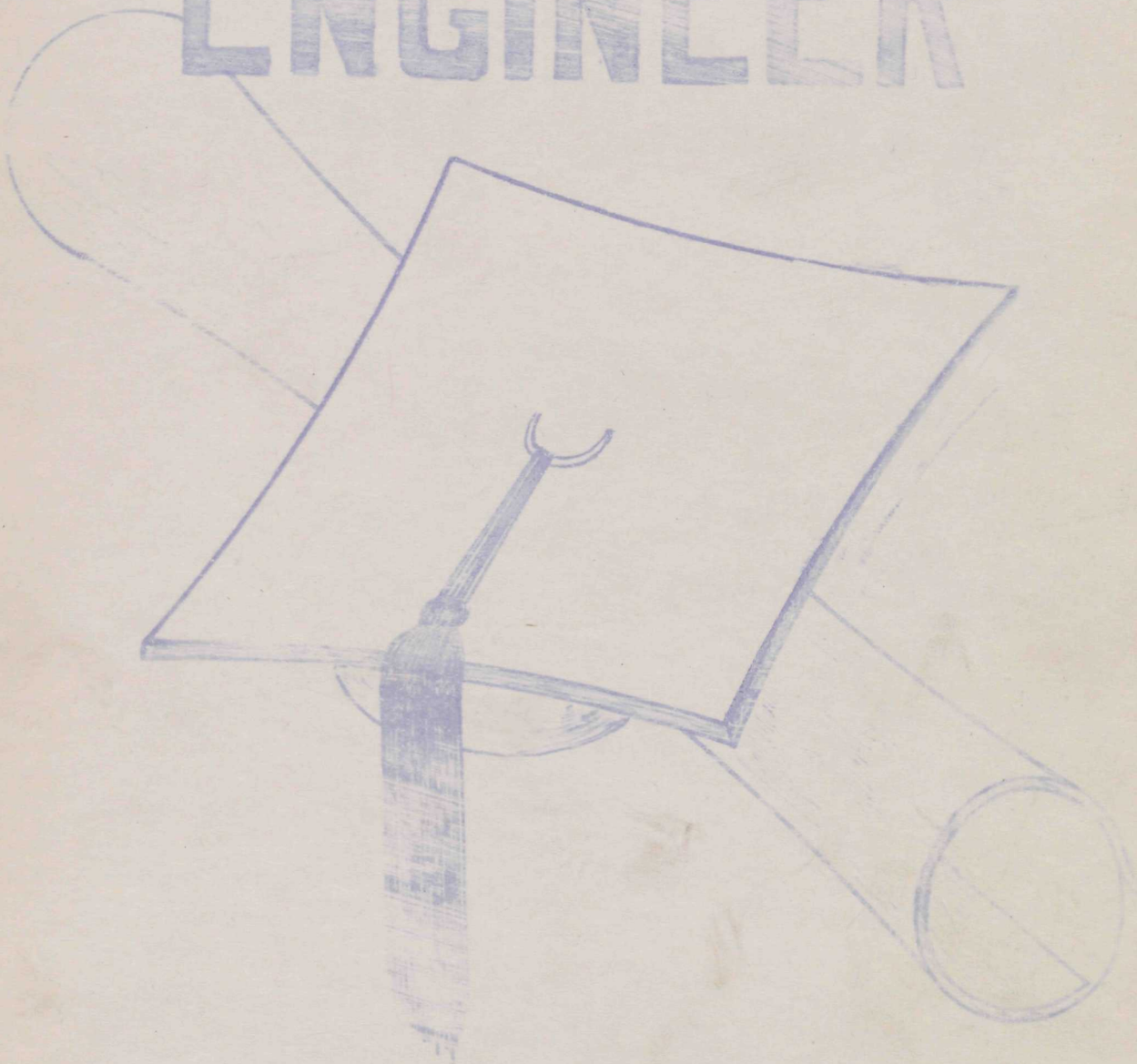
DUKE ENGINEER



THE DUKE ENGINEER

Volume III April 1942 Number III

STAFF

Editor-in-Chief--
Richard F. Wagner
Managing Editor--
Benjamin H. Carlisle, Jr.
Art Editor--
William W. Heath
Business Manager--
James W. Barrow

REPORTERS

A.I.E.E.--
Stephen C. Clark, Jr.
A.S.C.E.--
Richard J. Lynch
A.S.M.E.--
William A. Kleinhenz

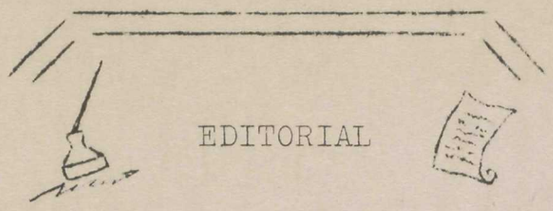
ASSISTANTS

Herbert N. Barry
Carl C. Edens, Jr.
Charles G. French
Wilber S. King
Neal W. McGuire
J. Edward Napier
Richard E. Nelson
J. Reed Stovall
Charles G. Todderud
Donald S. Wall.
H. Torey Walker
Frank W. Walters
Richard B. Wells

