

The California Tech

California Institute of Technology

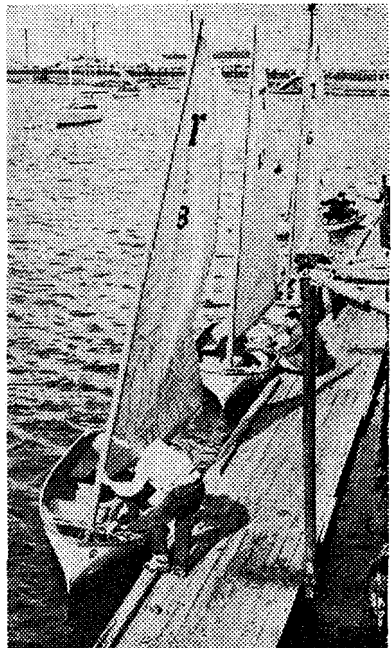
Volume LIX

Pasadena, California, Thursday, October 24, 1957

Number 4

Caltech sailors place in regatta

Caltech and five other schools met at Terminal Island for Caltech's Invitational Regatta last Sunday, despite small craft warnings due to strong winds and heavily clouded skies.



Courtesy ASCIT Photo Division

Competing teams make ready to embark for the starting line

Tech sailors placed second in their best effort of several seasons against Occidental College, Harbor Junior College, UCLA, Claremont Men's College, and Santa Barbara College. Tech's representatives were Nelson Byrne and Ron Arps as skippers in the A group and Doug McLane as skipper in the B group. Although no teams gave a spectacular performance in any single race, consistent good sailing brought Caltech into second place.

Oxy takes first

Harbor Junior College, which was not officially invited to the regatta, caused much concern to Caltech when they took the lead during the first three races. Oxy took the lead for the next and last 5 races giving them a total winning score of 47 points. Harbor Junior College took third place with 33 points. Claremont, Santa Barbara, and UCLA, which lost a few points because of a breakdown in the boat, were the last three, with 32, 24, and 23 points, respectively.

Racing weather

The Los Angeles Yacht Club was the sponsor and Caltech supplied the six glass cats for the race. The weather was ideal for the regatta; the race started a little late, at 11:30 a.m., after a wait for the sky to clear.

The racers and spectators, about 35 in number, shared 20 box-lunches which had been contributed by Student House residents.

Providing a permanent starting line proved to be an unexpected difficulty for the sailors. Two buoys were selected to mark the original starting line. When two large yachts pulled up and moored to the selfsame buoys during the middle of the race, a new line had to be found.

BOD to appoint UN, committees

Monday night, the ASCIT Board of Directors will appoint the chairman for Caltech's "Australian" delegation to Model United Nations at the University of Washington, April 23 to 26, announced ASCIT President Dick Kirk this week.

A committee of five to select subjects for a proposed Deans-Students Conference, to be held in the spring, will also be appointed Monday night. Further information on the conference is available from Gene Cordes, ASCIT Vice-President.

The Board will also appoint the ASCIT Committee on Educational Problems and the Chairman of the Instituturs at that time.

Officer Newton stars at trustee meeting; makes official debut as campus poet

by Mike Milder

Too long had talent gone unrecognized, virtue unrewarded. Now at last has come news to gladden the hearts of Caltech undergrads: Officer Newton (Lt. A. G. Newton, campus guards) has been officially dubbed Poet Laureate of the Institute.

In a surprise move by the Board of Trustees at their meeting on October 7, the title was conferred upon campus bard Newton, who has been long endeared to Techmen for his lyrical verse and home-spun philosophy.

