1-17-1957

# The Amplifier - v. 3, no. 6

Associated Students of the Montana School of Mines

"The news you can't read anywhere else---"

Published Bi-Weekly

MONTANA SCHOOL OF MINES

MINES AMPLIFIER

VOLUME III 6th EDITION JANUARY 17, 1957

# DROUGHT HITS BUTTE

(ANA Jan. 17) Shocking news was brought to light early today with the release of a technical report from the office of the president of the junior class, Montana School of Mines. Pres R. "Rockin' Dokken spoke very gravely, at the special press meeting.

According to the budding chemist G. Eugene Bullock, the results of a rigorous, sime-micro, quantitative, qualitative analysis of the new-fallen snow showed: (1) a dust content of 10 %. (2) calcine (from Anaconda) content of 40 %. (3) a duck-down content of 50 %. (4) a moisture content of 0 %.

President Dokken went onto say that Mr. Bullock was prompted to run the analysis purely by chance. As the water to the Bullock residence had been shut off due to a delinquent bill, Mrs. Bullock filled the coffee pot with "snow" in order to make coffee Wed. morning. When the odor of burning feathers assailed Bullocks nostrils, he ran to the pot (coffee) and discovered, not coffee, but a sickening eutectic of duck-down and calcine.

The Butte Chamber of Commerce and representatives from the Local Relief Agency (a subsidiary of Crane Plumbing Co.) have wired Pres. Eisenhower collect requesting that he reroute the Columbine and take in the local scene.

Many theories have been set forth by the students and faculty at the School of Mines to account for this catastrophic phenomenon. The most probable cause for the duck-down content was stated by Wayne "Deadstick' Seguilia. He believes the duck-down in the atmosphere resulted from his inadvertantly flying through a formation of mallards over Tokyo while hurrying to make a 6:00 date on the Ginza. The results from the entanglement of Thunderjet and duck strewed forth into the trade-winds and was hence deposited on Montana.

Several interesting sidelights have developed from this unusual "snowfall." The mineral dressing department of the school has received a research frant from the Sleezy-Sleeping Bag Co to see if it is possible to separate the down from the calcine and dust, and thereby gain a new, cheap source of down for their products.

Also, a whole new field of employment has opened up. Men will be needed to shovel this white blanket from the campus. Those interested give your application to Rose when you pass through the chow line Friday.

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## "WE DIDN'T KNOW THAT---"

Geologists will be interested in reading a tribute by F. M. Fryxell to our former president J. R. Van Pelt. This tribute is given on page 56 of volume 34 Number 1 (November, 1956) of the Compass. Some may be surprised to learn that J. R. V. P. held a distinguished professorship in Geology. Fryxell by the way is a world famed educator at a world famed institution, Augustana.

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## THETA TAU NEWS

### MSM REPRESENTED AT NATIONAL CONVENTION

During the Christmas Holidays Bob Rowe, Junior in the Petroleum Engineering Department attended the national convention of the professional engineering Fraternity, Theta Tau. He was the delegate chosen by Psi Chapter as its representative at the convention. During the three days of sessions Rowe served as chairman of the Resolutions Committee and as a member of the Insignia Committee which reported at the convention. A brief report of the convention follows.

Theta Tau, national engineering fraternity, held its 21st Bi-ennial Convention at Columbus, Ohio, December 28-30th. Representing 24 chapters at Engineering Colleges throughout the country almost 100 delegates, national officers, alumni and active members assembled for three days of sessions. National officers were elected and following tradition, and in recognition of his many years of service to the Fraternity in many offices, including Grand Regent, the current convention was named for Prof. Donald D. Curtis, Head of the Mechanics Department, Clemson Agricultural College, South Carolina.

Significant actions taken during the convention included the authorization of a new post of Travelling Secretary. Also approved for the coming Bi-ennium is the appointment of four gegional officers who will assist the Executive Council in stimulating and co-ordinating the national program. As a guide to all chapters a new recommended Pledging Code was adopted. Approval was given to the continuation of the regional meetings which have proved valuable during the interim between conventions. Montana Mines offered to hold the next regional meet on the Mines campus.

Numbering over fourteen thousand members Theta Tau fraternity was first established at the University of Minnesota in 1904. As the principal professional engineering fraternity in this country it numbers among its members outstanding leaders on each campus and in all the engineering fields.