FACULTY ADVISORS

C. R. Vail, E. K. Kraybill

CONTENTS



EDITORIAL

At this time we would like to present the aims of the new staff to the readers of the "Duke Engineer". We feel that the "Duke Engineer" should be written, not by the staff, but by the students of the College of Engineering. We of the staff, in organizing and printing the material, have enough work to do; therefore, we should not have to write the contents of the magazine. Each issue of the "Duke Engineer" will contain a scientific article by a member of the engineering faculty, articles by the students, news of the four engineering societies, articles on E.S.G.A. and D.E.S. activities, an explanation of problems facing the students by Dean W. H. Hall, and, finally, the well known "Data Sheet". We have tried to give you a general outline of the contents of the "Duke Engineer". and we should like to add that the staff will do its utmost to publish a magazine that will appeal to its readers. We are always open to suggestions. and new ideas, so, if you have one, let one of the editors in on it. If you have a gripe, gripe to the editors, and not to your fellow students, for you will only get results by doing the former. Let's put the "Duke Engineer" on top!

We would like to express thanks to the old staff for their work on the "Duke Engineer", congratulations to all of the newly elected officers in every organization of the College of Engineering and to John Carr for his election to the Publications Board. Get behind

Continued Page 11

The Accelerated Program

During the national emergency accelerated programs, on an optional basis, will be available for all engineering students at Duke University.

Freshmen who matriculate on June 9, 1942, will have the opportunity of fulfilling all requirements for the degree in three calendar years. Members of the Class of 1945 may graduate in September, 1944, and members of the Class of 1944 in January, 1944.

There will be no regular summer program for the rising senior class (1943). However, members of this class whose grades are below the average are strongly urged to matriculate for summer courses, as it will be rather difficult for these students to complete the same amount of work in thirty weeks that normally requires thirty-six weeks. This class will be graduated on approximately April 10, 1943.

All students with deficiencies should attend summer sessions. All of the better engineering students are advised to participate in this speed-up program if they are financially able, as the Army, the Navy, and private industries are clamoring for more and more well-trained engineers to do their bit in winning the war.

--W. H. Hall,
Dean

The staff wishes to thank Professors E.K.Kraybill, R. E. Lewis, and C.R.Vail for their invaluable advice and assistance in publishing this issue of THE DUKE ENGINEER.

-THOUGHTS OF A SENIOR ABOUT TO GRADUATE-

Roomo and I were having a bull session the other night (not about girls, for a change), and we agreed that going to college is worth every cent that it costs; and it would be, even though we might never remember a thing that we learned in classes .... the people that a fellow meets and friends that he makes are worth every bit of the time and money spent.... you guys who are freshmen and sophomores take note: at least half of this vague thing called 'a college education" consists of outside activities such as sports, publications, politics, side-parlors, etc. .....some of the things about the set-up here sure burn a fellow up though, and almost everybody, like myself, is afraid to do any griping where it will do any good, so nothing is ever done about them.... take, for instance, the rule around here about girls not being allowed even to speak to a fellow on Mo day night! ..... when I first got down here and heard about that, I was dumfounded .... imagine, mature young women, some of them old enough to vote, being told they can't talk to a fellow at certain times, when they meet him on the campus ....and another thing, it would be nice to be able to take in the second show. .... reminds me of that blind date I had over at Chapel Hill last year....didn't get in until almost two..... well, so what if her teeth did stick out a little? I ain't no Tyrone Power, you know .... then all this "stink" ablut the Ball .... something about guarding the doors so nobody can leave.... what I want to know is what conditions have existed at the other Balls that can be eliminated by these proposed actions? .... so what if some of the boys do get a little "oiled" and have a good time.... I've never yet heard of anybody being carried out of an Engineer's Ball; and that's more than I can say about some of the dances over in the gym and the Union Ballroom.... the administration, or whoever is responsible for such milarky ought to wise up.... I don't see why there was so much fur flying about the Engineer's Show, either..... during all the foolin' around about it, I didn't hear one good reason why it shouldn't be held.... it seems that those who didn't want to have it were just using the speed-up program and the war as a blanket to cover up their laziness.... it sure showed the lack of organization around here .... well, in less than a month now the class of '42 will be "over the hill".... in spite of all the griping I've done about some of the small-time things that go on around here, this is still the "best damn school in the country", and I wouldn't go anywhere else if you paid me.... when I get up in Akron, some of you guys drop me a line and let me know how things are down in this old fire-trap, hear?....