The meeting was scheduled to observe the 80th birthday of

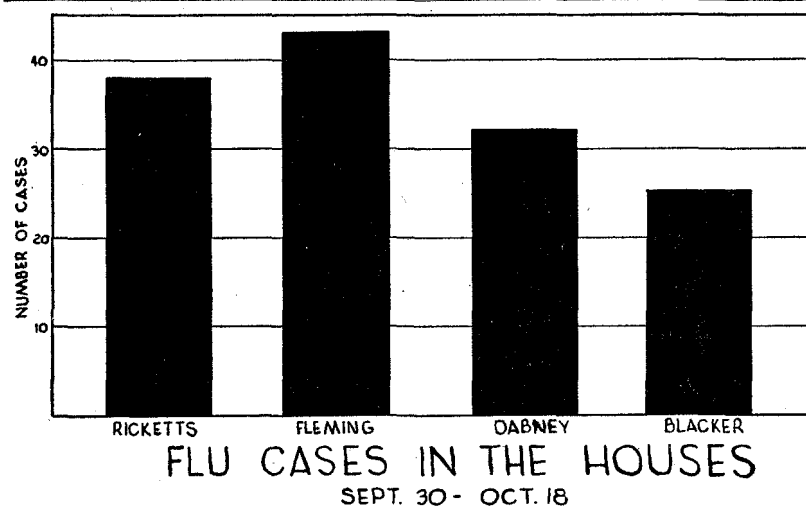
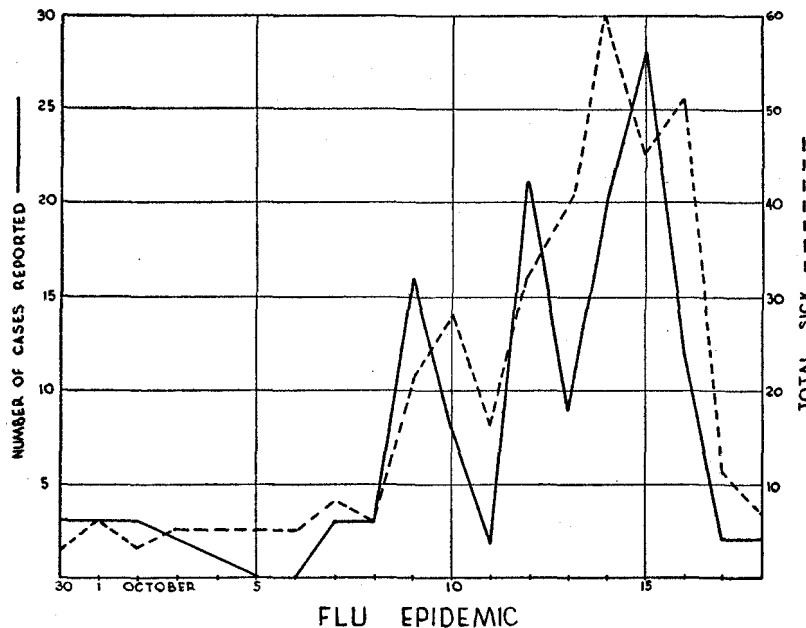
Keith Spalding, trustee and donor of funds for the new Laboratory of Engineering. Newton, in charge of directing traffic outside the meeting, accosted Alfred B. Ruddock, Chairman of the Board, and presented him with the poem he had written in honor of the occasion. Ruddock, divining the talent hidden beneath the tough exterior of our campus minion, suggested that Newton, himself, read the poem in front of the trustees and their guests.

Newton, normally modest and retiring, was, in his own words, "... froze with stage fright." But the presentation went smoothly, and several of the members present, including Spalding himself, were moved to offer Newton their personal commendation and thanks.

Later last week, Newton commissioned himself to write another poem:

To the Caltech football players
And all their coaches too:
Get up and hold that line
my boys,

Tech version of flu epidemic grinds to halt; sports resume



Parents to visit campus, learn student problems

200 parents of new students will visit the Caltech campus on Saturday to see the sights and find out how their sons are being educated. The occasion is the annual Parents' Day, held

each fall to acquaint parents of new students with the Institute.

Morning session

At 10:00 a.m. the parents will meet in 201 Bridge where Paul C. Eaton, Dean of Students, will act as master of ceremonies, introducing George W. Beadle, chairman, Division of Biology, who will speak on "What is a University?"

Richard M. Kirk, ASCIT President, will give the welcome from the students, followed by George P. Mayhew, Master of Student Houses, speaking on "A University and its Practical Accomplishments."

True clue

Foster G. Strong, Dean of Freshmen, will give the final talk on "The Problems of a Student at Caltech." After Dean Strong's speech, a group of assistant professors, teaching assistants, and residents associates will answer the parents' questions informally.

At twelve o'clock lunch will be served at the Athenaeum. After lunch Professor Hallet D. Smith, chairman, Division of Humanities, will preside, and Professor Robert E. Sharp, chairman, Division of Geological Sciences, will speak on "What is Caltech?"

Tour, tea

Student guides will take small groups of parents on a guided tour of the campus. Those par-



Officer Newton

And beat that Devil Flu.
You made a grand old showing
On your first game of the year;
And I know when you get going
again
You will knock them all on
their ears.

Student houses hit hard by plague; toll climbs to 150

Abating as predicted, the Asian flu epidemic on campus is today but a shadow of its former self. At the height of the wave of illness, on Monday, Oct. 14, 60 student house members were confined to their beds. In contrast, an average of one new case per house per day shows on the health center reports for this week.

Water sports were resumed yesterday, and all athletic contests will be played as scheduled except for Friday's water polo match against Pomona.