Bob Rowe - Delegate

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## YOUR PROBLEMS

Dear Hardrock,

My husband has to go on the Senior trip and I will be all alone for two weeks. How do you suggest I spend my evenings?

A Student Wife.

Dear Wife of a Student,

After careful consideration of such a delicate problem, I have worked out a adequate schedule to occupy the loney evenings.

Sunday Evening: This should be a evening spent in devoted meditation and prayer to insure the safe home coming of your beloved husband.

Monday Evening: Those Monday blues will vanish as you spend a quiet evening at the It Club with your favorite sewing group.

Tuesday Evening: A good chance to recubriate from last night's orgie err... sewing club meeting.

Wednesday evening: Cultivate your favorite hobbies. Suggestions: basket-weaving, the art of under water diving, or the study of the love life of minor poets.

Thursday Evening: A delightful time to invite in your husband's friends in order to plan a home coming party for him. This is also a good time to practice the fine art of being a good hostess.

Friday Evening: This evening may have to be spent visiting the neighbors so that you will be able to tell them how lonely you are while your husband is away.

Saturday Evening: Saturday night is the lonliest night of the week when a loved one is away, so the healthy thing to do is keep busy in order to occupy your mind. Do all those things you would never get away with when the old man is home.

If this schedule proves satisfactory repeat for the remaining week your husband is away.

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### THE INQUIRING REPORTER

The question :

Do you think the students here are disinterested in and disgusted with conditions here?

Dale Sawitky: Yes, everybody is disgusted for a number of reasons. The food is probably the main reason. It's monotonous with very little variety and appeal; this is illustrated by many dormitory residents preferring to eat some meals down town. (next page

Secondly, the A.S.S.M.'s inability to represent the student body in matters concerning curriculum changes and administration policies, tends to make the students feel left out.

Frank Ordway: Yes, the students here are disgusted with many things in particular. I think that in some courses too much time is spent in testing and enough in teaching. Also, some subjects are repuired in curricula which have little direct bearing on the course.

Dan Rovig: Yes, I think the big trouble is the attitude of the faculty and the administration toward the students. How do you think the beginning students feel on registration day when they are told that 75% of them will flunk out?

(continued in next column)

Carlos Eckhart: Yes, I have the feeling that most students here are somewhat depressed but this, in a way, is explainable because in a specialized school like M.S.M. there is a confined atmosphere both in actual studies and extr-curricula activities.

Ray Utter: Yes, one of the reasons is probably that the curricula is outdated in certain aspects. Why should metalurgy and mineral dressing majors take surveying and topography? It seems to me that a general revision of the curriculum would raise the interest of many students.

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Statistics prove that 50 % of the all the married people in the United States are men!