Larry Darling

"I was out with a desert explorer last night."
"What is a desert explorer?"
"A fellow who fools around the waist places."

MAN-MADE LIGHTNING

by C. R. Wall

with his fellows, he is locked

Man's history is one of warfare. When he is not quarreling in bitter struggle with the titanic forces of nature. Not the least of these is lightning.

Today, man and all of his works are increasingly dependent upon electricity. Like a vast network of atteries, electric-powerlines reach out over mountains and plains, through forests and across rivers, to carry life-blood to the farthest-flung parts of our nation. Night is turned into day, factories thrown from idleness into roaring production, long trains hurried to distant points with precious cargoes, all at the touch of a switch. Like a great nerve-network, electrical communications systems men's ideas around the next corner--or all the way around the world--with the speed of light. Airplanes are guided over invisible courses and the injured ankles of college athletes are hastened in their healing by the same invisible medium.

It takes but a moment of reflection to realize what a single stroke of lightning can do to the picture we have just drawn. A blinding flash and a thundering crash, and the arteries spills its blood into the ground or that nerve is severed. It is no wonder that man recognizes lightning as an enemy.

About twenty-five years ago the first real war on this enemy was begun. Since then, investigators all over this world have been gradually accumulating data which reveal the characteristics of natural lightning. The factors causing thunderstorms, thundercloud electrification, the mechanism of lightning-discharge, and the apparatus have all been -- and still are being -- investigated.

Today the battle has reached the stage of applying the lessons learned. Manufacturers, in developing apparatus capable of withstanding the impact of lightning and lightning arresters capable of discharging these surges harmlessly into the ground, must have available a a limitless "supply" of lightning strokes for testing and experimental purposes. That is the reason for the development of Surge, or Man-Made Lightning, Generators.

At present, the electrical manufacturers who pioneered in the field of generating artificial lightning in the laboratory find their facilities completely engaged in the routine testing of apparatus turned out by the factory to meet defense requirements. Most still-unsolved problems of research must yield precedence to emergency-requirements. It is in the solving of these problems that college laboratories are now in a position to enter the picture. So new is the subject that only a few colleges--not over a dozen --are equipped with Surge Generators. The College of Engineering at Duke University is one of the few.

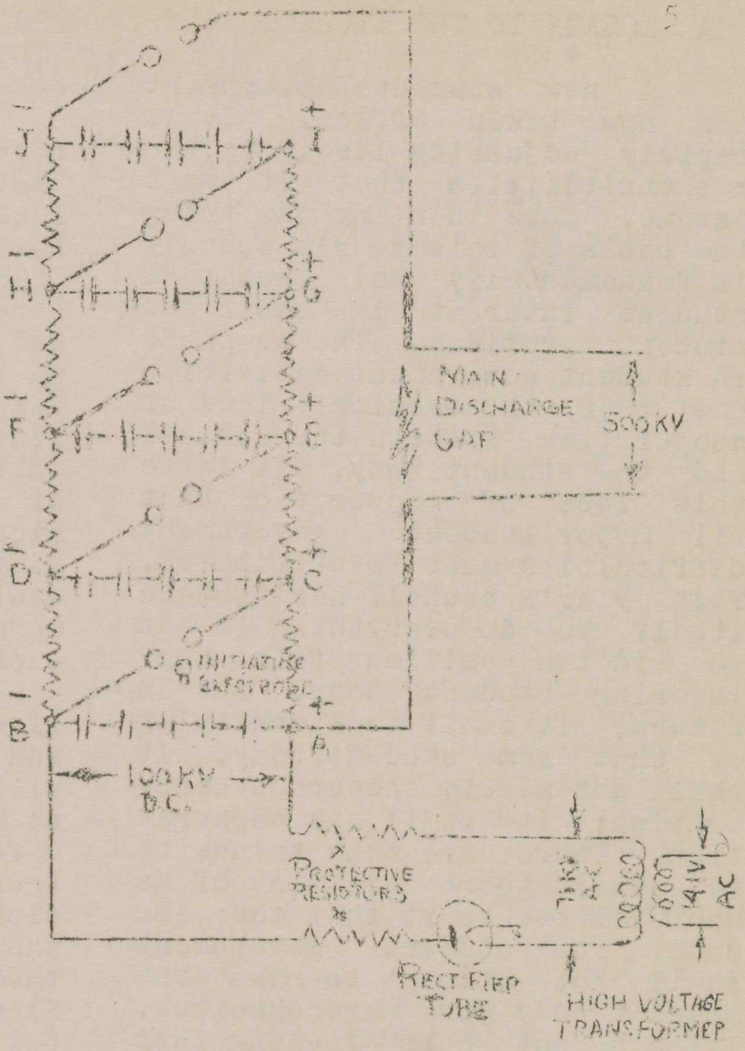
The Surge Generator at Duke University is capable of generating voltages up to 500,000 volts and can produce discharges reaching a maximun value of approximately 15,000 amperes. These have a probable duration of only about 15 micro-seconds.. (millionths of a second).