The little vaccine available was administered too late to have any preventative effect, but almost all men were sick for only two or two and a half days.

Struck Fleming first

First group to suffer the effects of the virus was Fleming house which was hit on Wednesday, Oct. 9, and had 15 men sick over the week end. Altogether, Fleming had the highest total of reported cases with 43. Each afflicted Flem was ill, on the average, 3 days, also the inter-house high.

Blacker men fell ill noticeably on October 14, followed by Dabney house the next day. Although Ricketts was second high with 38 reported cases, these were too evenly distributed throughout last week to reveal a trend. The majority of early cases fell among freshmen. It was thought that this high susceptibility was due to the new climate and pressures of the time-consuming activities of rotation, initiation, and college classes. However, present records show that the number of cases among upperclassmen has increased to keep pace with the frosh statistics.

(Continued on page 8)

Announcements

FOOTBALL GAME INFO

Caltech's Athletic Department has released the following instructions for finding the Tech-Poly football game: Take the San Bernardino Freeway east. Turn off at Holt Avenue. Proceed to Pomona Catholic High School.

SATELLITES!

The Caltech Physics Club will present Richard Mathison from JPL tonight as the first speaker of its fall series. He will explain JPL's Micro-Lock satellite radio tracking device at a meeting in 201 Bridge. All new and old members are cordially invited.

BIG T

Copies of the 1957 Big T may be obtained from Eldridge Moores in rm. 24 Ricketts.

SCOREBOARD

FOOTBALL

Caltech Frosh 12, Oxy Frosh 50

SOCCER

Caltech 2, Pomona 2
Caltech JV 0, UCLA JV 7

To Mr. Keith Spalding:
A Happy Birthday to you.
May your future be bright
and happy too.
May the stalwart, sturdy
looks that you maintain
Also reflect on the new
campus building
That bears the Spalding
name.

Lt. A. G. Newton

(Continued on page 5)

Editorial

Personal opinion columns vital to newspaper function

Ford Holtzman's "Bull Pen" last week not only raised thundering protests (see "Letters to the Editors"), but it also made clear the need for a clear-cut statement of California Tech policy with regard to student columnists.

Although articles such as last week's "Bull Pen" may "do much to discredit us at other schools," the California Tech takes the stand that this type of column, expressing individual opinion without editorial restraint, is one of a student newspaper's most valuable contributions to its student body.

One of the prime functions of a student newspaper is to make the student's life more interesting by keeping him aware of all the facets of life about him. No paper has ever succeeded completely, and none ever will, but the better newspapers continue to try. We feel that student opinion, right or wrong, majority or minority, is interesting and very important to our readers, and we feel that these columns constitute the best means of expressing it.

Last week Holtzman's opinions were definitely minority and contrary to editorial policy, but the California Tech does not regret their publication. Rather, we are proud that we were free to let the students read a very real (although seldom expressed) side of student opinion.

The editorial policy of a newspaper should, as nearly as possible, follow the best interests of the students. This makes the task of writing good editorials very difficult, and injects an aura of conservatism into the official policy of the journal. Therein lies another function of student columnists.

Columnists, unlike editorial writers, can express ideas as fast as they occur, without waiting through a "digestion" period to achieve objectivity. In this way columnists can deal with more current problems, while editorial writers try to limit themselves to longer-range objectives.

At the present time the California Tech is carrying three of these columns: Holtzman's "Bull Pen," Bob Blandford's "Human Review," and Dick Van Kirk's "As I See It." Anyone with a minimum of writing talent is welcome to start a column of his own, and it is hoped that many will.

However, we do apologize for one thing. Personal opinion has not been clearly distinguished from editorial opinion the past. Commencing with this issue, a notice will accompany each personal column, and we hope this omission will not occur in the future.

Secretary's Report

CALTECH SKI HUT

ASCIT has assumed ownership of the Caltech Ski Hut. The Hut will be operated by the Ski Club on behalf of ASCIT. This change of ownership was effected in order to give the Ski Hut a more stable ownership, and make possible some immediate repairs which are necessary for the operation of the hut this winter. The Ski Hut has each winter been the scene of several snow parties and skiing trips, and has been a valuable asset to undergraduate social activities.

AMENDMENT TO ASCIT BY-LAWS

During the coming week a proposed amendment to the By-Laws will be submitted to a student vote. The proposal is to introduce an assessment of \$2.00 per year on each student's bill to cover this cost of each student's picture in the Big T. Pictures would then be taken at an additional cost. This, it is hoped by the Big T staff, will increase the number of students who have their pictures taken. The theory is that if they have to pay anyway they will try to get their money's worth by having the picture taken.