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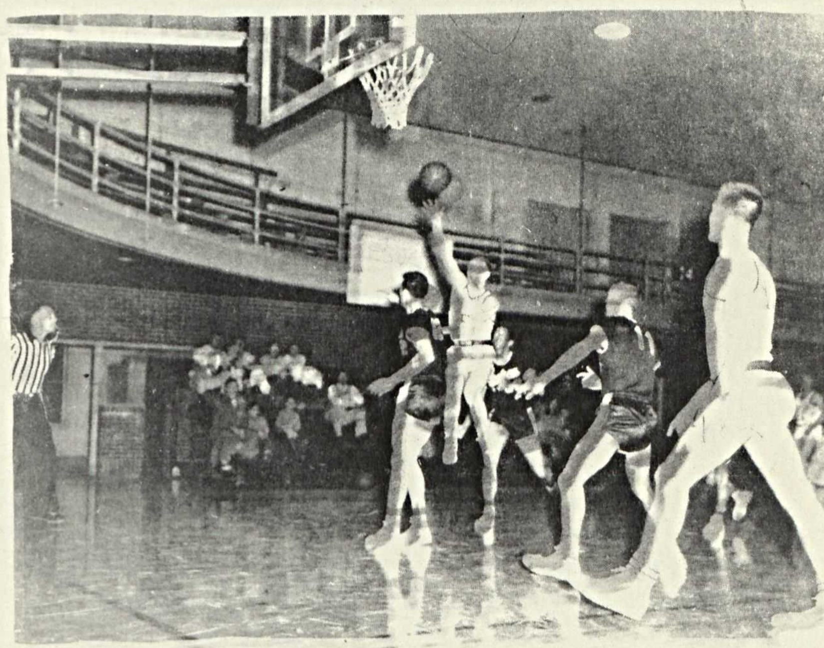
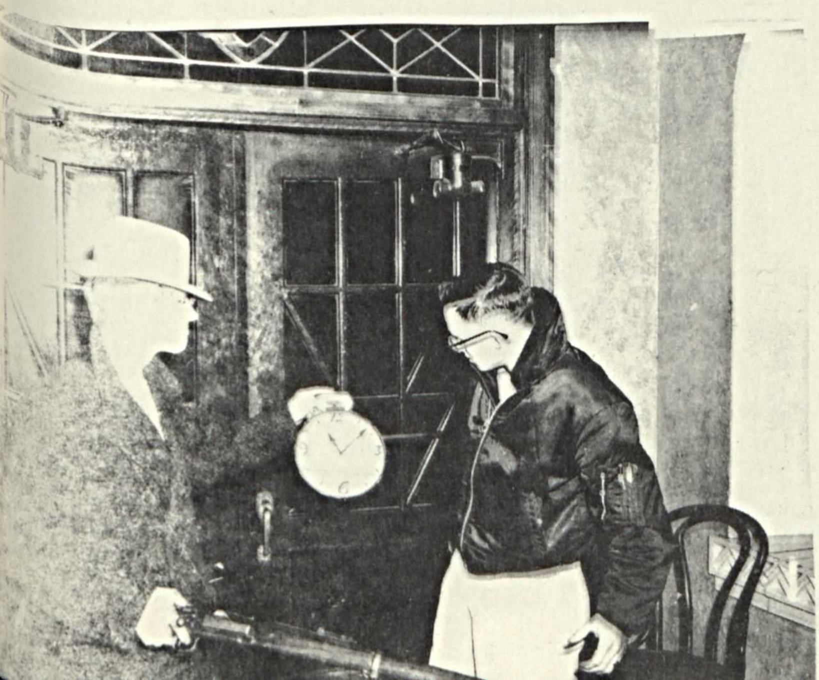
HIGH LIGHTS FROM THE MINES GAME (Billings)

Robert Griffen (5) drives through Lyn Homer (22) and Jerry Polesky (11) for two points as Robert Garey comes in for a rebound.





THE CRYSTAL BALL

Naughty, Naughty, late again.
Guess I'll have to turn you in.

NO FORMULA

WHAT THEN?

Editor's note: The following was taken from the commencement address by Charles F. Kettering at the General Motors Institute, Flint, Michigan.

We have had a plan for many years in General Motors for the promotion of our new developments. When we have some new thing we present it to someone who looks at it and theoretically throws it in the waste basket. We just pick it up and the next man that comes in, we present it again. Finally after about three or four years of presenting it, somebody says, "We have seen this before, maybe it is O.K." And then they begin to consider it seriously. We think the fundamental psychological incubating time is about four years. Once in a while you beat that, but not very much. I have been on some projects that have required as many as thirty-five years before they were taken seriously.

A man said to me one day, "It must be very dramatic, being an inventor or researcher."

I said, "It is."

Then he asked, "What is the first requirement?"

I said, "You must not bruise easily."

The telephone was finally accepted and Edison developed the electric light and the whole electrical industry came along. About that time it was found that some of the new things could not be calculated and could not be predetermined, and so the beginning of the experimental laboratory or the testing laboratory came about. A great many of our educators claimed, "That is the cut-and-try method, the trial and error method."

We said, "No, it isn't, is isn't either one of those. There is another way of saying it that more nearly describes it, and that is 'the method of experimental evaluation'."

When you can't calculate it, what are you going to do? When you haven't got a formula, what are you going to do?

On the cover of the program tonight there is the picture of a pneumatic tire. I don't know whether you have a textbook on tires at the Institute or not, but I have never seen a good engineering discussion of the pneumatic tire in any book on engineering. Yet we think the pneumatic tire in any book is one of the greatest mechanical inventions that has ever been made. In a number of institutions that I have visited, they explain, "The reason we haven't a text-book on it is because we can't write one. You have to have formulas for a textbook."

"Well," I suggested, "you ought to drive your car without tires. That might help decide which is more important, the formula or the tire."

