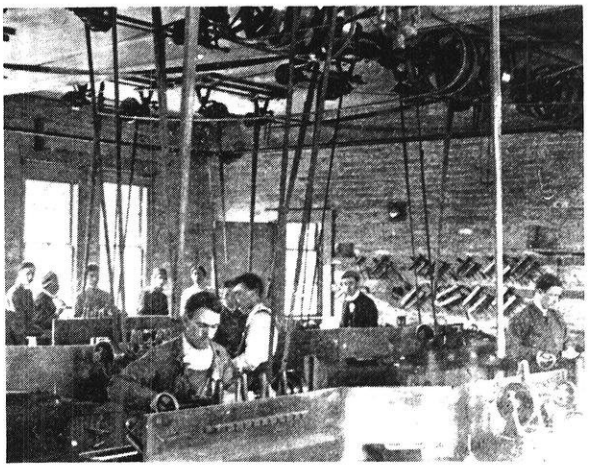




Chemistry lab

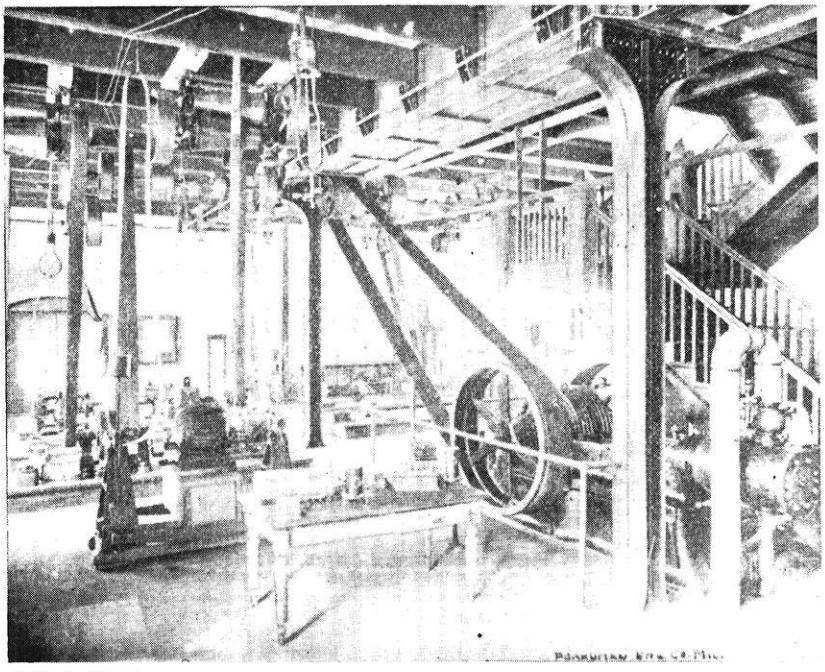


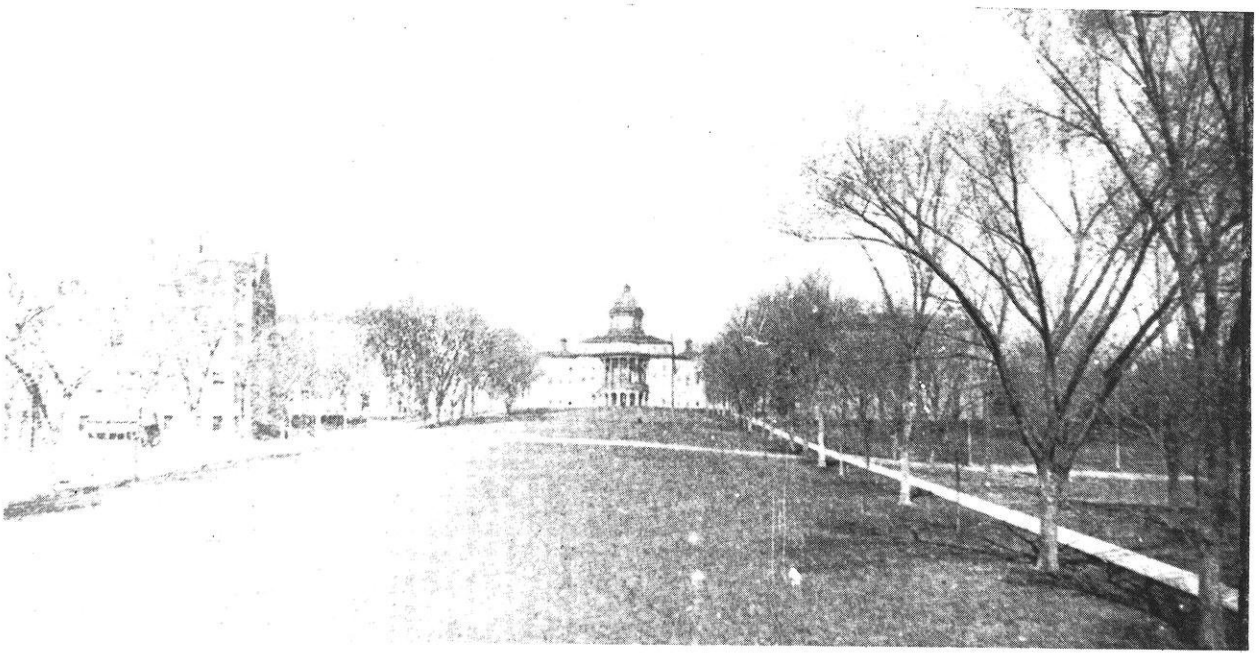
Steam Engine lab