Reference to the accom-

panying diagram reveals its operation to be relatively simple.

The generator consists essentially of five condenser banks which can be charged in parallel and discharged in series. Power is supplied from a variable voltage A.C. source to a high voltage transformer. One hundred and forty-one volts (r.m.s.) applied, yields 71,000 volts, r.m.s., or 100,000 volts, crest, on the secondary. This is rectified by a vacuum-tube so that 100,000 volts D.C. is now applied between the two vertical parallel columns of resistors. A few seconds suffices to charge all five of the condenser banks up to 100,000 volts, each. This corresponds to the charging-up of a thundercloud in nature. A row of sphere gaps connected across diagonally opposite points between condenser banks has been so spaced that a voltage slightly in excess of 100,000 volts is needed for arcing over each gap.

The generator can be fired, at the will of the operator, by mechanically thrusting a third electrode into the bottom-most gap, thus effectively shortening the gap and causing it to arc over. Point C is thus tied electrically to point B. Condenser Banks A-B and C-D are now in series. The 50,000 ohm resistors in each section of the vertical charging lines effectively "discourage" current from flowing back around from C to B, or from C to E. Point E is, then, still at the potential of A, while D is now at a potential of 200,000 volts. The gap D-E therefore arcs over, placing condenser bank E-F in series with the first two. This action continues automatically on up the stack until all five banks are in series, placing 500,000 volts across the Main Discharge Gap. The condensers thereupon discharge in series around the zig-zag circuit just traced, and back through point A. Protective resistors in the two charging lines protect the Rectifier Tube and the High Voltage Transformer from possible surges back into the charging circuit.



CIRCUIT DIAGRAM OF DUKE UNIVERSITY SURGE GENERATOR

Simple in design and operation, this new 500,000 volt Surge Generator opens up tremendous possibilities. To the interested student, it affords the opportunity of carrying out investigations on the very frontier of electrical engineering experimentation--it enables him to enlist in a literal "Blitz-Krieg".

A MESSAGE TO THE STUDENT BODY

A new student government has now taken office. It is rapidly adjusting itself to the responsibilities that it must assume. More than any one thing the basis of this year's council is fundamentally to encourage student interest in their own student problems. The weakness in student government activities has been the seemingly lack of cooperation between the council and the student body. It is to this lack of cooperation that all major student government difficulties must be attributed. This year's council has pledged itself to do everything it can to aid the position of the Engineering Student Body. But in return, it shall ask something of that same student body. It shall not merely encourage cooperation; it shall ask cooperation. There are many things to be done; there are many of us who will see to it that they are done. The student government shall not attempt to make the student body more war-conscious. It can not help feeling that this is being handled by departments more adequately informed and more suited for such work. It does wish to point out one important fact. It cannot overemphasize the effect that the war will eventually play in our lives. Certain undesirable results of this war will cause a great deal of dissatisfaction among us all, but our sacrifice shall be small compared to that of many. Much of our program shall by necessity be revised, and substitutions made. This is just a small part that we are all asked to contribute to national safety. The council shall always cooperate with any move

Continued Page 10

PERTINENT PHRASES PREVIOUS PERRY PERRY

A long, long time ago, 'way back in June '41, a group of about 40 men graduated from the Duke College of Engineering. They had all had their ups and downs of college life: some had studied, some had loafed; some had lived on milk-shakes, some on beer--all in all they were a very representative class of engineers-to-be. And they all had their plans for the future: each of these 40 had an imaginary niche carved in a mental Hall of Fame which someday he knew he would occupy. Some of the niches were more hazy than others, but each man saw his spot somewhere.

Then along came those slant-eyed men, and they put an end to an awful lot of those plans. Some of the 40 men with no more military experience than a few years in the Boy Scouts back home found themselves newly clothed in Army uniforms; and the Navy adopted a good many of the land-loving mid-westerners. Electrical engineers found themselves handling supply depots and diesel engines; mechanical engineers worked on flood control; and civil engineers took airplanes and boats under their wing. Few of the men found themselves doing what they expected or wanted to do.

But strangely enough they all ended up working for that same man with the white beard, and they all realized soon enough that it wasn't such a bad thing to be able to do their bit for the Uncle--either directly or indirectly. None of them was overly patriotic, but they all saw that working with a will against the slant-eyes was just like taking out more insurance. Perhaps it meant a little side-

Continued Page 12

DELTA EPSILON SIGMA

With the writing of this article, further attempt is being made to acquaint the students of the College of Engineering with the activities and meaning of Delta Epsilon Sigma, the honorary engineering fraternity at Duke.