So there is a need in education today which considers the engineering beyond the formula. Almost all of the automotive engineering is this type. So we ask, "What are you going to tell the students to do when you haven't got a formula?"

Edison was the first man who decided what to do. He set up the first organized method of analyzing problems. He set up a definite research program and put project engineers on the problems to see what could be worked out. It is a commonplace thing today, and every big organization has its own type of research and development organization.

You go into a great many towns, and as you drive along the road you will see a billboard with a map on it and an arrow pointing, saying, "You are right here." They are showing you where you came from and where the town is on the map. I think at this commencement, the important thing now is to try to point out where we are. Where are we now on the map of future engineering education?

This is a unique institution. It grew up over a great many years. It started back in the YMCA schools and finally came up until we have this very fine organization

Now it didn't grow up because somebody had a brainstorm about organizing a new type of school. This came about because of the necessity of training people to do things in which the method was different from the accepted engineering educational programs.

To show you how easily you can get fooled abiding too closely by the formulas, I have been a member of the A.I.E.E., the American Institute of Electrical Engineers, for many years. When we developed the self starter, which I did. When I was through one of the members got up and said, "I don't think we should allow talks like this to be before our section. This man has profaned every fundamental law of electrical engineering."

So I said, "Well, now for instance, what have we profaned?"

"You are using more current through the wires than our formula allows."

I said, "I am not interested in that. I am simply interested in trying to start an automobile, and it worked out fairly well."

We get so set upon the formula, upon the procedure, that we miss a great many of the side views. It is like driving through the country at night, when you don't see any of the scenery at all. There is a lot more country on the side of the road than there is on the road.

One of the most interesting experiments that we had at the Research Laboratories in Detroit was on one of these elementary problems. It concerned a simple beam, I think about twenty-three inches long. It was just one of the flat springs or one of the pieces of an ordinary leaf spring that is used in automobiles. One of our divisions had designed a production machine in which that spring had been used. They had figured it out and they were sure it was strong enough and flexible enough to do the work that they wanted to do. But when the got the machine running, they had to change the stroke and then the springs began to break at about two thousand cycles. So they asked the laboratory to look at it.

We had five suppliers of leaf spring material, so we asked each one of them to send us some samples and tell us what they thought we should use. They were given the working specifications. They all came back with figures within about five per cent plus or minus of the same value. They all agreed on the 2,000 cycles.

They all used the same formulas, they all used the same constants, so they were bound to come out almost the same, and the springs followed the formula very well. That looked like complete verification of their theory and practice.

We then asked them to send us some other pieces of spring and mark them for identification. It didn't have to be a secret mark because we just wanted to be sure they got back their own piece. We have those springs a physical treatment and sent them back and none of them broke in two million cycles.

That is a one hundred thousand per cent improvement, and yet you would have been perfectly justified in saying that this material obeys the formula and therefore you can't expect anything else.

Now I don't mean that we should disregard every formula. But I think we ought to find out whether it is applicable to the particular case that we have at hand.

I have an English friend who came over a few years ago to give a commencement address at one of our great engineering schools.

He said to me, "When I was over in your place last year, you told me that you were driving these Diesel-electric trains over one hundred miles an hour, and I now find that you take power on the front wheels of your locomotive. Now," he said, "you just can't run a locomotive above fifty-five miles an hour and have it stay on the track if you are going to take power on the front wheels."

"Well," I said, "I hope the locomotive doesn't discover that."

And he said, "I have the figures and the formula right here in my portfolio to prove it."

"No," I said, "I won't look at those."

I got an airplane and I flew him to Chicago, and put him on the Denver train and made arrangements for him to ride in the cab after midnight. He went out one night and came back the next, and when he finally got back I said, "I never expected to see you again, bacause I am perfectly sure you went over fifty-five miles an hour."

He said, "Do you know what they did for me? They put that locomotive up to 120 miles an hour, and it had no tendency to jump the track."

I said, "No, it is perfectly happy on the track. Why should it jump off?"

The thing that worries me," he went on, "is how we could have been so absolutely wrong in every detail."

"The reason you were wrong in every detail is because your figures had nothing to do with this locomotive. They had to do with another type of locomotive which we do not build."

