

The California Tech

Associated Students of the California Institute of Technology

Volume LXI

Pasadena, California, Thursday, November 5, 1959

Number 7



"Maybe Next Year?"

Interhouse Dance Decorations Feature Art, Literature, Skis

Good Luck, Kids!

The Mudeo — annual display of friendship and brotherly love — will take place next Tuesday at 3 p.m. on the athletic field under the supervision of the junior class.

The traditional slate of events is planned. In order, the frosh will meet the sophs in a tug-of-war, a sack race, a wheelbarrow race, a horse-and-rider fight, and the ever-popular tire spree.

Meanwhile, the senior class will set into action their rumored plan to win the Mudeo for the fourth straight year.

Homecoming Queen Candidates Presented Sunday

Candidates for Queen of Caltech's November 20 Homecoming will be introduced Sunday at a reception in Dabney Garden. Next week the candidates will eat in the Student Houses and their pictures will appear in the California Tech. A student body vote will be held next week end to select five finalists.

Homecoming celebration will start at 6:10, Friday evening, with a dinner in Fleming and Dabney for Techmen and dates and alumni. The game with Claremont-Harvey Mudd will follow at 8 p.m. in the Rose Bowl. Senior Class President Jim Sorenson will crown the Queen and attendants during the half.

Tickets are available from the House social chairmen. Prices are \$1.75 for students' dates, \$1.75 for off-campus students and alumni, and 50 cents or resident students.

Newman Club to Hear Dr. O'Reilly Tomorrow

Rev. James A. O'Reilly, a Caltech physics Ph.D., will talk to the Newman Club and interested spectators Friday at 7:30 in the Parish Hall of St. Philips.

BY GEARY YOUNCE

Interhouse is here again! Yes, it's that time of year when students walk hurriedly around with puzzled looks mumbling "2x4x6 feet 7 inches," and weird structures begin to rise from the courtyards. And with the prospects of building in mind, the talents of Caltech are turned toward these questions: "What shall we build," and "Who shall we steal the lumber from?"

A little industry suffices to answer for the first, and we shall ignore the second.

Throop Club, deprived of their courtyard, has decided to center their decorations around Edgar Allen Poe. Outside the entrance will be a grave (surrounded, no doubt, by "Caution, Howard Sewer" barricades), and inside will be articles depicting other writings of Poe, such as a gold bug, pendulum, a walled-up body, heart-gushing punch, and "the best band on campus."

Fleming House will build their theme around "A Teahouse of the August Moon." Their courtyard will be a tea-house courtesy garden with a concert statue of Buddha, and the dining room will be made into a stage for four Japanese entertainers.

Dabney has decided on a mountain theme and will build a mountain scene in their courtyard with ski lift, skiers, and BIG mountains. Their lounge will be disguised as a ski lodge with trappings on the walls.

Blacker, taking advantage of their floodable courtyard, has turned to the Odyssey for ideas. A ship will be anchored outside the lounge, which will be transformed into a Greek temple for the evening. The dining room will be a banquet hall.

Ricketts has overcome the problem of the pot in the middle of their courtyard, by electing to place a huge head on it. The rest of the courtyard will be made over into a 3-dimensional abstract, with ideas taken from several abstract paintings. Their lounge will follow along the same line.

Jazz Festival Makes \$1250

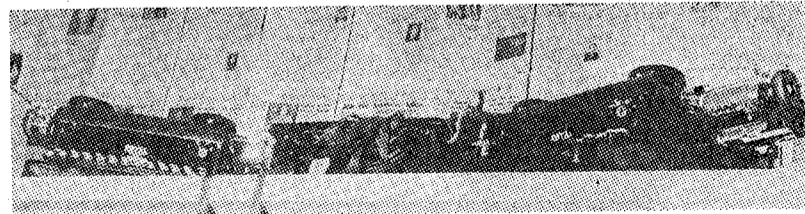
The Second Annual Pasadena Jazz Festival drew nearly 2,300 jazz fans and netted about \$1,250 profit, reports Hugh Kieffer, ASCIT Activities Manager.

The Tech: Progress In Crusading Journalism

The Institute's most robust organization, **The California Tech**, has shown dramatic signs of ever-increasing strength recently.

It all started a few weeks ago when Editor-in-Chief Moler was invited to appear on a panel at the Associated Collegiate Press convention in New York City next week. Cleverly concealing the fact that the Institute would pay the return fare, he talked the ASCIT BOD into giving him a one-way ticket to New York. He leaves Tuesday for the four-day convention.

Shortly after this indicative event, The Tech's fourth consecutive All-American rating arrived from the ACP.



THE TECH'S NEW TYPEWRITERS STILL LIFE BY ASCIT PHOTO

Late last week, the staff decided it was time for a really big move. They stormed the Institute's Purchasing Department, where they demanded that they be supplied with better equipment. Overwhelmed with such a display, Mr. Jacobsen (kindly) consented to provide two reconditioned Royals with

House Population, Rotation Confab Set For Monday

A student body meeting to discuss the four rotation plans and the one population procedure proposed last week by the New Student House committee will be held Monday, 7:30 p.m., in Dabney Hall lounge.

Committee members will explain the work behind their proposals and then invite questions and discussion from the floor in an effort to gauge student body reaction to their ideas. Any new plans, if supported by good reasons, will be welcomed. Lee Hood, committee chairman, will preside.

Faculty to Decide

Based on Monday's discussion, the committee will suggest formally one of the rotation plans, with a minority report if necessary, to the IHC. If the IHC approves the report, it will be forwarded as a recommendation to the Faculty Student House committee, which will then decide the form of rotation.

Along with the eventual rotation plan, the committee will submit a suggestion for the upper-class population of the new houses. One proposal printed in detail in last week's California Tech, has evolved from the committee. The heart of the population proposal is:

- 1) A first-come, first-serve sign-up list for the new Houses.
- 2) After noting in which areas (as to class and present House affiliation) uneven distribution lay, volunteers would be especially solicited to even out membership.
- 3) Any marked departures still remaining would be eliminated by requiring students in the over-populated areas to draw lots.

The four rotation plans to face discussion are:

- 1) No rotation, with the Master of Student Houses assigning a cross-section of the incoming freshmen to each House.
- 2) Partial rotation, having each freshman visit only three

Houses. He would spend two days in each House and his choice would be limited to the three Houses visited.

3) Short rotation, allowing all freshmen to spend one day in each of the seven Houses. Freshmen would be encouraged to arrive at Tech the Monday before frosh camp in order that they might gain a better understanding of the Student Houses.

Long Rotation

4) Long rotation, lasting six weeks. Freshmen would eat in each House for one week, except for the House they start in. Week-end meals would be eaten in their home House. A frosh could choose any of the seven Houses, but each House must keep all its freshmen who do not wish to move. In addition, a House could accept up to five more than its quota by converting singles to doubles. The following year such a House would have five less freshmen.

During long rotation freshmen could not participate in inter-house athletics, but freshmen teams could be set up. Inter-house Dance would be moved to the eighth week to avoid conflicts with rotation. Freshmen would participate in the social events of the House through which they are rotating.

Tech Represents Israel in Model United Nations

Caltech will represent Israel at the Model United Nations next spring in Berkeley. About 10 men will be chosen before the end of the term to make up the delegation.

The Tenth Commemorative Session of the Western College Model United Nations, as it is officially known, will be held at the University of California from April 6 to 9.

Delegations from over 70 colleges in 10 states, Canada and Mexico will be on hand to represent the 84 UN member-nations. The U. of Cal. will act as the Secretariat. The several hundred delegates will stay in two downtown Berkeley hotels.

A number of international questions, ranging from Laos to the economic problems of the Upper Nile, will be discussed in various committees and councils during the session. All resolutions passed in the committees will then be brought before the General Assembly for final discussion and voting.

The Caltech delegation will be chosen by the MUN Continuations Committee — Cleve Moler, Roger Noll, Bill Bauer and Pedro Bolsaitis. Anyone interested in attending should contact one of the committee members.

Caltech has, in the past, represented countries like Japan, Australia and Cuba.

real ribbons in trade for two of the Tech's Eli Whitney brand mills which use reconstituted shoe laces. (Now the printer can read our copy.)

The result of this dramatic chain of events is this week's Bigger-Than-King-Size 10-page issue. And look for even better things to come!

Interhouse and BOC

Since the Interhouse Dance is only a week away, it might be helpful to review the Board of Control policy regarding procurement of materials. As you undoubtedly know, the Honor System applies to relations between students and the Institute as well as to student-faculty and student-student relations. Consequently theft of Institute property is a violation of the Honor System. Borrowing without obtaining permission is regarded as theft.

In the past students have found Institute employees very cooperative in lending them building materials. Many useful articles may be had for the asking. However, it is your responsibility to ask before taking anything which is not in a trash pile. This includes material at the various sites of the campus development program.

The Board becomes concerned with off campus procurement only at the request of outside authorities. Nevertheless, it is a very good idea to ask permission before taking material which you find off campus. If you fail to do so, you must be prepared to assume responsibility for your actions.

Tom Tebben
ASCIT Vice President

Letters To The Editor

Eidtor, The California Tech

I'm becoming a little short of patience with those who are continually complaining about the present student house system, and particularly with those who are of the opinion that rotation and interhouse competition are bad.

Personally, I think rotation is the one good thing that makes the student houses outstanding. It keeps them from being dorms, without making them fraternities. I am in favor of having as much choice as possible in deciding who I want to live with and who wants to live with me, while at the same time realizing that these two choices do not always go together.