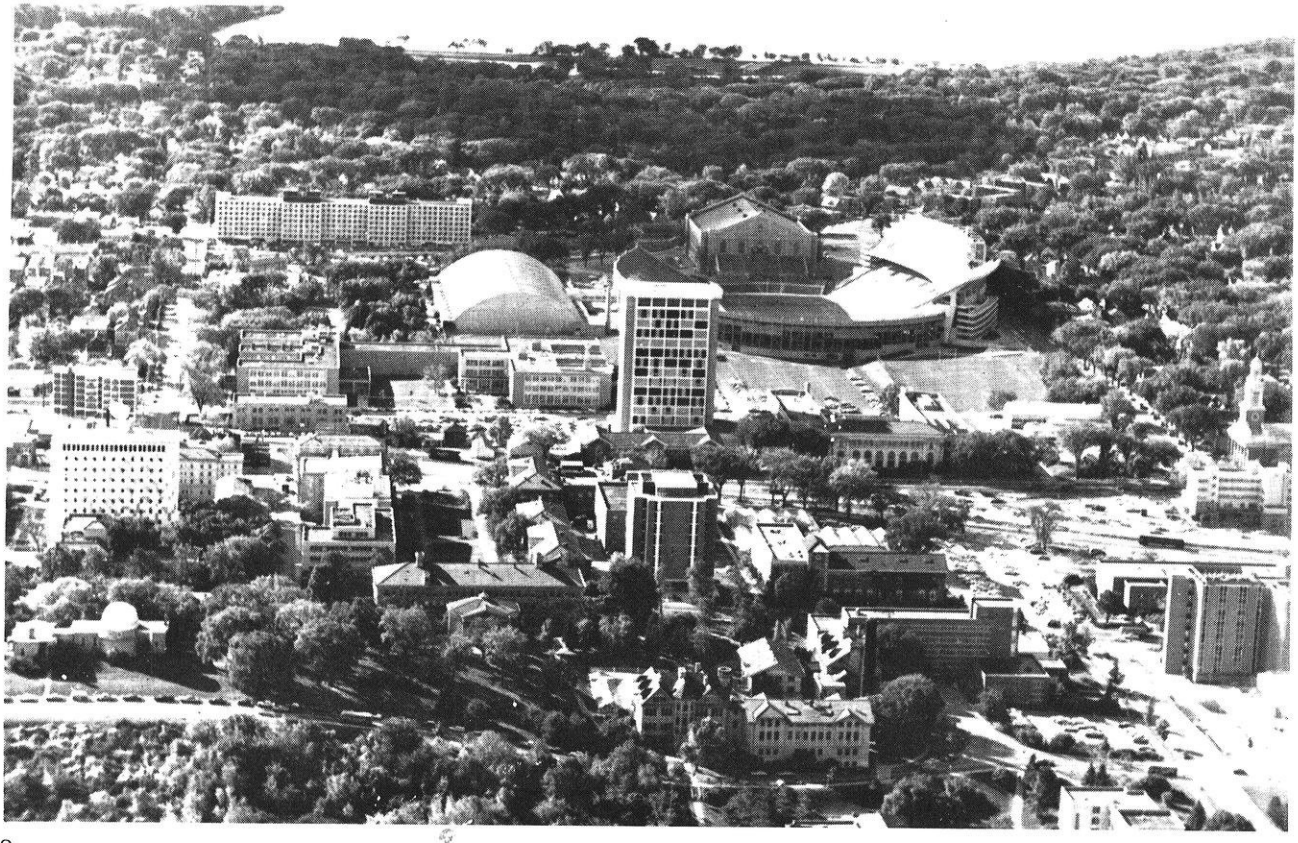
Wood shop

Dynamo lab





Bascom Hill of 1896 provides a sharp contrast with the crowded hill of today.