He was talking about a rigid frame locomotive, while our locomotives have individual trucks like every railroad car but we put motors on them. But here a man who was perfectly willing to say without a trial that it was impossible to do what we were already doing.

In research work, when you are trying something new, always ask the apparatus you're working on whether it is happy about it or not.

I had the dean of a school of engineering come into my office one day, and he asked me, "Do you sleep well at night?"

I said, "Yes, that is one thing I do fairly well, night, day or any other time. Why do you ask that?"

"If I designed anything as screwball as your two-cycle Diesel engine," he said, "I would never be able to sleep."

"I am glad I am not that sensitive," I replied. "What is wrong about it?"

He said, "It is all wrong. It is just theoretically all wrong."

"Who wrote the theory? He might have been wrong, too."

"No," he said, "this is fundamental theory."

I said, "Well, we didn't design that engine. Nobody designed that engine. What we did was set up a single cylinder engine and give it half a dozen different kinds of pistons. 'Try these out, and see which one you like best.' We gave it valves and injectors and other things, and we let it pick out what it wanted. And to show you how much smarter the engine is than the engineers, the piston the engines picked out runs a million and a half miles, and the one the engineers picked out runs fifty thousand."

He said, "Well, I don't think the piston that is in your engine is any good. It is the most peculiar looking thing that I ever saw, and I know it isn't right."

I asked, "How do you know that?"

He said, "I am an engineer."

"But, were you ever a piston in a Diesel engine?"

So the fundamental thing that we think we have developed in research is simply to run errands for an idea. The supposition that you can design things just doesn't sink very deep with me. You can design things if you happen to know what the thing ought to be, but the old idea of having the drafting room in one city where you make the drawings and send them over to another city to have the parts made and put together, and then expect it to run--that never worked in anything we ever did. In fact I think if you get two hundred feet between the drawing and the manufacturing, you will have trouble. In most industry the last thing you do is to make the drawings.

So our industry has grown up on the principle of letting the job be the boss, and I still think that is a good thing to do, because you can't expect material to do something just because you think it should.

We have had a lot of jobs like that. Take the extreme pressure lubricants. Lubricating oils are very old, and some time ago at Cornell University there was developed a lubricating testing machine based on a railroad journal. Many tests had been run, a lot of tables plotted out, and six thousand pounds per square inch of projected area of the bearing was the highest that they could go with the best lubricating oils then available. We had built a small testing machine at out laboratories and our figures checked very well with this.

Now what more could you ask.

So I said, "Well, let's just try an experiment. Let's suppose that the lubricating oil testing machine is a dangerous weapon. It belongs to your worst enemy, and he can kill you and your family with it. But you can pick the lubricant for it. What would you recommend if you were picking the poorest thing in the world to lubricate it with? What would you specify?"

We all thought about it, and finally picked a material called monochlormethyl ether, which is practically the same as is used to put you to sleep when you are going to have surgical operation. It is so thin it has no viscosity at all. You can pour it on your hand and blow on it and it is all gone. You couldn't pour it in a warm machine as a liquid, it would evaporate at once, so we took the cap off the ether can, soldered a tube on it, ran the tube over the oil hole. Then we put a warm towel around the can and the vapors went through the tube to the bearing. Since there was no liquid in the bearing it must run absolutely dry.

We had made bets on how long it would last--how much pressure it would take. One man had nerve enough to guess 150lbs. That was the highest. We started to load up the machine very gently and carefully, and to make a long story short, we ran out of weights at 30,000 lbs. Everybody was amazed; they said, "It can't be." But we tried it over and over again, and we got some more weights. I think it stuck up around 36,000 lbs--five or six times the load of the best oil.

We brought the oil engineers in and it to them. They said, "The only thing that makes us sore is that we didn't do it. This is our business, not yours."

"But," I said, "you couldn't have done it. You have graded oils for so long on their viscosity that you would have fired anybody who proposed using something like this, that didn't have any viscosity feel to it."

Well, that was the beginning of the so-called extreme pressure lubrication which came just about the time we were developing the hypoid gears, and you couldn't have run hypoid gears if it hadn't been for these lubricants. There are many things that you couldn't do today if it wasn't for these lubricants.

Now what did we do? All that had been done in lubricating oils before that was to test the affinity of one molecule of oil for another. This is called viscosity. When you put pressure on them, you found that you pushed them apart and you had no lubrication. But the oils with no viscosity at all formed a chemical bond more like the nap on plush, and this took much more pressure to break through than did the viscosity film. It completely changed the concept of what you could do with lubricating oils.