REPAIR LOT

On Monday, October 28, anything movable on the ASCIT repair lot will be claimed by ASCIT. Anything which the expert eye of Brad Efron deems junk will be removed by a junk dealer.

ASCIT APPOINTMENTS

At the regular meeting on Monday, October 28, the Board will appoint students to the following positions:

Chairman of the Instituturs

Model U.N. Chairman

Seven members of the Student Committee on Educational Policies

Anyone interested in any of the above will be welcome at the meeting.

HOMEcoming QUEEN

It looks like the Board will pick the finalists for the Queen contest, but it will not be easy. It appears that the masculine judgment of certain Board members may be placed in doubt. There will be no short meetings for a while.

Michael Godfrey
ASCIT Secretary

Letters to the Editor

A rebuttal

Editor, the California Tech:

This evening, while glancing through your newspaper, I ran across the column by Ford Holtzman, entitled "The Bull Pen." In this column Mr. Holtzman tears down the theory of student spirit at football games, claiming that it does nothing to help a team to victory, that the only joy to be found by an individual from a football game is a "second-hand joy assumed from a spurious association between the individual and the athletes," and that athletic events "rank far below other forms of entertainment such as the stage, certain movies and a good concert."

These statements are, to this writer, almost too ridiculous for rebuttal. May I ask Mr. Holtzman if he works harder at a physics problem when he knows that many people are depending upon him for a correct and satisfactory solution, or when he feels that the problem is unimportant and trivial, with no one giving a damn about the results?

Mr. Holtzman's description of the "joy" derived from an athletic event leaves me in complete disagreement. The amount of pleasure which an individual receives from a sports affair is based entirely upon his own personality. In general this joy, while partly being a thrill from viewing the unexpected—whether he hoped for or not—is to a great extent a feeling of pride. The same type of pride was felt by Americans when the United States fliers did such a creditable job of knocking Russian MIGs out of the Korean skies.

In his column, Mr. Holtzman attempts to rank forms of entertainment, placing athletic events at the bottom of the list. Any ranking of entertainment is entirely an individual preference, of course, and this writer would definitely rank a non-fictional football game over some author's screen or stage interpretation of a great emotional experience.

The true subject of this letter goes deeper than establishing the merits of a game of football, however. As a sideline, Mr. Holtzman states the belief that people in other schools think poorly of the Tech man due to a jealousy of our reputed intellectual capabilities. This viewpoint, common on our campus, places the Caltech man on a pedestal, surrounded by the seclusion of a dream-like world. While most of the science majors of other schools undoubtedly envy the reputation of the California Institute, the truth of the matter is that the average student of another school does not even concern himself with us. Like air, they know we exist and are grateful, but that is all. We have done nothing, outside of scientific achievements, to warrant attention, and the average coed at a liberal arts college is much more interested in having a good time with a personable date than in discussing scientific achievements. If, as Mr. Holtzman claims, students from other schools are so acutely aware of our intellectual capabilities, then every Caltech man would have a harem of marriage-seeking women hanging around him.

Due to the nature of our school and our students, the average C.I.T. man is destined to graduate with an excellent education and a lack of social graces, particularly as pertain to relations with the opposite sex. Fortunately, the latter is much easier to acquire during life than the former.

Let us not abandon all contact with the outside world during our school year, therefore, but try to develop and maintain an interest in things which people of less intelligence, people with whom we shall be working in later years, enjoy. Athletic events is an excellent starting place.

Jon Tibbitts

Thanks

Editor, the California Tech:

Of late I seem to find myself a member of a minority around Tech. Recently, I attended the well-ballyhooed Pajamarino in T. P. I found myself in a minority. Most of the loyal Tech students seemed to have better things to do, as it was evident that only about one-fourth of the student body had come to the assembly.

During the program at the Pajamarino, a "great" man rose, and with stentorian tones, extolled the merits of the Caltech football team. His main point seemed to be this, and I quote as best I can: "We have a great team, but that isn't all it takes to win a game. We have to have a great group of backers. We need a lot of noise from the spectators if we are to win a game."

I wonder if he was kidding. Does LaBrucherie really think that even the noise of Krakatoa would inspire a team such as ours to fight even harder? Does he think that a mediocre bunch of players can become heroes if the noise from the stands approaches 130 db? I must be one of the minority who think he was pulling some legs that night, because I do not agree with him.

However, the majority of the men at that assembly seemed to agree with him, for they cheered like mad. Maybe it was the excitement of the free show that made them wild. Maybe it was the evident attractiveness of the song queens. But was it school spirit? I doubt it.