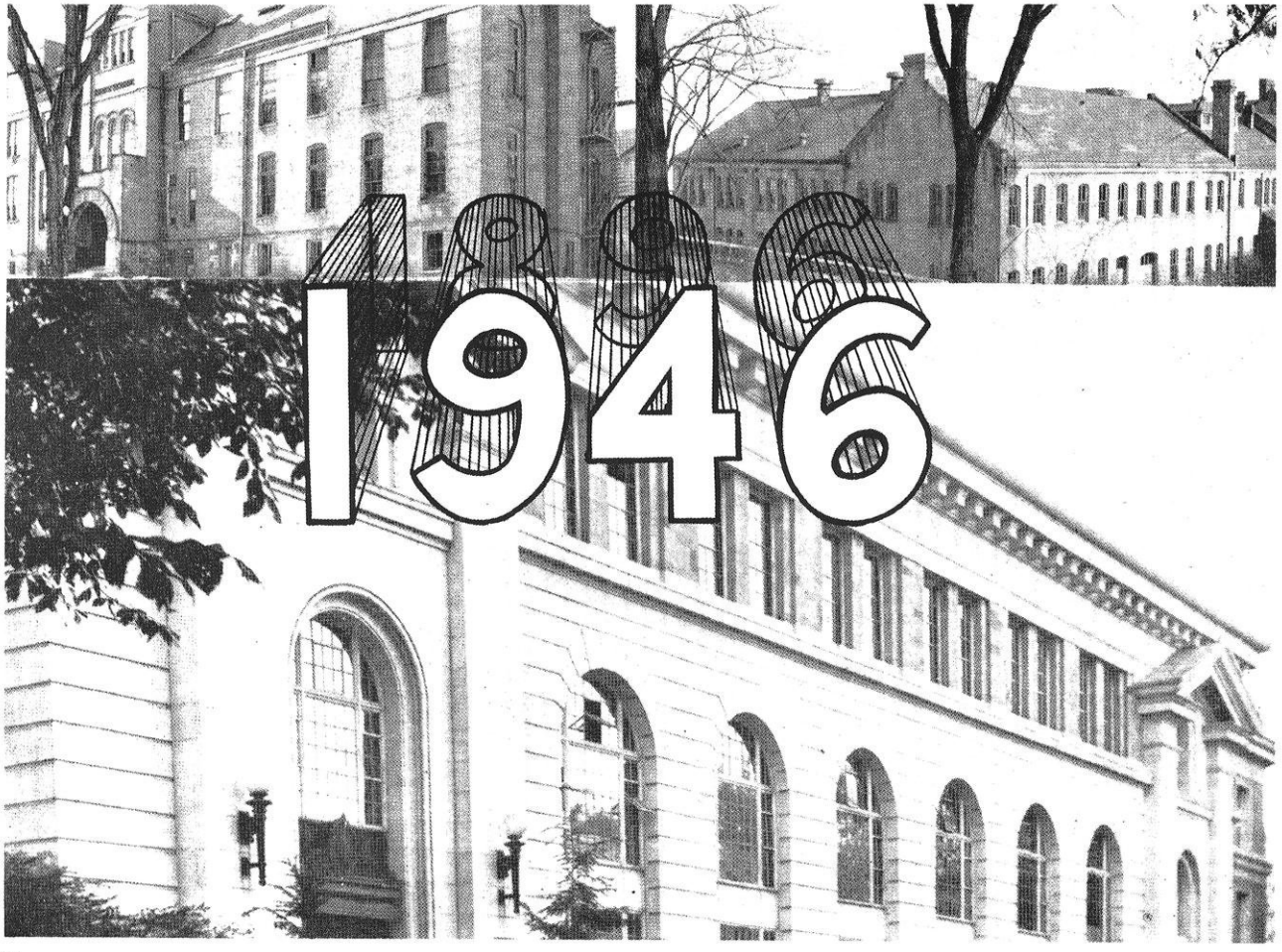


Post WW2 Generation Crowds Campus

by Prof. Mack

The engineering campus of the past 25 years has witnessed tremendous change, both socially and academically. From the post-war generation of the 40's through the involved, turbulent generation of the 60's man has made many discoveries, created many problems, and solved many. The Engineering Campus at the University of Wisconsin has been in touch with the times. Professor David Mack, who came to the campus in 1945 as a member of the Metallurgy Department, reflects on these times in the following article. Son of Prof. J.G.D. Mack, whose diary was instrumental in our research for the article about the campus 75 years ago, Prof. David Mack has been a great friend to the **Wisconsin Engineer**.

When I returned to the campus the first week in November, 1945, it looked just as it had when I had left nearly fourteen years before. Madison was the same too. There had been a depression and a war. Therefore, there had been little time, money or materials for new buildings. There was a new mechanical engineering building, built around the



Quonset hut classrooms were erected in the present Library Mall and Wisconsin got the Rose Bowl bid in 1958.

old shops west on University Ave., a new Memorial Union Theater, and a few small additions to other buildings. The State Constitution had prevented the U.W. from using WPA, CWA funds to construct new buildings or remodel old ones as most Universities had done.

My last "job" had terminated at the end of September and after a month's rest it seemed appropriate to start looking for a new one. Dropping in for a chat with an old friend and former teacher, Prof. Roland A. Rogatz of Chemical Engineering, we were interrupted by a phone call from Prof. Harvey Sorum of the Chemistry Department. After a moment Prof. Rogatz turned to me and said, "How'd you like to teach a freshmen subject for a while until things in your field open up?" He explained that the GI's were beginning to drift back to school from military service and help was needed in freshmen classes in Chemistry, Math and Drawing and I could pick any one of them. My choice was Chemistry. After some conversation, Prof. Rogatz turned and said, "Sorry, you've got a PhD, what's your next choice?" I took Drawing and reported to the Chairman of the Drawing Department the next day.