Another good feature of rotation is that everybody meets people in all four of the houses. If any one says later that he

does not know somebody in another house, or that he does not know enough people in another house, he has nobody but himself to blame.

Interhouse competition is under fire from nearly everybody. I say that nothing could be better than this competition. Those who complain that the competition is getting cut-throat don't seem to realize that this is not the fault of the system. This is the fault of individuals who have not yet learned how to take defeat gracefully, and they don't see that the mechanism for learning this has been provided in the form of competition between friends, and I emphasize, friends.

In short, I think the present system is pretty good.

GEARY YOUNCE

Secretary's Report

Any remaining tinges of nostalgia for the *ancien regime* methods of running ASCIT have, in the minds of nearly everyone, been completely swept away by the somewhat startling successes of BOD meetings during the past few weeks.

For those who have not yet been witness to the somewhat revolutionary type of procedure, its keynote is informality: student house lounges, shirtsleeves and brief business sessions (this week's took exactly 12 minutes).

The meaningful part of a Board meeting now consists of a general discussion, of the bull-session type, concerning problems which have significance for most of the student body. To sum it up, ASCIT is now beginning to take on a much more realistic character: that of an organization, through which we can work to solve common problems; the description student "government" should not — if it ever was — be taken seriously.

Charities Drive

One of the more interesting ideas which has resulted from these discussions was brought up at last week's meeting concerning the Charities Drive.

In past years, as almost everyone is aware, the Charities Drive has consisted of a more-or-less random selection of worthwhile causes, picked by the BOD, and presented to the students on a single consolidated pledge card. Considering the somewhat distant relation of these chari-

ties to the Tech campus, the drive has done surprisingly well; an amount on the order of \$2000 was collected last year.

However, it was felt by nearly everyone that a much more meaningful program, in terms of its relation to the Caltech student body, should be attempted.

Hence, the idea of a new type of charities drive arose, one in which the student body would sponsor a specific project.

Possible applications of this idea are the support of a program for caring for refugees in a specific area of the world, the development of a school in a backward area, or the establishment of a fund for getting food to peoples in areas of starvation.

The essential characteristic of this type of proposal is that we would have a direct interest in the development of the program, instead of merely giving money to a large organization, having no idea — or particular concern — for what the money is spent. The details of this proposal are being worked out by Bob Koh; any ideas or suggestions would be more than appreciated.

Tea Dance

Highlighted by the presence of Mms. Carolyn Divelbess, Vale Goldman and Martha Storn of Scripps College, the meeting this week was mainly concerned with a discussion the Frosh Tea Dance.

It was universally agreed that the dance, as it has been conducted in the past, does much more harm than good to the reputa-

tion of Tech social adeptness in general and freshman orientation in particular. (One of the Scripps social chairmen estimated that as many as 95 per cent of the girls who have attended have left with a negative impression.) Although the discussion was much too involved to be completely summarized here, some of its more salient features can be mentioned.

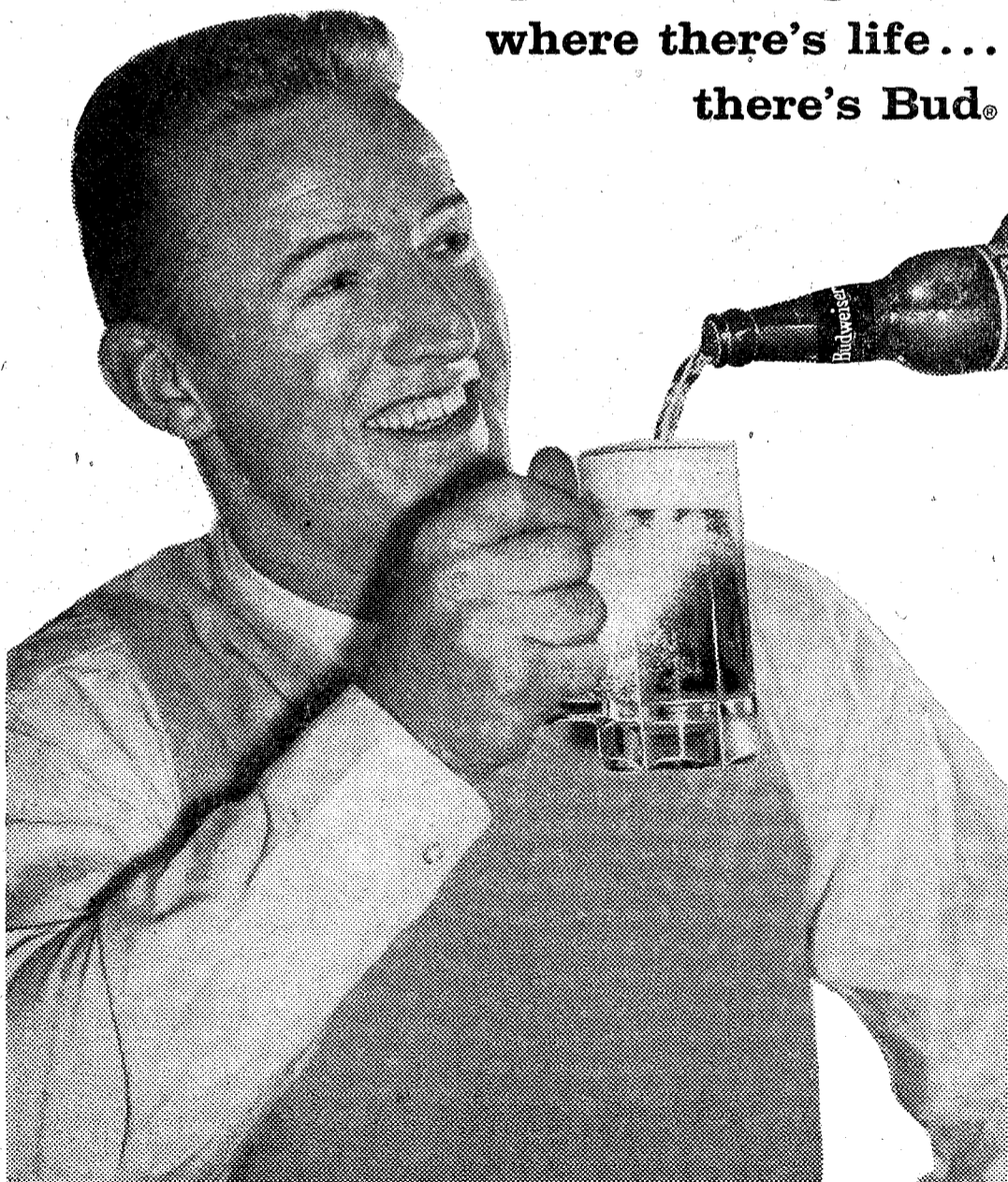
Fundamentally, the difficulty with the dance seems to be that the ice is never broken. This happens for a variety of reasons: the dance has, perhaps, been poorly organized; it is held in the afternoon; too many of those present lack the necessary initiative and social ease to make the girls feel comfortable, and many others.

Suggestions for improvement, which were many, included the following: the program should begin with something like a picnic at T.P. in the afternoon. The atmosphere should be informal and relaxed, so that people get a better chance to meet each other; the dance would then be held in the evening, after the picnic.

More organization is definitely needed. And, possible, the affair should be expanded to include the entire school, not just the freshman class. Anyone who missed the meeting and who has further ideas on the subject should so inform Mr. Kendall Casey, ASCIT Social Chairman.

William R. BaUer
ASCIT Secretary

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Opinion

Techmen View Un-American Activities Committee Hearings

By DAVID KUBRIN,
STEPHEN LUNER
and STANLEY KLEIN

A subcommittee of the House Un-American Activities Committee (HUAC) held special hearings during the week of October 18 to investigate the activities of the Communist Party in West Los Angeles and in Santa Monica. The surprise hearings had been preceded by several months of controversy over hearings the committee wished to hold to investigate 110 California teachers and to examine infiltration of Communists into the teaching profession.

Several times the hearings had been scheduled, only to be called off upon a suit by the American Civil Liberties Union and censure by many of the nation's newspapers. Finally the committee released to the local school boards the names of the teachers subpoenaed, without giving any of the evidence that the committee had against them because of damage that might be done to the committee's sources of information. The school boards were then supposed to question the teachers about their subpoenas without knowing why they were subpoenaed.

The meetings held last month involved only a few teachers. Present in the audience at two out of the three open hearings were eight Caltech students, along with Communists, interested citizens, and members of the more reactionary wing of the DAR.

Most of the witnesses called before the committee refused to answer the majority or all of the questions regarding their activities and membership several disputed the right of the committee to pry into areas of their thought and political association. The HUAC members, Jackson (R., Calif.), Tavenner (Council), and Moulder (D., Mo.), for the most part, did not harass the witness; on the other hand the questions and atmosphere made clear that they were assumed guilty: "When you moved to Los Angeles from San Francisco, did the Communist Party automatically transfer your membership?"

Several times the committee warned witnesses that they might be found in contempt of Congress for refusing to testify on the basis of the Fifth or First Amendments, and ordered them to answer.

Two Exceptions

There were two types of exceptions to the unwilling witness. The first were the government witnesses, women who had joined the Communist Party for the FBI. There was one of these for each day of the hearings. They told how they had joined the party, the various organizations they had infiltrated, and gave the names and spellings (if known) of those people they knew as Communists or saw at meetings. Very often they did not really distinguish between attendance at meetings and actual membership.