Founded at Duke in 1931, Delta Epsilon Sigma is a local fraternity which honors those engineers who are conspicuous because of their leadership, character, scholarship, and work pertaining to the advancement of the College of Engineering. The primary purpose of the fraternity is eventually to petition Tau Beta Pi, the national honorary engineering fraternity. The only significant requirement of Tau Beta Pi that is not met at our college is the graduation of from forty to fifty men every year. This number of men has never been graduated, but the present enrollment seems to indicate that this requirement may soon be met.

Because of the existing separation of our campus from that of the university proper, Delta Epsilon Sigma takes the place of various organizations of the West Campus that cannot function properly on our campus. At the beginning of Freshmen Orientation Week DES members are present to welcome the freshmen and to help them in their preliminary work until they become settled. Throughout the year the fraternity acts as the Freshman Advisory Council for Engineers. Direct contact is made with freshmen, especially with th se who appear to be having trouble with their work.

Annually, DES and the engineering societies sponsor the Engineer's Show. Preliminary work and organization is carried out by DES. Various committees dealing with publicity, program, invitations, and high schools function actively for weeks previous to the show. This year despite the fact that the show had to be given upon such short over a thousand schools, individuals, and organizations.

This year DES will inaugurate what it hopes will be a permanent plan for the annual distribution to each student of a printed copy listing the names and addresses of all College of Engineering members. These copies will be given out during the month of April. It is hoped that these directories will be helpful during the coming summer and in future years in facilitating contact between various students of the college. If this will be continued for years to come, as the present plan proposes, each student will eventually have the names and complete addresses of everyone in his class, in the classes for three years preceding, and in the classes for three years succeeding. Probable working location of all seniors will also be given with this list.

Delta Epsilon Sigma tapping takes place semi-annually at the Engineer's Ball in the Southgate gymnasium. Final tapping of the present school year was held on Friday evening, April 17th.

— Dick Beeson

"Are you troubled with improper thoughts?"
"Naw, I enjoy them."

Duchess: Do you know the things they've been saying about me?
Duke: "Whatdya think I'm here for?"

THE A.S.M.E. NEWS

The A.S.M.E. is about to complete one of its most successful years since the organization of the chapter at Duke University.

The past year has been highlighted by the presentation of an unusually large number of moving pictures and talks by many speakers. Several pictures were shown jointly by the A.S.M.E. and the I. A. E. Among these films were included "The Bell Airacobra" and "The Stalling Characteristics of the Lockheed Wing". A film distributed by the Byer's Wrought Iron Company entitled, "Wrought Iron and Dupont's film, "The Story of Neoprene", were also shown.

The A. S. M. E. membership had the privilege of hearing five prominent engineers as well as several student speakers. The speakers included Dr. Nelson of the Brown Instrument Company; Professor A. G. Christie, consulting Engineer for the City of Los Angeles; Dr. Kemp of the Duke Psychology Department; Mr. Parker, the national president of the A.S.M.E. and a member of the Detroit Edison Company; and Mr. Schaner, a Safety engineer from High Point.

Of the student speeches, Ed Leu's talk on "The Design of an All Purpose Projector" was outstanding. It merited a well-deserved second place at the Eleventh Annual Southern Student Conference of the A.S.M.E. which was held at Knoxville, Tennessee on March 29, 30, and 31. From the reports of the Duke delegates, the conference was most enjoyable. The article "A.S.M.E. Conference" gives a detailed report of this trip.

William Kleinhenz

S A.I.E.E.

The Duke University branch of the American Institute of Electrical Engineers is bringing to a close a full year with a burst of activity climaxed by the Engineer's Show. The program committee was especially fortunate in obtaining for the February and March meetings such interesting speakers as Dean H. J. Herring and Mr. Karl Seldon. Dean Herring conducted an interesting discussion on questions raised by the members, at the meeting of March 25, and the meeting was followed by a lab party to which all freshmen engineers were invited. As a joint AIEE-ASME meeting, Mr. Karl Seldon of Broon Instrument Company spoke on and demonstrated "Temperature Measuring Instruments."