You have read in the papers about these great calculating machines. We have been using larger calculating machines for a long while. The gentleman who runs our Proving Grounds is here. These grounds constitute the biggest computing machine I know of in the country, almost 5,000 acres. In this case they don't put in something and push buttons and wait to see what comes out. They put the whole automobile in that testing machine; and if you want to get a comparison of two automobiles, you put them in there and drive one behind the other for twenty-five thousand miles and then tear them apart and inspect every piece. Those are just as much computing machines as if they were integratingmachines with all their vacuum tubes, and the results are more conclusive.

Look at the development of tires. I have seen tires go from 3,000 miles to 75,000 or 80,000 miles. How did we do it? Here was an automobile, we put on two tires, one on the front and one on the rear and we put the new tires on the opposite corners. Then we took them out and ran them around, giving them the same kind of treatment they would get from the general public. After five or ten thousand miles we looked at them and said, "This tire is better than that one."

So we came to using the roads as our integrating machines, and it has turned out to be a wonderful job.

Ours is a tremendous power industry.. I don't know whether you realize it or not, but it really is. If we have fifty million cars on the road and we only figure them as fifty horsepower per car, which is much below the advertised value, you would get two and a half billion horsepower. All the central power stations in the United States only have about seventy-five million horsepower.

The greatest power industry in the world is this industry we are in. We have ten million tractors, and those tractors are of tremendous importance. In the first place, with ten million of them, at say thirty horsepower apiece, you have three hundred million horsepower, which is a lot more than you have in all the central power stations.

But there is another thing about tractors. People keep wondering why we can raise so much food in this country. Every time you put a tractor on a farm, you take off some horses, and we have taken about eighteen and one-half million horses off the farm. This means we can feed eighty million more people, because you can feed four and one-half people from the land it takes to feed one horse, so we can feed eighty million more people without any more ground.

When you start looking for the simple things that are important in this engineering education, the main one that you need to consider is problem analysis. What is the problem? Sometimes it takes a long time to pull the thing apart and really say, "Here is what we are trying to do."

We worked for many, many years before we really got the internal combustion engine problem pulled out so we could work on it and know what we were doing. The reason for that was that we tried at first to make the internal combustion engine work like a steam engine, and it doesn't want to do that.

In the early days of the Diesel engine everybody tried to make it run like a steam engine and then the next generation came along and tried to make it run like a gasoline engine. All we did was let it run like a Diesel engine. We always want to make something like something else; we never want to let it be itself.

So problem analysis is a very important thing. I am going to give you one more illustration of what I mean by that. I have worked for many, many years on this very simple problem, why is the grass green, and we are making progress on it. We know it isn't green for several reasons so we don't have as many things now to take into consideration as we had. What we tried to do was to pull the problem apart, and we have found out one thing about it. If I lay a stone out in the sun, the sun shines on it and it gets warm. When the sun goes down, it gets cool again. Now if the stone stayed warm after the sun went down, that would be wonderful, but it doesn't. A lot of things we put in the sun get warm, but they get cool again after the sun goes down.

The only thing that has more energy after the sun goes down than it had before, is the leaf of a plant. In other works, the leaf of the plant picks up some energy from the sun that it keeps. So we said, "All right, what is the method of this energy lift?" That is physics, fundamental physics.

Now what about it? You will be surprised some day, I think, when we have had a chance to pull this problem apart and make some progress in solving it.

It is easy to see why, when a fellow used to think about a tractor to pull a plow, he would think about a mechanical horse, and he was interested in how the horse's muscles worked. That wasn't the important thing. The only thing was the drawbar pull, and the ordinary tractor today doesn't look anything like a horse. So there is a possibility of getting energy from the sun, and you don't have to grow a plant to do it any more than you have to imitate a horse. There is energy equivalent to 640,000 horsepower per square mile, on a day like today, falling on every square mile in this country and in every other country. It is perfectly amazing, yet we don't keep it, we don't know how. Nature has been trying to tell us how, but we are always trying to make it more complicated than it really is.

Awhile back, a group of us got together and finally I said, "Write down on the blackboard in one sentence what you think we ought to do."