How many times have we heard some announcement of a forthcoming athletic event ended with, "Come on out and support the team. Show your school spirit." There is a line of bull even larger than that found in the infamous Catalog. I enjoy watching football games, and I have attended almost every one which has been played in the last two years. However, I'll be damned if I'll go out to a game just to help give a good impression of my school spirit. I might point out that there is a standing joke that all candidates for student body offices are seen at the games "in order to show their school spirit."

I realize that I probably hold the minority view on these subjects. However, I am extremely grateful to the California Tech for allowing Ford the opportunity of expressing his views. Maybe many of the readers do not agree with what he says, but you will find that his supporters really hold with what he says. We're glad that there is such a freedom of thought that these minority views can be brought out into the light. Maybe the majority will start thinking, and wondering if we're right.

Again, thanks for printing the "Bull Pen."

Pierre Sundborg

Clarification

Editor, the California Tech:

In reading last week's "Bull Pen" by Ford Holtzman, I noticed a startling lack of perspective on his part. He never considered the effect of a crowd of rooters on the performance of a team. Knowing that Ford has

California Tech

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rarely if ever competed in sports, this is not surprising.

In fact, a member of the team never realizes more than the presence of spectators. He never hears the cheers and only comprehends numbers in terms of large or small. The effect of the spectators is nil.

The player in competition is only aware of the progress of the game. He feels dependence on and responsibility to the other members of the team and hasn't time to feel them for anyone else except in slack periods.

I feel that this opinion from one who has competed in three sports in the last year will help clear up the clouds of conflicting thought on this subject.

David Singmaster

From Tech man to Oxy man

Editor, the California Tech:

Criticism of existing institutions and customs is undoubtedly a sure sign of a healthy society. There are, however, certain criteria by which such criticisms should be judged and certain limits, defined by the precepts of good taste, past which such criticisms should not venture. I refer in particular to last week's "Bull Pen." This article was, I think, sufficiently incorrect factually and more than sufficiently biased by petty personal motives that it cannot justifiably go unanswered.

The main falsehood upon which Holtzman bases his argument (i.e., that support of athletic activities is a stupid waste of time) is that no amount of student support can help our athletic teams. As anyone who has ever competed in athletics will readily verify, encouragement is a very powerful psychological motive. Encouragement is as essential to a good athletic performance as it is to a good academic, social, or political performance. One always likes to feel that what he is doing is acceptable and worthwhile.

Evidently our Mister Holtzman does not believe that athletics really are worthwhile. Superficially his attack appears to be upon the support of athletic events by non-participants, but upon closer inspection one finds a more basic attack on athletics as a whole. Holtzman's attitude seems to be that sports are for stupid clods and Oxy men, the two lowest branches of humanity. In reality I think it will be found that a sound and healthy mind is to a large extent dependent upon a sound and healthy body. The development of the body is by no means antagonistic to the development of the mind; rather the two are supplementary. The overemphasis of either the mind or the body can create only social misfits.

It must, indeed, be reassuring to have, as Holtzman has, an absolute scale of good and bad which can be applied equally

(Continued on page 5)

Seniors favor engineering; sophomores like science

Caltech upperclassmen seem to be tending more and more towards options in science each year. In the sophomore class the scientists-to-be outnumber the engineers 127 to 55 while the seniors have split their choices evenly, 69 in engineering and 68 in the science departments. First term registration figures released this week showed the juniors following the trend with 97 scientists and 73 engineers.

Enrollment totals were listed as 676 undergraduate students and 490 graduates. The undergrad total includes 137 seniors, 170 juniors, 182 sophomores and 187 freshmen.

The most optimistic trend shown by the figures was the doubling of the number of women students at Caltech. This year 4 of the fair sex are doing graduate work on campus compared to the 2 registered last year. They are concentrating in aeronautics and biology.

Physics leads

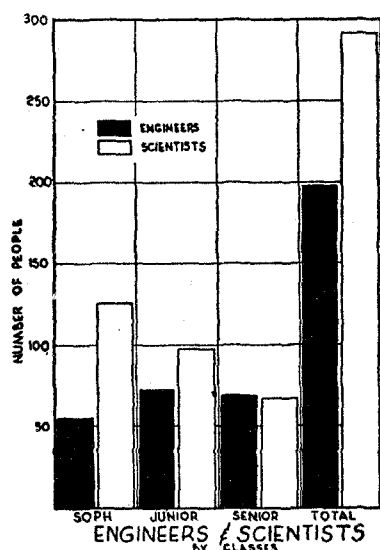
Physics is the most popular option with 38 seniors, 55 juniors and 56 sophomores choosing the field.