The Sixteenth Annual Engineers' Show, even though hampered by WSAB and the "speed-up" program, was presented. Though several features of past shows, such as the "Engineering Magic", the Magic Dial, and the operation of "ham" station W4AIY (now closed by the FCC), were missing the E. E.'s still found ways and means of drawing crowds. The Circuits Lab., supervised by Bill Marshall, drew big crowds with the novel displays which included the "Lovometer," the "Quoit Game," and the usual assortment of interesting electrical gadgets. In the Communications Lab., Johnston, Foscue, and Olson explained the elements of telephones, radios, and amplifiers to the accompaniment of Prof. Seeley's new sound effect records. The Projects Lab. took on a new aspect when Sheretz and Clark changed it into a den of sound and light to demonstrate the transmission of sound on a beam of light and the myster-

ious lighting of fluorescent tibes, which indeed kept the crowds baffled. In the Machinery Lab., Bob Everett, Watkins Martin, and Jim Barrow explained the difference between motors and generators and answered questions from Durham homeowners regarding the motors in their home appliances. Replacing the Majic Dial was Everett's ingenious demonstration of perpetual motion. In the High Voltage Lab., Crane, Howard Moffet, and Luchans demonstrated what a 5,000 volt discharge from the new surge generator would do to a block of wood. Large crowds gazed in awe at this amazing demonstration of man-made lightning.

At a meeting following the Engineer's Show, a donation of $3.00 to the "Duke Engineer" was voted, and plans for the annual Senior-Faculty Banquet to be held on April 11, were made. The following officiers were elected for the coming year: President Paul Sherertz; Vice President Bill Marshall; Treasurer, Robert Hottel; and Secretary, Stephen Clark.

Stephen Clark

I. Ae. S.

When this, the newest society in the College of Engineering, was born, there was but one question uppermost in the minds of everyone. That question was, "Will this new organization be longlived?" Obviously from the time of its inauguration to the time of this writing, the I. Ae. S. is just another "club."

Primarily, the society's being ordinary is induced by lack of individual effort as a result of the collegiate speed-up program. Secondarily, it is induced by the small membership of the society's beginning which was limited to seniors at the start.

With effort to put the I. Ae. S. on its feet, it would be well to investigate the duties and objectives of such a body. In the past few years it has become increasingly apparent that air-power is a vital weapon. What constitutes air-power? What are its functions? Endless questions on this order have prompted much discussion in the United States and in the Engineering Student Body as well as in I. Ae. S. meetings.

The Institute of the Aeronautical Sciences is, even at this moment, able to place answers to the above questions at the disposal of every engineer; and, from now on, will endeavor to do so at each periodically-scheduled meeting.

The I. Ae. S. will pioneer in the art of a "streamlined" society meeting such as has never been seen before in the College of Engineering. A model meeting will be one in which every person attending is eligible to take a part. To this end, future meetings will be conducted on th order of a radio quiz program in which each member will have a chance to demonstrate his knowledge of aviation. A cash award will be offered to that person with the best score for the evening. In addition, tests on aircraft recognition will be given. With the use of the slide projector, native and foreign aircraft silhouettes will be presented in sequence; those taking the test have a chance to record the name of the projected silhouette. If such tests as these are given at each meeting, it will be no time

(continued next page)

at all before everyone will have a valuable knowledge of current aircraft types.

Such a program's success will depend on those who will get it under way and on you, if it is to be well received. Possibly, as you read this article, a meeting will already have been conducted. If you missed this one, we urgently ask that you do not miss the next one. The I. Ae. S. has an important job to perform and is determined to complete it.

J. L. Fisher, Jr.

(continued from page 6)

that will mean the extension of that safety. Therefore any important step that the council takes will be motivated by its earnest desire for fullest collaboration with the administration in its drive to aid more completely our National Government. We make no pretense at being geniuses in governmental affairs. We do not expect to make many mistakes, but we shall limit our mistakes to as few as possible, for mistakes are costly. Everything that we do, and everything that we plan to do will be done because it is considered just and right and our bound duty. The fine spirit and tradition of the engineers shall be maintained and strengthened. The power that is ours shall be used justly and righteously. No attempt at incrimination shall ever be made; the engineering council shall always work for the benefit of the Engineering Student Body. It is far too early to estimate any degree of success, but our hopes are high and our plans are many. It is sincerely hoped that the job we will do will be to your satisfaction and with your approval.

Bill Wetmore

A.S.C.E. NEWS

This year the spring semester has proved a very interesting term as to the turnout and program of the A. S. C. E. Probably the most interesting meeting of the chapter was held on March 18. At this meeting we were honored by the presence of two distinguished civil engineers in the personages of Mr. Jaeger, National Field Secretary and Mr. Piatt, prominent Durham construction engineer. Mr. Jaeger is at present making a tour through the nation visiting the various chapters. He spoke on the "Objectives and Activities of the A. S. C. E." Mr. Piatt is in charge of the greater part of the construction of Camp Butner and showed some very interesting pictures on the construction of Camp Davis, North Carolina.

One of our meetings was turned over to the sophomores for the Annual Sophomore's Night a meeting which consists of various talks on phases of civil engineering. Those who participated were: E. Morrison, W. Black, W. Karl, H. Newsome, T. Sales, and R. Wood. Pete Goddard, a Naval Reserve officer who was stationed at Atlanta last summer, also spoke that evening on "Civil Engineering in the U. S. Navy."