I had to leave the meeting about four o'clock to go to a funeral. When I came back there was just half a sentence there, and I asked the boys the next morning what the difficulty was.

They said, "We got that half sentence down and we couldn't agree on anything further."

I said, "All that you did there was to indicate that we don't know what the problem is. Therefore there is no use working with test tubes and Bunsen burners and chemical balances. We have to find out what the problem is, because I am sure we have enough technical ability to solve any problem we can analyze and set out clearly."

So I think in our future engineering, we are going to have our mathematical approach that came down from civil engineering. We are going to calculate what we can calculate, because it isn't a question of this or that, it is this and that. You don't have to belong to the mathematical or experimental group, you can have them both. We are going to teach how to experiment. You are doing that right here in your school and as I said, we grew into that because we had to.

Mr. Wilson told me the other day about a friend of his who asked his advice about a certain thing, and Mr. Wilson had written him a letter and told him exactly what he would do under the circumstances. Later on he asked him about it, "Joe, I wrote you a letter and told you what I would do. Did you do it that way?"

"No, I thought I would be losing my personal liberties if I did that."

People seldom accept advice. You haven't any idea how many people come and ask you for advice on how to do this or that, and then go out and do exactly the opposite because they say, "He can't tell me."

So you won't have these ideas adopted completely, but you are making a start here. You young men are the youngest engineers of a type of process which hasn't been snapped into existence by somebody's imagination; it has grown up over the due to necessity.

I have been interested in the cooperative type of education for years and years. because I think that it helps us to see where we can calculate and where we can't. I think it is a process of lap welding industry and education.

I want to congratulate you for having this school, for having reached the end of it, for having received a diploma or certificate. But I also want to congratulate you on being graduates from what I think is one of the fundamental principles of engineering education of the future—a proper blending of theory and practice.

# RISQUÉ BUSINESS

CHEMICAL ANALYSIS OF A WOMAN

Symbol: wo
Atomic weight: 120
Occurence: **Found wherever man exists. Seldom in the free state.**
Physical Properties: Boils at nothing
May freeze at any time.
Melts when properly treated.
Chemical Properties: Great affinity for gold, silver, platimun and precious stones.
Able to absorb great amounts of expensive food.
Acts instable; ages rapidly
Uses: Higly ornamental. Useful as a tonic in acceleration of low spirits, ect/
Equalizes distribution of wealth
Is probably the most powerful (income) reducing agent known.
Catution: Highly explosive when in inexperienced hands.

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Everyone has heard of "trust busters." Now a girl wearing a strapless gown is called a bust truster.

We know a modern Cinderella who, at the stroke of midnight turns into a motel.

The aging student should find some satisfaction in the knowledge that though he's not as good as he once was, he's as good once as he once was.

The best way to cut off a cat's tail is to repossess his Jaguar.

They parted at the corner
She whispered with a sigh
I'll be home tomorrow night"
He answered, "So will I"

"I see you are no gentleman," hissed the woman on the street corner at the man who laughed as the wind swept her skirts over her head.
"No," he replied, "and I see you aren't one either."

She was a second-hand dealer's daughter, which probably explains why she wouldn't allow much on the davenport.

Student: "I'd like to see something nice in dainty lingerie"
Floorwalker: "Ah, yes, wouldn't we all."

Student: May I take you home?
Coed: Sure, where do you live?

Then there was the geologist who had a hobby of collecting stones and putting them in his bathroom. He had rocks in his head.

Prof. Doug Harrish's comment on vertebrate and invertebrate:
Paleontology:
In some courses you need a lot of vackbones and in others, a lot of guts!