The greatest increase in enrollment was shown in the mathematics option. Playing with the integrals this year will be 23 sophomores, 12 juniors and only 4 seniors. Chemistry and applied chemistry, including

chemical engineering, were the other popular science options.

Engineers are almost equally divided between the two preferred options, electrical and mechanical engineering. The totals showed 95 EE's, 87 ME's and 16 CE's.

Among the graduate students, 271 are interested in science and 219 are following engineering. Physics again heads the list with 113 grads.



Music series begins in Dabney

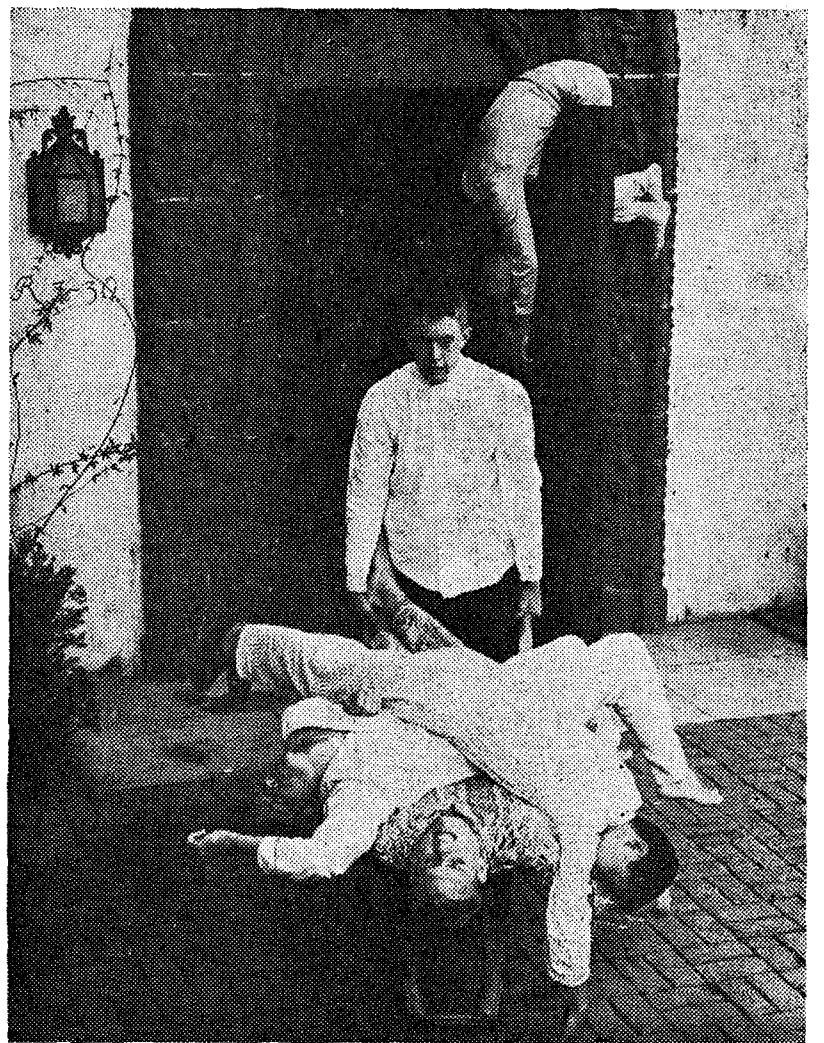
Sunday evening chamber music concerts began their eighth year at Caltech with a program by the Kaufman Chamber Ensemble at 8:15 p.m., Oct. 13, in Dabney Hall Lounge.

These concerts will be presented bimonthly in Dabney Lounge at 8:15 on Sunday evenings and will conclude at about 10:00 p.m. The programs are open to all Institute personnel and the general public. Undergraduates, in particular, are encouraged to attend.

Enrichment

This is the first year that the Humanities Division has given the Chamber Music Series financial support as part of their extra-curricular enrichment program.

The concerts will be as rich and varied as the groups which will perform. The combinations will range from trios to sextets, and will include woodwind and string quartets. The performers are the finest local artists available.