The time of most of our meetings has been spent in projecting slides and motion pictures. A movie on "Construction of an Earth Dam and Spillways at Sardis, Mississippi" was shown, along with slides on Bonneville Dam, Catskill water supply, and George Washington Bridge.

Another feature of this semester will be the spring convention of the Southeastern Section of Student Chapters, to be held at Roanoke, Virginia. The Student Conference was orig-

inally scheduled to be held at Columbia, South Carolina, but, because of many speed-ups and other obstacles, the meeting will be combined with the Roanoke convention on April 22-23. Some of our Seniors will be unable to make the trip because of exams, but we expect to make a good showing.

As everyone knows by now the CE's have finished the season with flying colors by taking all honors at the annual CE-ME picnic.

The final meeting of the year will be held on April 29, and the new officers for the coming year will be elected.

Dick Lynch

EDITORIAL CONTINUED

these boys and help them make these positions easier and more pleasant. They are working for our benefit, so let's give them our full support. Another thing, more of us should realize that the College of Engineering is a part of Duke University. The Undergraduate Division of Duke University includes Trinity College, The Woman's College and the College of Engineering. We must all work together to promote a bigger and better Duke University. Forget petty jealousies! Show the public that we engineers are greatly interested in the betterment of the whole University, not just our part of it. Let us all remember and apply this aim.

R. F. Wagner

* * *

Lipstick is merely something to give a new color to an old pastime.

THE A. S. M. E. CONFERENCE

The Duke Chapter of the A. S. M. E. was represented at the recent Eleventh Annual Southern Student Conference by ten members and the honorary chairman, Professor Chapman. The conference was held at the University of Tennessee in Knoxville, March 30 and 31. In spite of the shortage of tires, attendance and representation was notably fine, the former running up to 162 delegates, and the latter numbering fourteen institutions. The attendance prize, which consisted of a loving cup mounted on a short section of three inch pipe neatly attached to a pipe flange for a base, was won by the Virginia Polytechnic for their delegation which totaled twenty-four members.

Ten technical papers were presented during the course of the convention; and the Duke contestant, Ed Deu, copped the thirty dollar second prize with his paper: "Designing an All-purpose Projector". First prize was carried by Virginia Polytechnic Institute, whose speaker's subject was "Practical Im Method of Measuring Spur Gears." Third prize went to the University of Tennessee contestant, whose representative presented the paper "Electro Photographic Ballistometry".

The two luncheons and one banquet which were held in the Andrew Johnson Hotel provided opportunity for introduction of various prominent men, including Dr. James D. Hoskins, president of the University of Tennessee; Dean Emeritus Charles E. Ferris, who is completing fifty years of service to the University of Tennessee; Mr. R. L. Reece, committee on relations with col-

(continued next page)

leges and chief engineer of R. J. Reynolds Tobacco Company, and Dean S. B. Earle of Clemson A. and M. College. Incidentally, Mr. Richard Wagner, Vice chairman of the Duke student branch, acted as chairman at the first luncheon.

According to the original program, inspection trips were planned for the Gray-Knox Marble Quarry and Mill, the patent Button and Knox Porcelain Corporation, the almost-completed Cherokee Dam and Power House, and the Southern Railway Locomotive Shops. All of these trips were carried out with the exception of the later, which had to be called off at the last minute because of a telegram from Washington refusing admittance. In place of a trip through the shops, a joint inspection trip through the Southern Extract Company and the Knoxville Veneer Corporation was finally arranged.

Among important sidelights of the convention was the informal dance held in the hotel ballroom the first night. Dates were furnished for the delegates through the medium of a "date bureau". For some reason it seems their were more dates than daters, a rather unstable condition which caused the Tennessee fellows no end of worry. In a desperate effort to successfully dispose of the superfluous girls they even went so far as to ask Professor Chapman three times whether he would want a date.

It has been unanimously agreed that the one item most sincerely missed by Duke delegates to this convention was a sure-fire way of confusing speakers from other schools -- namely, a few of Drogo's questions asked in his own inimitable fasion.

--Jack Roper

continued from page 6

track from the direct path to their niches, but it was chalked up as a necessary evil and a means of obtaining more extensive experience.

This class of '42 is facing much the same situation with the difference that they've had a year or so to think about it, and probably the same will hold true for a goodly number of the succeeding classes. But they too are a representative group of engineers, and what they lack in showy patriotism they make up for with lots of srtaight and hard thinking. They won't be licked because they're put into strange and unfamiliar jobs and asked to do previously unthought of tasks. Simply because the civil engineer is divorced from his transit does not mean that he is a loss to industry; a good engineer is a man who can adapt his clear thinking to any problem confronting him, and right now that problem is anything standing in the way of that much-talked-about victory. It's up to the classes of '42, '43, '44, and '45 at Duke and every other University in the country to set aside a few of their personal aspirations and ambitions and to pitch in and hand those other fellows a licking. And take it from an ex-proxy, the Duke boys won't be found lacking.