Much of their testimony consisted of moral indictments of the party on quite irrelevant matters. For example, issue was taken with the Communist Party because it used Marxist philosophy, not with Marxist philosophy itself; witnesses complained about the number of meetings held by the party; they also complained about the col-

lection of money at meetings, forgetting that most organizations devoted to a cause do likewise; one witness complained for two minutes because she had to spend money to keep as nicely dressed as other Communists. One valid moral argument brought up concerned alleged exploitation of groups with sincere social consciousness by getting them into Communist front organizations which supported worth-while causes.

24-Hour Job

Both government witnesses agreed that being in the Communist Party took most of one's time, studying, joining other organizations, and going to meetings. One said that because of their devoted ways there was very little difference between Communists and actual members of the Communist Party. A Communist who is not in the party, when a member of a respectable organization, still acts like a party member, and tries to pervert the organization. People often join front organizations so that they cannot be convicted of perjury if they deny being Communists before investigating bodies. "Communism is a 24-hour-a-day, seven days a week, 365-day-a-year, except in leap year when there are 366 days, job," the witness stated. It is a way of life. That is why, she continued, a teacher when in a classroom, or a labor leader, or a movie writer or TV writer can't turn off their Communism. They live and breath Communism. She said a smart person could definitely tell that the party was linked with Russia.

She told that after she first testified before a government group, the Communists conducted a smear campaign against her and her husband, who was also a government agent. During this testimony, the witness, with the help of leading questions put to her by the committee, implicated, although not in Communist activities, two quite respectable organizations: the Ford Foundation's Fund for the Republic (whom the HUAC has investigated), and the American Civil Liberties Union, who defends many of the witnesses before the committee.

Left the Party

The second type of exception was a former Communist who had left the party in 1957. Although he was an unwilling witness, he stated that he would answer all questions except those pertaining to people that he knew in the party. The HUAC warned him that by agreeing to testify to some questions, but not others, he might be sacrificing whatever rights the Constitution might provide him. He gave an extremely interesting, and what appeared to be a quite objective, testimony, telling why he left the Communist Party, the party's philosophy and aims, and what he did in the party.

He felt, although the Communist Party was an organization composed of very patriotic people trying to bring about what they believed in for society, that they had lost contact with the rest of society, and that theirs was not the solution and not the method by which our society should be changed. In addition, he found the party to be unrealistic and unobjective in many of its beliefs.

The Communist Party was not a conspiracy, he said, and all its

members believed that change would come only through Constitutional means. He did not believe that the party consciously infiltrated organizations, but that it wanted its members to join other organizations to know their objectives, to gain respect of non-Communists, and to win converts to Communism. The witness did not think that the Communists were lined with Russia. Moreover, he brought out that the party has in its constitution a provision to expel members who believe in the violent overthrow of the government. This was neither confirmed nor denied by the HUAC. Nor was it made clear whether this provision was put into the constitution prior to, or after, the passage of the Smith Act.

Misleading Evidence

The HUAC shows a great lack of discretion in the information which they use. Witnesses often fail to distinguish between liberal and Communist ideas, and among liberal groups, "front" groups and the Communist Party. Attendance at party meetings is taken as convincing evidence that one is a Communist, and no account is taken of academic interest. Because of the lack of cross examination of witnesses, false or slanted information is used.

A good example of the practices prevalent where there is no chance for cross examination was witnessed: The government witness had given in her testimony the name (changed for this article) Pinn, saying that she was not sure whether it was spelled PINN or PYNN. During the next recess, two members of either the federal court or of the Congress approached the witness backstage and asked her what Pi(y)nn had looked like. She replied that he was tall and had a mustache. On this overwhelming evidence, the questioner turned to the other and said that they would have to subpoena Pynn. Asked if he

knew Pinn, he told how Pynn had just taken his bar exam; he once had met Pin because he had bought a book from Pinne at his apartment. The government witness said that Pynn had lived in a house when she had known him. The questioner said that Pinn had probably moved. The other member of the court ventured, "Maybe it's a different Pynn." "No," said the witness. "I'm sure it must be the same one." By such circumstantial evidence and conjecture like this, people lose jobs, and lose their reputations.

Wants More Power

The House Un-American Activities Committee quite definitely stated what legislation it desires from Congress as a result of its hearings. Relying on the theories of the committee and on the testimony of the government witnesses, it called for tighter laws to enable the government to get members of Communist front organizations.

Jackson stated that the HUAC also has evidence that the Communist Party is trying to form a new organization composed of its former members, who would continue to cooperate with the party in working toward its goals; new laws should cover these people, too. Thus the HUAC, which now controls subversive activities and spread of Un-American propaganda, and which has been trying to gain power over the granting of passports, is now trying to further widen its field of thought control and suppression of "unhealthy" ideas by getting laws to control people due to past beliefs and to organizations that one belongs to. In the past the committee has been content to merely attach a stigma to one's name for these things.

Throughout the hearings, the HUAC was unable to demonstrate evidence of any actual threat to the government by subversion. All that was mentioned in the testimony was in-

filtration and names of members. Not one of the witnesses for the government told of disloyal acts they had to perform, or heard of others performing. Exposure for exposure's sake seems to be one of the chief aims of the committee. When they fail, there are others to help them: at the recent hearings, there was present a member of one of our more right-wing organizations, taking the names of those subpoenaed in order to send the information to their employer.

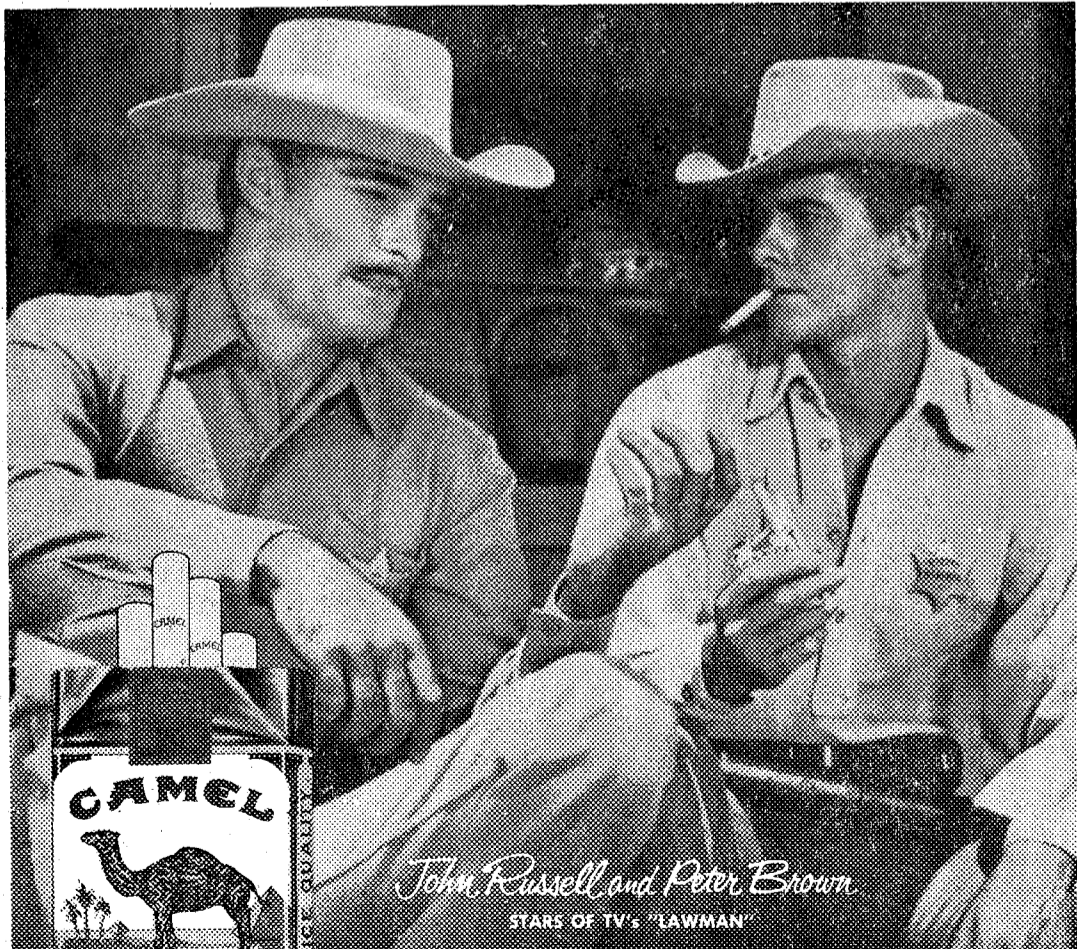
The House Un-American Activities Committee judges people by their thoughts and by their associations, and these judgments are passed on to the nation. People called before the committee are guilty by virtue of their subpoena. A new maxim of justice is being involved: Innocent until subpoenaed guilty.

Moreover, witnesses are heard who cannot be cross examined.

Supreme Court Opinion

With this perversion of due process, one might wonder at the legality of the committee. In the recent Barenblatt decision (June 8, 1959), the Supreme Court found the committee Constitutional by a 5-to-4 decision. Moreover, it stated that the First Amendment must be balanced against the competing private and public interests at stake. If this is true, as Justice Black said in his dissent, it "is to read the First Amendment to say, 'Congress shall pass no law abridging freedom of speech, press, assembly and petition, unless Congress and the Supreme Court reach the joint conclusion that on balance the interests of the Government in stifling these freedoms is greater than the interest of the people in having them exercised.' This is closely akin to the notion that neither the First Amendment nor any other provision of the Bill of Rights should be enforced unless the Court believes it is reasonable to do so." So stands the state of freedom in America.