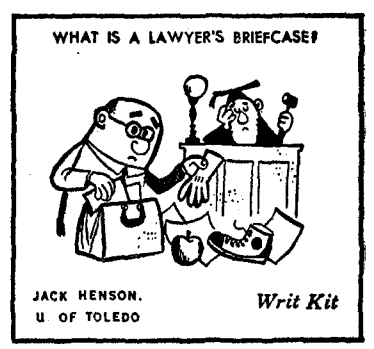
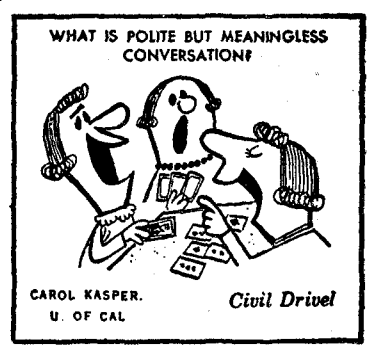


The Asian flu epidemic reached its peak last week. Courtesy ASCIT Photo Division

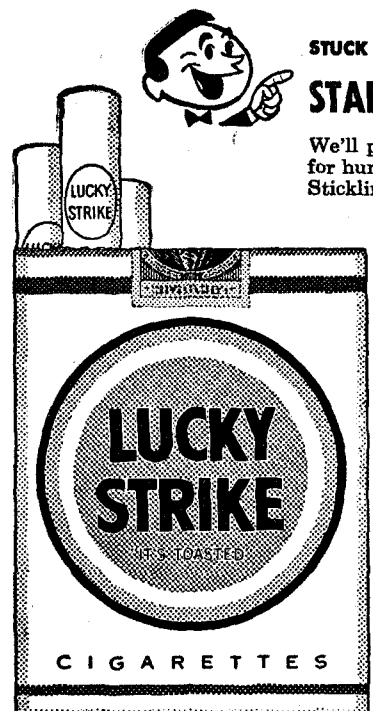
Sticklers!

OAK KNOLL
CLEANERS and LAUNDRY
 Your Best Clothes Cleaned the Oak Knoll Way
 One Sweater Cleaned FREE With \$1 or More Order!
 Bring this ad. Sorry, no white on this offer.
 902 East California (4 Doors East of Lake)
 SY 3-6704
 Next Door to Caltech Barber Shop

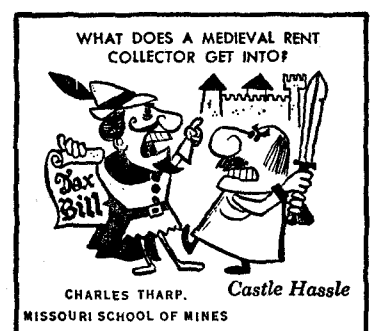
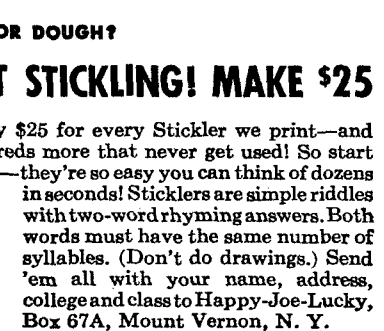
ANY SALT worth his salt will gripe when told to paint a dull hull, varnish a vast mast, or swab a dank plank. How to make him break out in smiles? Just break out the Luckies! He'll be a *Beamin' Seaman* in no time—and no wonder! A Lucky's a light smoke—it's one cigarette that's packed end to end with superbly light, golden rich, wonderfully good-tasting tobacco. And Luckies' fine tobacco's toasted to taste even better! Now hear this: Want to go light? Just go Lucky!



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 Prompt Free Motor Delivery
CALTECH VITAMINS
 Caltech Genuine Wheat Germ Cereal
CALOID COLD CAPS
 NEW, EFFECTIVE REMEDY
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 We'll pay \$25 for every Stickler we print—and for hundreds more that never get used! So start Stickling—they're so easy you can think of dozens in seconds! Sticklers are simple riddles with two-word rhyming answers. Both words must have the same number of syllables. (Don't do drawings.) Send 'em all with your name, address, college and class to Happy-Joe-Lucky, Box 67A, Mount Vernon, N. Y.



UNITED ARTISTS
 ENEMY FROM SPACE and Unidentified Flying Objects



LIGHT UP A light SMOKE—LIGHT UP A LUCKY!
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The Outside World

Time for an overhaul

Sputnik in itself is apparently of little real significance in the international power struggle. Yet it symbolizes, if it does not offer some actual proof, that our major competitor has drawn ahead of us in technology, the very basis of our world leadership. It therefore seems appropriate to examine one of the basic reasons for this achievement, the relative decline of our educational system, and perhaps to draw some conclusions as to what we ought to do about it.

While the Soviet Union has been constantly increasing the number of college graduates in science and engineering since 1950, the U.S. has experienced a decline, which continued until this year. And this is typical of our entire educational policy; the educational system, allowed to develop almost completely under private and local control, has failed to satisfy the national needs as well as it might or as well as the Soviet Union's system. Some will argue that the dubious additional freedom is worth the price, but I contend that a compromise is more in order.