--Lt. R. E. Perinovich

Ah wins
What you got?
Three aces
No you don't. Ah wins
What you got?
Two eights and a razor.
You sho' do. How come yuh so lucky.

A bird in the hand isn't worth the risk.

? ? DATA SHEET ? ?

Well, here we are again in the opening months of Spring--- and the engineers are operating. Bob Beatty is seeing quite a lot of cute little red head. Have you heard that Ty Lory is still hot for Greensboro---the girls call him "Tyrone." Joe Lyons is getting serious about a certain little girl from W.C.U.N.C. Big Tom Sales at last has a girl that's big enough for him---so he says. Ty Martin won't give Joanne Price a break, poor girl she loves him so much. Vivian Etzel thinks Burt Evans is cute ---watch her, Burt. Chuck Happ won't give East a break---- poor Dottie and Ann will never get a chance at him at this rate.

Have you heard that Bob Wood got a little ticket for speeding and then talked the judge into lending him the money to pay the fine---poor judge, he will never learn.

Bud Dunn and Gil Brandon are now members of the "Club Foot". Dan Brandon can't seem to forget Frances---in love, Danny?- Did you guys hear about Bob Bargeon's girl friend's getting engaged just when he was going to ask her to the Ball? Tough, Bob! Gordy Cummins, the Epworth terror, was calmed down the other day when his girl poured a bucket of water on him. Bill Griffith has taken up with Peggy Smith again ---- watch out Bill, she's it---ask Pete Goddard!

At last Sid Benson got a girl and free meals as a side line---be careful of your roommate; I hear he is hot for her too. Air Warden Hatfield thinks that bomb shelters should be put on East Campus for certain reasons besides air raids.

Bill Ehrenfeld and Bill Waller have devised a method by which we can save (CENSORED). Has anyone ever found out what happened to Gingher's love in Raleigh? We couldn't. Bill Kleinhenz still hasn't recovered from his trip from Washington to Durham with Tarpley. Some stuff, Bill. Fred Manchester did all right at the A.S.M.E. Conference in Knoxville --- he got one of the 24 most beautiful girls at the U. of Tenn. Have you heard that Tom Kiely is now going steady with Mary Power of Greensboro? She is O.K. too.

It's been around the campus that "Ace" Armour likes 'em all- ------especially those with big automobiles. "Bones", president of the "V" Club (V in this case doesn't mean Vistory) has been relaxing the issue----the little woman at home fixed it. Someone should give a lecture to Donahoe Razz, and Venable on the importance of gasoline in the Ford test engine. These fellows are Seniors, too. Whitmeyer got scalded----Raleigh got engaged and left him with Kathleen. Too bad, Willy. It seems Hottel is trying to get his fingers burned again--better take it easy, Rod. It is rumored that "Cosine" had an exciting time one Saturday night. Bob Dorton can't decide whether it should be Planscon, Wyman, or the new girl friend at home.

And that's all the news for now. I'll be back next issue...

A shoulder strap is a piece of ribbon worn to keep an attraction from becoming a sensation.

MARRY NOT AN ENGINEER

Verily, I say unto you, marry not an engineer;
For an engineer is a strange being and possessed of many evils.
Yea, he speaketh always in parables which he calleth formulae,
He wieldeth a big stick which he calleth a slide rule,
And he hath only one bible, a hand book.
He thinketh only of strains and stresses, and without end of thermodynamics.
He showeth always a serious aspect and seemeth not to know how to smile.
He picketh his seat in a car by the springs thereof and not by the damsels.
Neither does he know a waterfall except by its horsepower, nor a sunset except that he must turn on the light, nor a damsel except by her weight.
Always he carrieth his books with him, and he entertaineth his sweetheart with steam tables.
Verily, though his damsel expecteth chocolates when he calleth, she openeth the package to discover samples of iron ores.
Yea, he holdeth her hand but to measure the friction thereof, and kisseth her only to test the viscosity of her lips, for in his eyes there shineth a far away look that is neither love nor a longing look - rather a vain attempt to remember formulae.
Even as a boy he pulleth a girl's hair but to test its elasticity;
But as a man he deviseth different devices.
For he counteth the vibrations of her heartstrings
And seeketh ever to pursue his scientific investigations.
Even his own heart flutterings he counteth as a measure of fluctuation,
And inscribeth his passion as a formula,
And his marriage is a simultaneous equation involving two unknowns
And yielding diverse results.
Verily, I say unto you, marry not an engineer.

Annapolis Log

Sponsors

The Engineering Student Government Association

The American Society of Mechanical Engineers

The American Institute of Electrical Engineers