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Eighty Days Around the World

By Tom Jovin

Taiwan (Formosa) is perhaps the one place in the world most misrepresented in the American mind. At the time I arrived from Okinawa, my conception of this Chinese province was essentially one of an island overflowing with people intent on ducking a rain of shells from the mainland.

In actuality, the picture that develops before the eyes of the observer focuses more upon the fact that here is a community of people making great progress in the face of much adversity and the ironic circumstances of the contemporary scene. Panic over the Chinese dilemma has to be imported via the U.S. newspapers and Time magazine.

Lest the reader be misled by oversimplification, however, I will present a few pertinent statistics obtained primarily through the efforts of a friend from days in Argentina, the Philippine Ambassador.

Presently, the island of Taiwan is, of course, the temporary headquarters of the Nationalist Government of China, i.e., Chiang-kai Shek's regime in exile. It must be stressed, however, that it still remains a province of China; in fact, a provincial government exists quite distinct from the national seat in Taipei.

'Invaders' Unpopular

Ten million people live on this island, one-fifth of which are "mainlanders" exiled since 1949. The distinction is important for the local "Taiwanese" care little for Chiang-kai Shek as they cared little for the previous "invaders," the Japanese who ruled the island for half a century.

As might be expected, a constant state of war emergency is in effect, implying the usual restriction on civil liberties and freedom of movement. Vocal criticism of the government is prohibited, as is emigration from the island. The army is large — about 600,000 strong — and extremely well equipped and trained. This is largely due to the gigantic program of military aid maintained by our government. MAAG, the Military Assistance Advisory Group, involves 15,000 U.S. troops and provides a fully modernized weapons arsenal. Unlike most other places, U.S. aid in Taiwan is used very effectively with a minimum of graft and wastage. And to be fair, one must admit that it is not all military but also includes such worth-while organizations as the Joint Committee for Rural Reconstruction, a great force in the land reform and development movement.

Commies at Work

The Communists on the other side of the Formosa Straits are committed to the "liberation" of Taiwan and the consequent expulsion of U.S. might from the Pacific. Force, however, has given way to more subtle tactics characterized by wholesale infiltration into all political and social levels of their neighbors in Southeast Asia.

Chiang-kai Shek's group is, of course, rabid in its declarations to the effect that they will recapture the mainland. But even to the most casual observer, the impossibility of this venture is all too painfully obvious. The Communists are firmly entrench-

ed and though commune-based economy is having its setbacks, only a mass defeat of the gigantic army could topple the government.

This seems hardly likely to occur in the foreseeable future. Assuming it could, though, Chiang-kai Shek's prospects for affirming his leadership over the 650 million Chinese would not be appreciably greater. For the insurrection group, whatever its elements, could hardly be expected to welcome the Generalissimo back to the land he ruled so ineptly.

But the average person in Taiwan has little time to ponder these questions. His primary concern is with keeping alive in face of great population pressure and a struggling economy. Tourists don't visit Taiwan; only students and people on official business are given visas. Life in Taipei is geared accordingly.

(Continued on page 6)

Positive Bias

Reader's Guide To P.B.

BY PIERRE SUNDBORG

I have heard a few complaints recently by those who claim to know very little about high fidelity. They feel that I use unfamiliar words in this column in order to hide what I'm trying to say, and thus conceal my ignorance of the subject. I won't discount their first point, but I do hasten to state that I know whereof I speak. Thus, this week we'll begin consideration of a few of the more common audio terms. Incidentally, a tip of the hat to **Audio** magazine for the ground work.

High Fidelity. High fidelity is fidelity that is higher than low fidelity. The two terms should not confuse you, as low fidelity is in reality nothing more than high fidelity for low incomes. This must not be confused with low fidelity for high incomes, which is grounds for certain types of legal action in some states.

Pickup. The hi-fi meaning of this term is not to be confused with any other definition al-

ready in the reader's mind. A pickup picks up the bends in a record groove and converts them into various forms of distortion and frequency response. The turntable is sometimes considered an integral part of the pickup, but it isn't really because they may be purchased separately as well as together. Pickup arms may be purchased separately, too, except when the turntable is a record changer.

Turntable. The turntable is a circular table which rotates the record in the same direction at all times — which is considered important by most audiophiles. Every turntable has a motor, futuristic styling, and lower rumble than all competing brands tested by an Independent Consumer Investigations Laboratory.

Styli. All pickups have styli, which are either changeable by the user or are not, depending upon several factors which are exceedingly important and should be borne in mind whenever shopping for a pickup. Most

styli wear out with use, except for "permanent" osmium styli, which are sold only by drug stores and department stores, usually with \$59.95 hi-fi sets.

Amplifiers. The next link in the high fidelity chain is the amplifier. This converts the tiny electrical impulses from Debussey's "Clair de Lune" into watts of horsepower such as Tschaikovsky's "1812 Overture."

Some amplifiers have a built-in preamplifier and some do not, just as some of them have Fletcher-Munson curves and others have RIAA's. The Fletcher-Munson curve was named after Messrs. Fletcher and Munson, who wrote a technical paper proving once and for all that equally loud sounds aren't necessarily equally loud. The RIAA is a curve, like a frequency response, which is used for equalization. But it is less important today than it used to be, because all record manufacturers add a certain amount of bass attenuation and decibels to their

(Continued on page 10)

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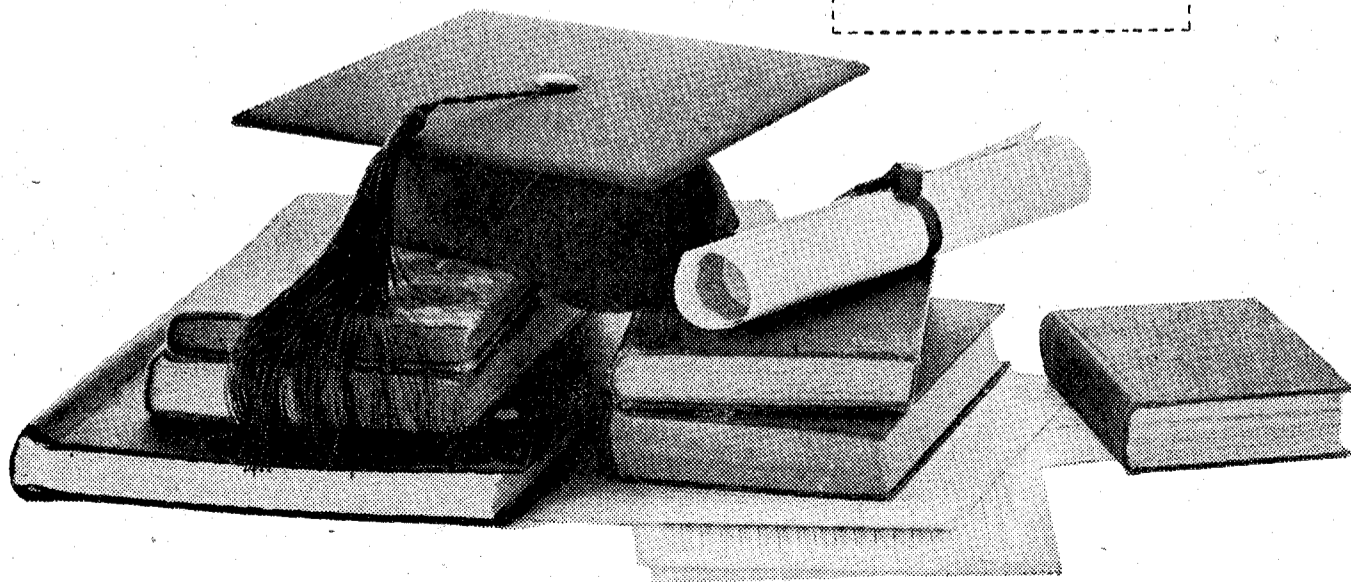
Hughes offers you an atmosphere most productive of creative work in your specialty. Your assignment will be to help forward basic theoretical progress in areas such as these:

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The Fifth Column

The Crucifixion Of Cleve Moler

BY BRAD EFRON

(Tack, tack, tack, tack, tack)
 KUBRIN: That oughta fix his house bias.
 SCHOLTZ: Nice job, Dave.
 KUBRIN: My Bostich stapler made it easy—and six times faster than a skilled Roman using hammer and nails.
 (Enter Tebben)
 TEBBEN: What's new, guys?
 SCHOLTZ: Should've been here a few minutes earlier, Tom—you just missed a crucifixion.
 TEBBEN: So I see — gonna keep him up for Interhouse?
 SCHOLTZ: Yeah, I think so. Our theme this year is **BOC Violation**. Six scenes from the life of a dry-labber.
 TEBBEN: Sounds great, but think you'll be able to fill the courtyard?
 SCHOLTZ: No sweat, it all takes place on the S.S. Titanic, (Enter Carnoy and Carmichael, wearing their "ExComm" insignia t-shirts.)
 CARNOY: Looks like you guys were up to a little mischief.
 KUBRIN: Nothin' much—we crucified Moler.
 CARMICHAEL: Sloppy job on the left hand.
 KUBRIN: You're right. (Tack.)
 CARMICHAEL: Much better. By the way, what motivated you to do this?
 KUBRIN: We thought he was too wise.
 CARMICHAEL: Glad to see you thinking. According to the latest ExComm poll, the average Techman (except, of course, for a small select group of off-off campus intellectuals) spends 40 hours a week studying science, 9 on music, 7 on art, 3 on politics, 12 on literature and less than one hour a week thinking!