After starting the present Engineering Placement Office in the fall of 1946, I moved over to Metallurgy in the summer of 1947.

Things were exciting on the campus. The war was over and we knew many of the men and women coming out of service would come back to school to continue their education, while others with the help of the "GI bill" would start theirs. The U.W. was trying to prepare for the tsunami of invading students. The most serious problems were lack of teachers, classroom space and housing. I well remember that a bunch of the guys set up pup tents on the tennis courts at the site of the present Humanities building and vowed to remain there until they got decent housing. Quonset hut classrooms were erected on the lower campus in the area between the Historical and Memorial Library. War time surplus trailers were brought to Madison and trailer camps for married students appeared on Camp Randall on the site of the present Engineering and Memorial Shell Buildings, East Hill Farm, now Midvale Blvd. and elsewhere. The village at the Badger Ordnance Works at Baraboo was taken over for married students who commuted daily to class by bus. There was still insufficient classroom and laboratory space so surplus buildings from Army camps were torn down and re-erected all over the campus. Some still exist such as the one housing the Drawing Department and the Army ROTC. Incidentally, the last surplus WWI buildings on campus wre torn down only six years ago. Better luck this time (we hope).

The *Wisconsin Engineer* had never ceased publication during the war years, but it had been uncertain from month to month who the editor would be because of the draft. One of the editors grabbed that once-in-a-lifetime chance and published all the risque jokes that had been accumulating for the humor page, and left the next day for military service.