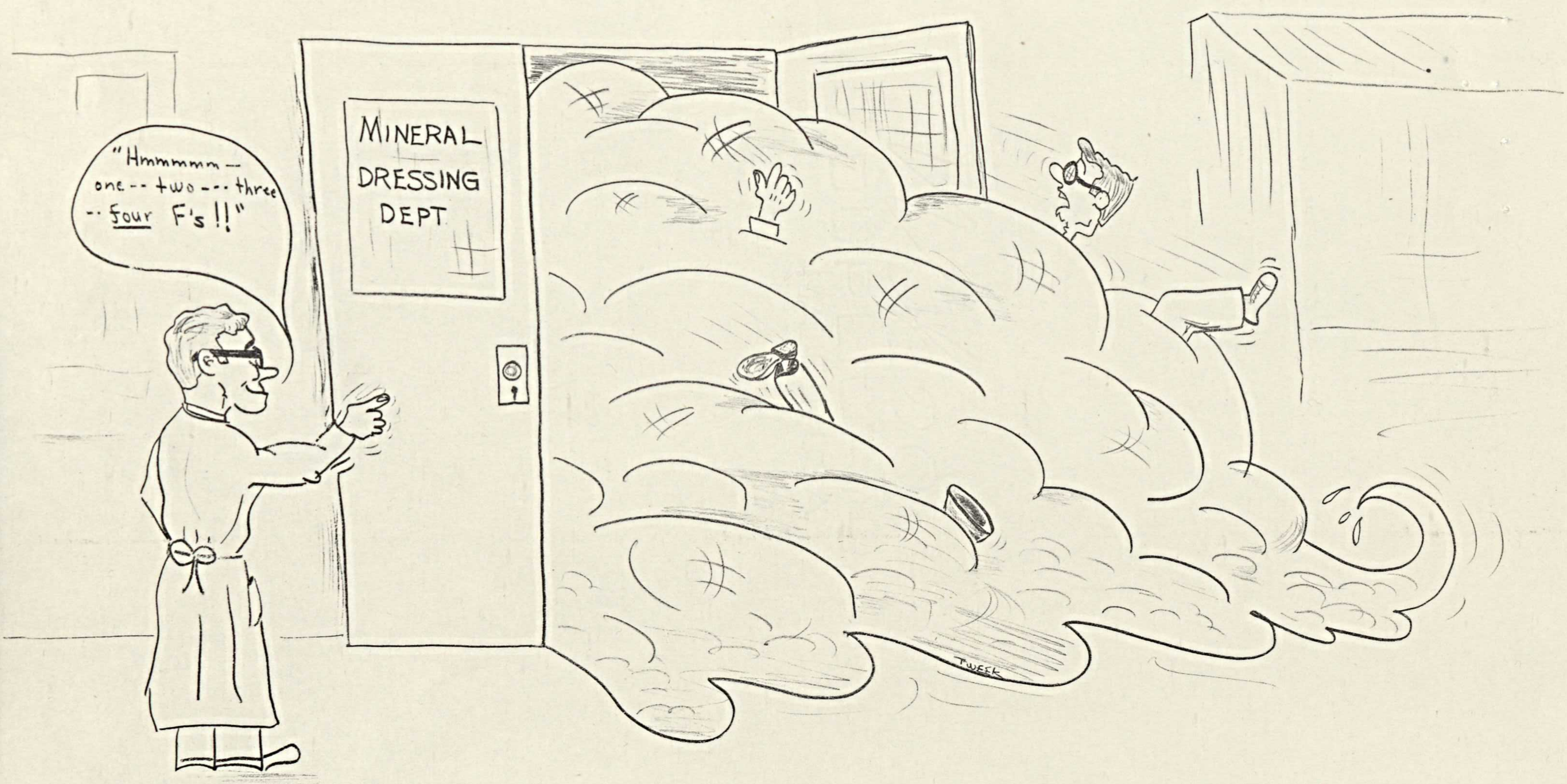
One prim old professor to another as they follow the owner of dog kennel: "Why can't he say female?"

Wearing her new evening gown which was extremely daring, the wife paced up and down for her husband's inspection.
"Well, how do I look?" she said finally.
"I hate to say it, dear," replied her husband grimly, "But you're getting fat."
She gave him a look of annoyance.
"In the best place they say 'plump,'" she corrected.
"Well, then," he retorted, "you're getting plump in the best places."

Bandage-covered Joe lay in the hospital bed and spoke dazedly to his visiting pal: "What-what happened?"
"You absorbed too much last night and then made a bet you could fly out the window and around the block?"
"Why didn't you stop me?" screamed the patient.
"Stop you? I had $25 on you.

The defeated candidate for election as shop steward was contesting the election. "I know it was crooked," he exclaimed. "I voted for myself three times yet I didn't get a single vote."

Thought for the week:
Even a mosquito doesn't get a slap on the back until he starts working.


"Hmmmmm — one -- two --- three -- four F's !!"
MINERAL DRESSING DEPT
TWEEK