TEBBEN: Disgraceful.
 CARNOY: Just last week the students at Tangiers Tech marched on U.S. embassy, dis-

emboweled the American ambassador, and set fire to the European quarter, thereby expressing their protest over U.S. intervention in Wisconsin.
 CARMICHAEL: That's real ferment!
 (Enter freshman at break-neck speed. He trips over badminton net and breaks neck.)
 SCHOLTZ: What's up.
 FROSH . . . trouble a-brewin' over in Ricketts House, Ken . . . big inter-clique meetin' . . . they're gonna . . . they're gonna . . .
 SCHOLTZ: Yes? Yes?
 FROSH: . . . Moler . . . (freshman expires. Look of consternation and constipation grips all. Enter Dokken, followed by one hundred masked men, all in Ma-roon corduroy jackets. Dokken carries a rope.)
 DOKKEN: Spread out men — cover all the exits and plug anyone who makes a break for the health center.
 SCHOLTZ: You men have

business over here?
 DOKKEN: A little business with Kubrin. (He swings rope menacingly.) We heard about Moler.
 KUBRIN: (Speaking rapidly through beard.) He got just what was comin' to him. We don't cotton to no rotation-loving editors up here in sheep country.
 (Look of relief crosses Dokken's face.)
 DOKKEN: We thought you'd done in Art.
 (Exit masked men, with many a hearty "heidy deidy.")
 SCHOLTZ: Say, just who were those masked men?
 KUBRIN: Damned if I know.
 TEBBEN: See you guys—I've got to get back to thinking.
 CARNOY: It's time to do a little thinking about thinking.
 CARMICHAEL: I'm motivated to try thinking about thinking.
 OTHERS (incredulous): What a grasp of the subject!
 (Exit all. Mildew Moler.)

BY JOHN BERRY
 Here's an interesting drink. This again is something you'll probably want to feed the girl friend, but there is a modification which takes it out of that class entirely.

THE MAIDEN'S PRAYER

3 parts Dry Gin
 3 parts Cointreau
 1 part Lemon juice
 1 part Orange juice
 Stir well with ice and strain into glass.
 The first time I made this drink, I had no orange juice. I substituted about three dashes of Orange Bitters, instead (you might like more or maybe less), and was quite pleased with the result. I consider it superior to the standard Maiden's Prayer, although most girls will disagree with me.

This next drink is attributed to Ernest Hemingway. I have never tasted it as mixed by this recipe, but with the obvious substitution of Pernod for Absinthe it is quite good.

DEATH IN THE AFTERNOON

Pour one jigger of absinthe into a champagne glass. Add iced champagne until it reaches the proper opalescent milkiness.
 Much nonsense, pro and con, has been written about absinthe and its habit-forming and mania-producing properties. I do not presume to add to it on my own. But it has been argued that the absinthism is no different from garden-variety D.T.'s. Personally, I would like to try the stuff, and if anyone knows some way to get it — or maybe make it, starting (say) with Pernod — please let me know about it.



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THURSDAY, NOVEMBER 19
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Apostle Spearheads Math Fellowships Available To Seniors, Grads

Revolution At Caltech

BY KEN MANLY

There's a revolution taking place — and part of it is happening here at Caltech. If you are a freshman or a sophomore, you're probably already aware, perhaps painfully so, of its effects on the Caltech curriculum. One of the men behind this revolution is Dr. T. M. Apostol, associate professor of mathematics and author of the familiar Apostol's math notes.

I learned about this revolution and the reasons behind the new



Dr. T. M. Apostol

math notes when I interviewed Dr. Apostol in his home in Altadena. He explained to me that the revolution in mathematics concerns its teaching. Some mathematicians have proposed that matrices, calculus, Boolean algebra and other forms of modern math should be taught in high school; others are opposing any change in high school curriculum. The high schools, not having the men to compose a

curriculum, are caught in the middle. Here at Caltech, however, we have a faculty who can forget tradition, ignore current ideas and strike out on their own — this is exactly what they have done.

Department Dissatisfied

About three years ago the mathematics department became dissatisfied with the text they were using, and they began to discuss the possibility of writing their own. In composing the new course and its text they decided to forget everything that had been done before and try to evaluate modern mathematics objectively. They felt that the old texts did not do modern mathematics justice; the new one would have to be representative of the type of thinking being done in modern mathematics. As Apostol put it, they tried to decide how a modern mathematician would develop the historical concepts of mathematics. Finally they decided that the most valuable thing they could teach the freshmen was calculus, and the most important concept in calculus was the integral.

Last year Apostol wrote the notes for the new freshman math course. This year he is writing the sophomore math course and revising the freshman notes. He has hopes that his current project, the notes for math 2b, will be ready by the time they are needed this year. Apparently the revision of the textbooks will go no further than the old sophomore course; in fact, math 2c will probably use the standard text on differential equations that was used last year. There is no problem in the advanced math courses; sa-

isfactory texts for these courses are available.

In Apostol's opinion, it is more difficult to write a good elementary textbook than one on an advanced subject. Advanced math students have had enough training in mathematical thinking to follow new developments without too much trouble. On the other hand, elementary texts must present their material with crystal-clear explanations. They must appeal to intuitive understanding much of the time, and yet they must be sufficiently rigorous in their proofs to maintain the student's respect for mathematical thinking. Above all, they must give the true clue on the type of thinking among modern mathematicians so that students can see mathematics as really is. This is the job which Apostol has tried to do in his math notes. So far, it seems that he has succeeded.

Although the deadline for many of the big-name scholarship grants such as Rhodes and Fulbright has passed, there are many other opportunities for students, primarily seniors and graduate students, to receive research and study grants.

It is important also for those juniors who plan to do graduate study, to begin thinking about the many fellowships and grants-in-aid which may be of financial help to them.

In order to acquaint students with some of the general aid programs available, the schedule of grants and awards on the next page has been collected.

There are many other research and study programs available which are too numerous to list here. For the nature of these, the Placement Office has compiled reference files which are on the main floor of Throop Hall.

Some of the university an-

nouncements of research, study and teaching opportunities listed are:

1. Rhodes Scholarships to Oxford
2. Rice Institute—Physics
3. University of Rochester — Physics, Astronomy, Biological sciences
4. Univ. of Southern California—Biology
5. Yale Graduate School
6. University of California at Los Angeles
7. M. I. T. programs in fields ranging from economics to science.

In addition to those listed, there are many other opportunities for study and research programs. Most of these programs include books, tuition, possibly travel expenses, and on occasion, a living stipend.

(We are indebted to the **Redlands Bulldog** for much of the information in the following chart.)

Eighty Days

(Continued from page 4)

The unit form of transportation is the pedicab, a rickshaw motorized by bicycle-style, on which a ride may cost up to 5 NT (the black market exchange is 47 to 1). Food is very, very cheap—the lands of Taiwan are extremely fertile and productive and it costs considerably less than \$1 (U.S.) per day.

The YMCA where I stayed in Taipei was conveniently close to the government conclave and famed Sin Alley, the entertainment center.

Meanwhile

But I had a project to work with and this place was ripe with prospects. China possesses a rich heritage of medical practice, extending back thousands of years. Of primary importance is the branch of herb medicine, which deals with the preparation and use of medications derived from approximately 20,000 species of plants. Though its effectiveness has been questioned, it is apparent that many of the traditional treatments are extremely valuable and even superior to Western methods in some areas.

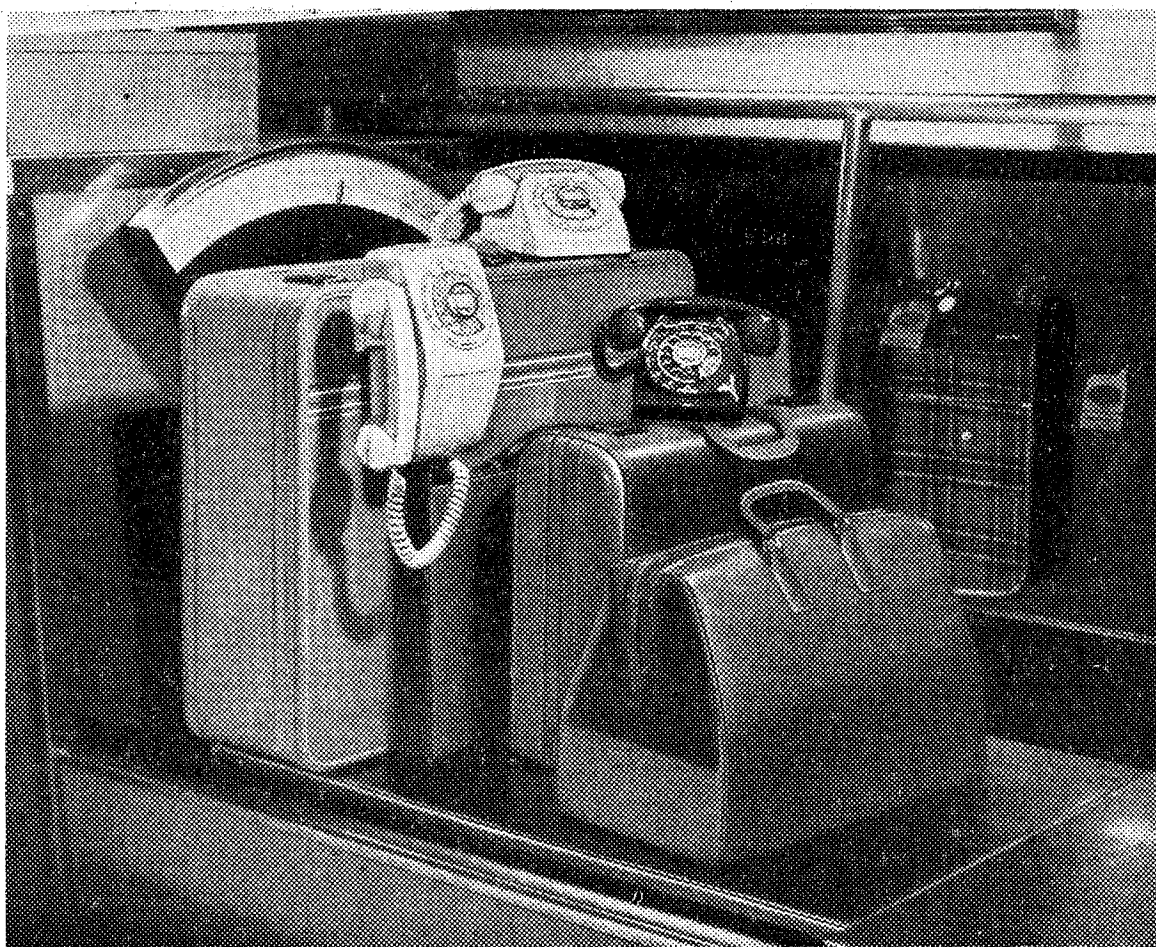
I observed much of the research being done in the field of drug analysis and isolation of active principles at the National Taiwan University and centers in the south of Taiwan. The quality of work done is amazing considering the sparsity of equipment and reagents. But trained people are at a premium — there are only three schools producing after seven