A continuing source of trouble was the humor page. Invariably, one or more of the jokes offended Dean Withey. The Dean would call and ask it I wouldn't censor the proofs of the humor column. I demurred and it was agreed that the Editor and I should have a talk which we would do, and two months later the whole process would be repeated. Professors Shorey and Barker being senior members of my Department lectured me frequently on dirty jokes and once a year or so would write a letter to the Editor criticizing the humor and threatening action if it wasn't cleaned up. But the Humor page still goes on.

Since the *Wisconsin Engineer* had been incorporated as non-profit organization and the staff contributed their services, a nice bank roll had been accumulating over the years. This money was greedily eyed by other campus publications who were continuously trying to dip into this reservoir to financially bail out their own publications which always managed to be in the red. They couldn't

touch it because it was in the independent incorporated Wisconsin Engineering Journal Association. We did our account bookkeeping, accounting and auditing, which consistently annoyed the student financial adviser. The pressure grew so great that about the time Professor James Gage took over as Faculty Adviser in 1954 for the magazine, we succumbed and let the student financial adviser have the job.

While the "Engineer" was going merrily on its way, campus life was changing. The veterans of World War II who had largely been a happy group (they'd won a war hadn't they?), were superceded by a smaller group of Korean War veterans who never seemed quite as happy and were more serious. The University began to acquire new buildings, the corner stone of the Engineering Building was laid in 1949; this area of the campus being officially recognized as the Engineer Campus.

The articles in the "Engineer" reflected the change occurring in the Engineer profession. The computer and its multidinous progeny appeared more frequently as did a more sophisticated approach to old problems. Nuclear Engineering had its impact too. With the advent of Sputnik I in 1957, Space and Science and Engineering articles began to appear. Nowadays, with the revival of environmental contamination and protection, the "Engineer" has even devoted entire issues to the problem.

The UW kept on growing. More students came, more buildings went up, more Vice Presidents of everything and Assistant Deans appeared. All vestiges of the tusnami of World War II and Korean GI's disappeared. The Engineering College, trying to keep pace, adopted a "Space Science and Engineering" program and then somewhat later, an "Ocean Engineering" program.

By now the veterans from the Viet Nam adventure began to appear on campus. They were, and are, a totally different breed than the Veterans of World War II and Korea. They are quiet, introspective, rarely smile or laugh and give an impression of one who is grim because he has seen and done too many repugnant things.

The beatniks of the fifties and the hippies and yippies of the sixties have gone almost unnoticed in the Engineering College. The engineering student is a dedicated guy in a galloping discipline that changes from day to day and provides answers to questions. The offniks are disciples of discipline that has no answers to anything, being intellectually circular and redundant.

Although the Engineering College was visibly worried about the trashers getting into some of the complex laboratory equipment that is everywhere, the College survived with only a few broken windows.

As we head into the seventies, other changes are in the wind. Perhaps the UW at Madison and

The newly completed Engineering Building – 1949 style – marked the beginning of the expansion of the post-World War II Engineering campus.

Milwaukee will be combined with the State Universities. Whether this will be good or bad is as yet uncertain. If this occurs, the UW will almost certainly become THE Graduate School, while the State Universities will become the terminal bachelor's degree schools or feeders for the Graduate Colleges at Madison and Milwaukee.

Most certainly, the plush days of easily financed graduate education of the last 15 years are gone. Graduate enrollment will revert more and more to the old times when nobody went to Graduate School unless they could at least help finance their own education. Not only that, but they went because they wanted graduate education above everything else. This will change the character of graduate education. While this occurs, there will be a reduction of low enrollment courses, special programs and perhaps even the disapperance of some departments. All in the interest of "reducing costs" it is regretable, but these trends will also increase the depersonalization of the University.

For the next 25 years, the *Wisconsin Engineer* must ride with the changing tide of engineering subjects as it has in the past, but much more so. As a guess, there will be more articles on environmental control from all angles; perhaps more articles biased in favor of the system's approach to Engineering problems; more inter-disciplenary subjects, such as bio-engineering and materials; certainly more articles on fusion power, thermo-electric power sources certainly increasing attention will be paid to the sociological and demographic aspects of Engineering; as we get farther and farther into space and into the ocean depts, the "Engineer" will have appropriate stories. And so on ad infintium.

At least it will be fun, but I'll bet you ten to one that occasional blasts at the Humor page will still occur. And don't forget: you can't beat fun.

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