years doctors with a B.S. degree.

A memorable occasion was a visit to the hospital of one of the foremost doctors in Chinese medicine, Dr. Lin, who is on the Board of Directors of the Chinese Herb Association. His clientele is international and pays handsomely for treatments only he can accomplish. His specialty is a common affliction known as the "Taiwan Itch," a skin ailment pronounced incurable by Western dermatologists. He also claims a perfect record of treating cervical cancer. In fact, his preparations are being analyzed by a team here at Caltech.

Somewhat hesitant, I spoke to Dr. Lin through the medium of a convenient English-speaking friend. He expressed great interest in my project and encouraged my research activities. As I departed, he pressed into my hands some herbs and recipes worth a small fortune — and these I have surreptitiously brought back with me. One of them, he claimed, could have cured Dulles had the U.S. State Department accepted his offer of assistance. Who knows?

I had much food for thought as I departed from Taiwan aboard a luxurious CAT (Civil Air Transport — successor to the World War II Flying Tiger outfit) plane. I had passed up tempting offers to remain with these fascinating and friendly people. The time, however, was not yet ripe. And as we heard of the encounter of Nationalist jets with Red Migs over the Straits, I wondered if it ever would be.



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Fellowships Available To Seniors, Grads

(See story, page six)

NAME OF AWARD	PURPOSE OF AWARD	FIELDS OF STUDY	RESTRICTIONS	STIPEND	DEADLINE
Danforth Graduate Fellowships	To encourage men aware of moral and religious values to go into college teaching	Any field taught in an undergraduate college, especially sciences and social sciences	Men under 30	\$1500 per year plus tuition and allowances for wife and children till doctorate received.	Nominations: Dec. 1, 1959 Applications: Jan. 31, 1960
Fulbright Scholarships and Inter-American Cultural Convention Awards	To provide graduate study in any of 47 countries in Europe, Asia, the Far East and Latin America.	Consult Folder	Knowledge of language of host country required. Preference given to persons under 35 who have not lived abroad.	Tuition, maintenance, and round-trip travel. Travel grants also available for other award-holders	Applications due Nov. 1, 1959
General Electric Graduate Fellowships	To provide advanced study for those who might otherwise lack opportunity because of racial or cultural background or region of residence	Unrestricted Provides opportunity for study or experience in the arts, business, journalism, labor relations, etc.	Open to Negroes, Spanish-Chinese- and Japanese-Americans, residents of Guam, Puerto Rico, Samoa, Virgin Islands, Appalachian or Ozark Mts., and Trust Territories	Normally \$1000 to \$3000	Applications due Nov. 30, 1959
Marshall Scholarships	To provide study leading to a degree in any British university	Unrestricted	Age under 26 on Oct. 1, 1960 (28 in exceptional circumstances)	\$1500 plus tuition, transportation, allowances, 2-3 years	Applications due Oct. 31, 1959
National Defense Graduate Fellowships	To provide study leading to Ph.D., preferably to persons preparing for college teaching	Unrestricted	Persons with not over half year of graduate study toward Ph.D.	\$2000 plus for 3 years plus allowances for dependents	Not yet announced
National Science Foundation Fellowships	To provide graduate study at any level	All natural sciences, math, and some social sciences		About \$2000	Nov. 15
Rhodes Scholarships	To provide two years (sometimes three) of study at Oxford.	Unrestricted	Men not over 24 on Oct. 1, 1959. "Some definite quality of distinction . . . in intellect or character" is required	About \$2100	Applications due Aug. 1, 1960, for study abroad 1961-62
Rotary Foundation Fellowships	To allow outstanding students to live and study abroad	Unrestricted	Age 20 to 28, inclusive, and unmarried. Knowledge of language of host country required (in most cases).	Sufficient for all costs.	Not yet announced
Woodrow Wilson Foundation Fellowships	To provide one or two years of graduate work for persons thinking seriously of going into college teaching	Any field taught in a liberal arts college	For seniors and persons with not over half year of graduate work in field applied for.	\$1500 plus tuition and allowances for wife and children	Applications: Nov. 15, 1959

C. L. Hampton

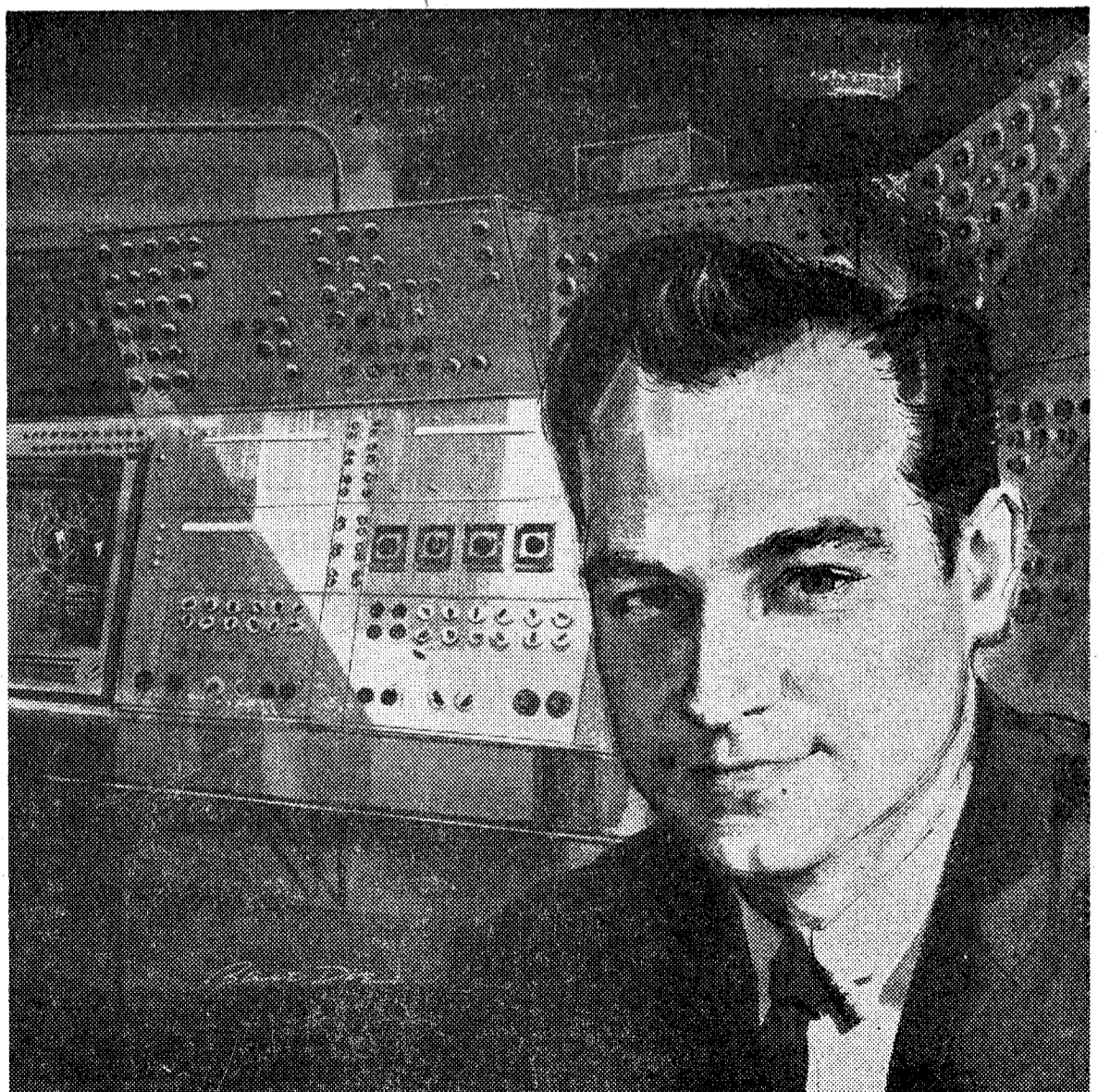
Computer expert Chuck Hampton is a man with problems.

As head of our Avionics Division's Computer Applications section, Hampton pits his analog and digital computers against the mathematical intricacies of infra-red research, optics, spectral background studies, feedback control and weapon system design.

At 30, with a BSEE from the University of Illinois, Chuck Hampton is a Senior Engineer. He typifies the progress made at Aerojet by younger men of technical distinction, in electronics and many other areas.

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FRIDAY, NOVEMBER 6



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The California Tech SPORTS

Soccermen Squeak Past Tough Sagehen Squad

A desperate burst of activity in the fading moments of last Saturday's soccer game with Pomona enabled the Caltech squad to eke out a narrow 4-3 victory for their first conference win of the season.

The close win put the Beaver booters' record at 1-2-1 for conference play. A pressing Caltech offense unnerved the Pomona defense in the final 10 minutes.

Dave Osias, sophomore wingman, kicked in two crucial goals to spark the comeback effort, and the score 3-1 for Pomona. With 10 minutes left in the game Osias belted in a corner kick to initiate the rally. Ron Forbess, grad EE student, added the tying goal with a short boot from immediately in front of the net.

With less than three minutes on the clock, Osias icked a high curving lob from about 30 yards out which got past the Pomona goalie for the winning point.

Defense Holds Lead

The addition of experienced men from the offensive line-up into the defense helped Caltech stave off the last-ditch efforts of favored Pomona. Francis Wilson, Joel Kowk and Dick Chang were defensive standouts.

With five minutes gone in the initial period, Fred Newman accepted a pass from Ellis Cumberbatch and tallied the first goal. Pomona quickly came back with a pair of fast scoring kicks to hold a 3-1 halftime advan-

tage.

Santa Ana, who holds a 2-2 deadlock with Caltech on their record, furnish the opposition Saturday in an exhibition tilt.

Tuft Sparks Beaver Win In X-Country

Sophomore Dick Tuft paced the Caltech cross-country team to a 28-30 win over Whittier last Friday to successfully initiate SCIAC competition.

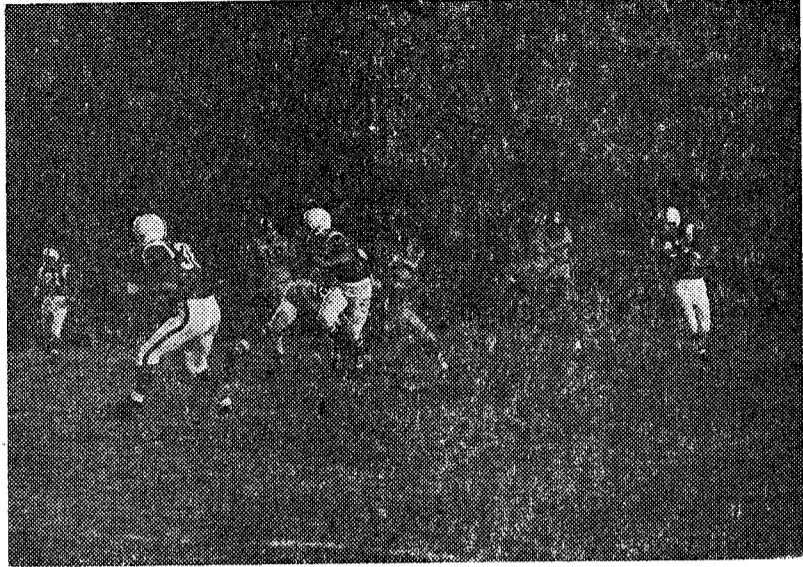
The Beaver harriers took first and fifth and placed six men in the top ten. Taking fifth was Bob Juola, followed by Rich Harris and Al Whittlesey in that order.

Tuft's winning time over the hilly three-mile Whittier course was 18:04 in leading the 14-man field home.

The Beavers host Pomona tomorrow in their second conference test.

Pat Earley, frosh from North Hollywood High, took the frosh two-mile event in 11:32. Since the Beavers could only field four men, the event was not recorded as an official conference meet.

However, using informal scoring on the basis of four men, the Beaver frosh lost by a single point.



Tech's blockers have trouble keeping out Whittier's defense in last Friday's game. The Poets won 40-0.

Gridders To Host Weak LaVerne

The Caltech football squad hosts LaVerne next Saturday in a game between two winless teams. The Beavers stand a good chance to nab a victory.

Last Friday Caltech lost its fifth game in a row as it bowed to a highly favored Whittier team, 40-0, at the Rose Bowl before a small audience.

Led by Little All-American candidate Gary Campbell, the powerful Poets had little trouble with the Beavers. Campbell and his understudies passed for touchdowns of 30, 24, 41, 25 and 40 yards. A 77-yard run from scrimmage supplied the other Whittier score.

Hood Lost

On the other hand, Caltech played one of its best games this year. Fumbling but once, the Beavers mounted several sustained drives against the strong Poet defense. Lee Hood regained last season's form and gained 47 yards on nine carries, but was injured and will probably be out for the rest of the season. Vince Hascall gained 27 yards on seven carries.

Defensive, Tech was also good. They were able to contain Whittier's second unit very well, and forced the Poets to punt five times. If the team can play as well next Saturday afternoon when they meet La Verne at Tournament Park, they could emerge victorious. The La Verne game starts at 2 p.m.

Frosh Creamed Once More
The frosh were badly smashed,

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Beaver Sports

Friday, November 6:
4 p.m.—Water Polo at Occidental.
4 p.m.—Cross-Country hosts Pomona.

Saturday, November 7:
10 a.m.—Soccer hosts Santa Ana.
2 p.m.—Football hosts La Verne.

Tuesday, November 10:
4 p.m.—Water Polo at Redlands.

Friday, November 13:
4 p.m.—Water Polo hosts Claremont.
4 p.m.—Cross-Country hosts Claremont.
8 p.m.—Football at Occidental.

Saturday, November 14:
10 a.m.—Frosh Football

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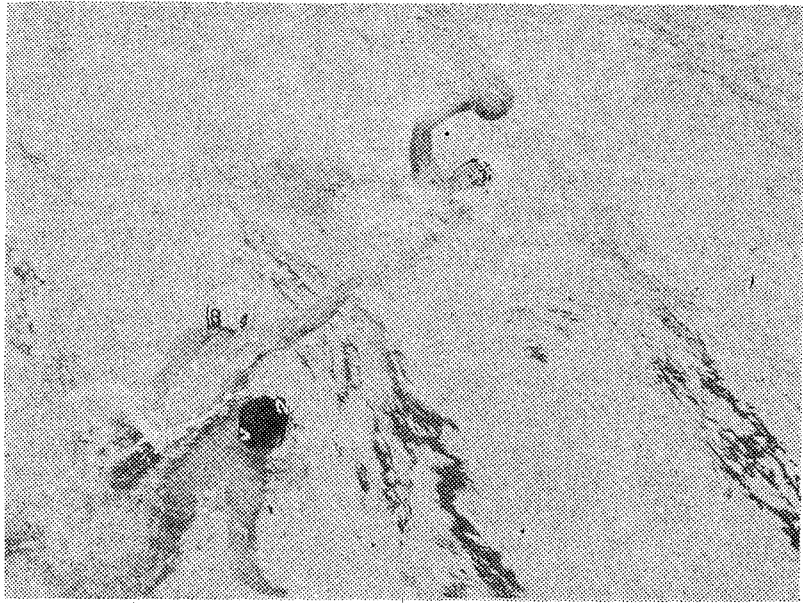
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Poloists Lose To Pomona, Face Oxy In Battle For 2nd



Gary Tibbetts, with ball, paddles in for a shot in the game against San Fernando, played Tuesday. Looking on is Bob Ruby, number 27, who scored three times for the local varsity. The Beavers, thanks to an occasionally spectacular offense, won, 9-7.

Pomona gave a convincing demonstration of their strength last Friday by handily thumping Caltech's water polo squad, 17-1, to abruptly end the Beavers' unbeaten skein in conference action.

The Beavers now hold a 2-1 record, good for a second place deadlock with Oxy, while the unbeaten Sagehens ride atop the SCIAAC rankings with a perfect

attempts to pace the Pomona attack.

Roger Bland scored the lone Caltech goal midway through the final period.

Beavers Grab Win

Going ahead permanently in the fourth quarter, the Beavers took their first exhibition win of the season Tuesday via a 9-7 triumph over visiting San Fernando State.

The visitors assumed a 2-0 lead at the close of the initial period when the Beavers couldn't connect on the shallow-end goal.

Bob Ruby led a second-half push and the winners had a 5-3 intermission edge. Ruby scored the go-ahead goal with a beautiful fadeaway shot at a near-impossible angle to the side of the goal. SFS came back to tie the score 5-5 early in the fourth period.

Gary Tibbetts scored the first of his two goals to put the Beavers ahead permanently. Ruby and Gary Mitchell also tacked on fourth-quarter goals to pad the lead.

Shooting with deadly accuracy, Bland flipped in three goals in four shots. Bland is currently shooting at a better than .300 clip, tops for the team.

The Beavers powered home five goals in the second quarter and four in the fourth period when the visitors were defending the deep-end goal.

Sailing Team Whips Tigers, Takes Second

The Caltech sailing team finished second in a Southern Series regatta Sunday, defeating Occidental for the first time in modern history.

Tom Bowman, commodore of the Beavers, sailed in the A division, gaining a second and three thirds in four tight races. Skipper Lowell Clark received a first, second and two thirds in the B division.

Orange Coast J.C., a school which classifies sailing as a major sport, finished first with 33 points. The Caltech duo received 28 points. Oxy, a team with many experienced sailors and always strong in the past, managed to get only 26. The University of California at Santa Barbara finished last and could score only 23.

The meet was sponsored by the Beavers, and was held at the Los Angeles Yacht Club in Caltech boats. The good Caltech showing indicates that they will be able to field a strong team for the Pacific Coast regatta to be held in mid-December.

Debaters Score In Tourney

Barry McCoy and Dick Robertson ably represented the Caltech debate team in the Novice Tournament at El Camino Junior College last Saturday.

The pair won three of the debates in which they engaged, repeating the .750 average which last year's team gained in this tournament.

This week end Caltech will send three teams to participate in the Los Angeles City College Debate Tournament.

ASCIT PHOTO

ASCIT Photo wants competent photographers from all Houses to work for them. Interested people should see Bob Williams in Fleming for assignments.

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Beaver Chips

By Noll and Koh

Anyone for Squaw Valley?

Last week the Organizing Committee of the VIII Winter Olympic Games sent the California Tech a bushelfull of information about the 1960 games. The winter olympics will be held in Squaw Valley, California, which is near Lake Tahoe and Yosemite Park.

For over half a century the Olympic Games have been the biggest spectacle in sports, the number one event in the eyes of fans and athletes alike. It is really quite an opportunity to have the games so close, making it not impractical to spend a few days up there. With this in mind, the sports department of the Tech is organizing a mass expedition to attend the last four days of the games, from Thursday, February 25 to Sunday, February 28.

According to the brochure sent by the Committee, the total cost for food, lodging, and a pass to the events, would be about \$60. Admission price includes the use of the hills for private skiing. With all incidental expenses, the total cost shouldn't run above \$80 if we all go in a group.

Anyone interested in making the trip should make their wishes known immediately, for reservations are already scarce; therefore, if you would like to go, drop a note in the "N" box in Ricketts House sometime before the end of next week. If you would like more information, all the brochures and press releases that the committee has sent us are accessible through any California Tech staff member.

Cross Country As An Interhouse Sport

The interhouse sports program at Caltech, although one of the best found at any college, is somewhat confusing during the first term. Certainly few will deny that both softball and swimming are run in fine fashion, and are both important enough to warrant a place in interhouse competition. But what about cross country?

It seems there are many reasons not to include cross country with the other interhouse sports. First of all, there are almost no students who are interested enough in the sport to go out for the team. This year two of the five houses could not round up the necessary three guys to enter the meet. This means that in a group of over 200 students, there were not six who were interested in the sport.

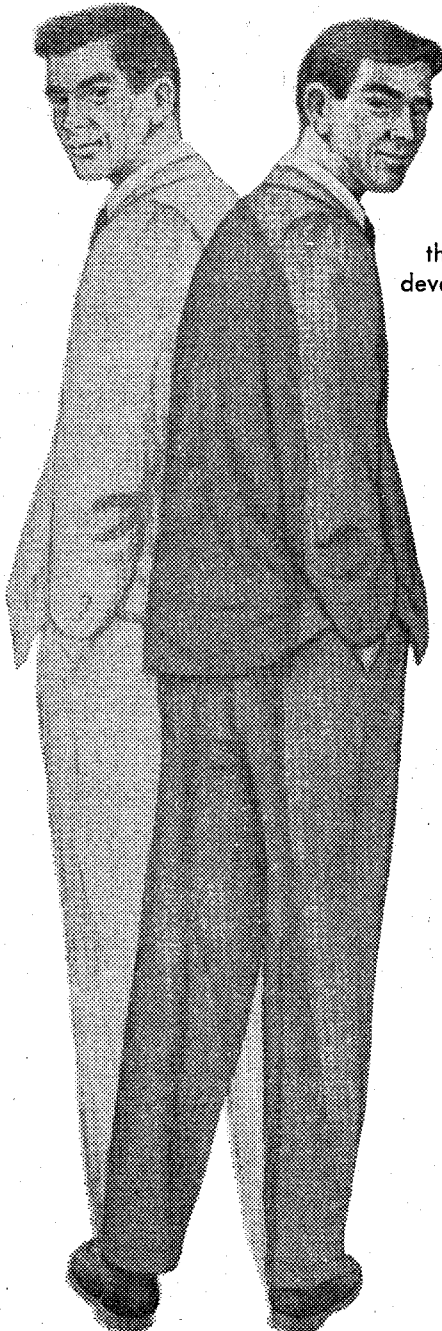
A second argument against cross country is that it is about as far removed as you can get from being a team sport. About all a house has to do to win is to have one guy who can win first place, and then two more who need only finish. In essence, then, cross country becomes a one man competition, with 25 interhouse trophy points hanging in the balance.

A final point is that the directors of the interhouse program find first term so crowded with events that they feel cross country has to be scheduled coincidentally with softball, which tends to make cross country even more insignificant and unattended than it would normally be.

There are several possible solutions to this problem. The best would be to replace cross country with a better sport, such as water polo, soccer or even badminton, and reschedule either softball or this new sport so they don't happen at the same time. The second possibility would be to have only two interhouse sports first term.

In summary, we can see no reason for the interhouse trophy to in part depend on as unimportant an event as cross country. The interhouse trophy should represent a house effort, the winning of which should represent the effort of the house as a unit. When the efforts of one long-winded house member can determine 12½% of the interhouse point total, something is wrong.

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Brewins



Shut Up and Eat Your Gruel
The flank steak flag was flying over the student houses as the Phlegm waiters set up for dinner guest L. A. Drawbridge. Returning the kitchen, waiter R. Lushing runs into Miss Genie. "What's with the tablecloth and all that jazz?" burbles Genie. "Oh, that's because Dr. Drawbridge is eating here." "With this mess for dinner?" gasps Genie.

Ooph
Neil Hoodsky was really swinging. "Man, what a built," gushes Hoodsky, "like wow!" But, like no go. "Good thing," replies random troll standing nearby, "because that's not a she, that's an it."

Monkey on His Back
Fran Greenrank ran a cautious hand over his shoulders and

sallied forth to Throop Hall. There he paid a visit to Dean Strong, and spent some time in the Placement Office. Leaving, he stooped to tie a shoe lace, for verily he was a man of meticulous appearance, only to hear the gentle plop of a banana peel, courtesy of K. Leprechaun, falling from his shoulder.

Mangled Machinations
"Tell me true, Houthmouth old boy, how would you like a blind date?" With these words the Cubscout began a droll new chapter in the HMouth's sad sex life. Shortly after arranging this date, the Cubscout learned that HMouth's date was the roommate of another girl who wiped out said unfortunate last year. Girl number one's com-

ment, heard via the grapevine, had been, "Verily the Mouth is a rake indeed." Even with this in the background, all went seemingly well on the date. However, the Cubscout was told later by his wench that the Mouth's date had said to her, "He looked like he wanted to attack me, if he knew how." Hearing of this, Houthmouth wrote a facetious letter to Cubscoutwench, of unknown content. Sadly for all concerned, the facetiousness of it all escaped the recipient of same. All the local participants are, for some reason, in bad humor.

Lips That Touch Liquor . . .
The air was balmy, wavelets lapped at the beach, and the final examination of the biology

summer course at Corona was over. A festive mood prevailed, and even Doug Stewart, a most serious young man indeed, was infected by the atmosphere of gaiety. Inspired by the example and rhetoric of his erstwhile classmates, he sashayed to the bubbling fount and there drew his first brew. Sadly enough, his conversion to the fuller life was short-lived, for no sooner did the first golden draught disappear than a strange expression crossed his face, and he made a hasty exit in the general direction of the washroom. Fear not for his digestion, gentle reader, for investigation revealed only our hero industriously brushing his teeth and gargling away the stains of dissipation.

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Positive Bias

(Continued from page 4)

discs, whereas several years ago that did the same thing only differently, depending upon him and supported by Good Engineering Practice. It used to be very confusing, but it isn't any more, thanks to the discovery of RIAA.

Loudspeakers. After the RIAA comes the loudspeaker, which is the most important link in the high-fidelity chain because it is the worst. There are three different kinds of loud speakers: woofers, middle-range speakers, and tweeters. Woofers are preferred by people who do not like treble tones, such as women, although many knowledgeable hi-fi enthusiasts prefer to use woofers and tweeters together. Middle-range loud speakers reproduce the middle range, which is not hi-fi at all because everybody knows high fidelity means reproduction of all the highs and all the lows.

Listening Room. The final link in the high-fidelity chain is the listening room. The room itself does not listen, but is called a listening room because it contains a listener.

You. The listener is the heart of the high-fidelity system, and is noted for having high distortion, poor frequency response, marginal stability, and arbitrarily variable performance characteristics. Listener instability is the most common form of defect in a high-fidelity system, which is why manufacturers recommend that the ears be checked periodically to ensure that they are meeting their specifications. Defective ears may be cleaned with anti-static spray, or may be replaced by a microphone and oscilloscope.

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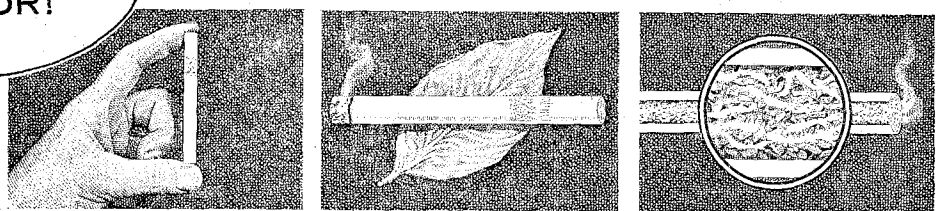
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