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News in Brief

FOREIGN

Syria received troops from Egypt through their combined army system under Hakin Amer and then, with Russia, demanded a UN investigation of a probable Turkish invasion spurred by the U.S. As the General Assembly discussed action, Russia proposed a summit conference for peace and meanwhile maintained she would aid Syria if attacked. Dulles stated that we in turn would protect Turkey. Iben Saud, miffed because he was not consulted on the army exchange, announced that Turkey and Syria had accepted his mediation; but there was no confirmation from the parties involved.

West Germany broke diplomatic relations with Yugoslavia, an important customer, because of her recognition of East Germany; and the U.S. started reappraising its support of Tito. Earlier in the week, in an unrelated event, East Germany called in its marks and issued a limited return which wiped out Western holdings and reflected possible economic faults and a money drain to the West.

Seventeen European nations

made the first move to set up a free trade area with Reginald Maulding, British Postmaster General, presiding. Rather than a six nation common market, the idea presented was to adapt slowly to a common outer tariff wall with free interior trade and possible coordination of men and capital at a later date.

France's National Assembly rejected Antoine Pinay's try for the premiership, to further confuse French politics. There was elation in the intellectual world, however, as Albert Camus received the Nobel Prize in Literature.

DOMESTIC

Hoffa's election credential reports were turned over to the rank-and-file insurgents by the courts, and his ascension to the presidency of the Teamster's Union was blocked by a restraining order, which his attorneys appealed. Dave Beck decided not to resign early, and was given a postponement on his income tax evasion trial.

Queen Elizabeth II and Prince Philip were given a royal reception by New York and the White House and quite seemed to captivate the country.

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Campus Brewins

Poor P. Poor

Mac Poor's weekend plight is just one more case in Beak's files that go to show that women are basically not worth it. It seems ole P went out to Pomona to play soccer with the thought in mind that he might stop by and see one of those things called girls. Now you must keep in mind that ole P doesn't have a car, in order to fully appreciate his good fortune. Now P laid his plans well. His good friend Uncle Tom Guncle was also going to see a girl in Pomona that night and told P that he would pick him up at one in the morning.

Poor P didn't have a chance from the start. He left his billfold with the soccer manager and forgot to get it back. This was just a hint of more to come. Around about one P was sitting on the front steps of his honey's dorm. Uncle Tom just didn't show. Poor P just sat there till this sweet young thing of his tossed a sleeping bag out the window. "Fine!" you say. "P Poor is saved." But alas it seems that it rained that night and P felt pretty bad sleeping in the rain in the middle of the girls' athletic field. Last Beak heard P had sworn off women and joined the ranks of the stags.

Conover crushed

John Con's filthy, vulgar, nasty, foul mouth was put in its proper place (wherever that is) at last by the Delegation from Upper Hell. The Senior Senator apoolgizes for not knowing that Janie was there. (Note: Keep your doors locked when doing homework—especially if the lights are out).

Drubney Men are taken

It seems that one S. Roth was listening in on a conversation between Lange and the social chairman at Good Sam Hospital. Now, unknown to Roth, the Good Sam end of the line had hung up and the conversation was for his benefit. Well, anyway, Roth was led to believe that there was a nice girl over at Good Sam that had a pair of horns to match his. So over he went to pick up this date that

had been set up for him. Imagine our poor troll's disappointment when there was not a single girl waiting for him. Poor frustrated Roth found his way back to Tech with even bigger horns than before. Lucky for him he found another Darb (J. Lango) who had a pair to match his. Now what would two people do in a case like this. It's obvious! Head for downtown L.A., since T. J. is too far. Now these two found themselves in a dime-a-dance place and were minding their own business when out of a dark corner comes a "pssst sonny wanna have a good time?" The little lambs forked over nine dollars, but the nice little man never came back. Too bad, boys; better luck next time.

Trollmaster trumped

Rosa to Sing: I must be drunk: I can't stand you when I'm sober

Mike Milder masters maladjustment

Last Friday night saw Rowdie Milder both consoled and psychoanalyzed by his alley mates. Seems he felt a lack of adjustment or something where female of the specie is concerned.

Last Saturday night at Rowdie House Party same (sic) maladjusted Milder was seen stretched out on chaise-lounge with very well adjusted lovely. Wonderful, this modern psychiatry!

Conley called

Beak hears that Proctor and Gamble will have to get along without poor Phil—he got drafted. The army only takes the best men—let's see, Bill Davis and Phil and . . .

Married man mourns

Beak was doing some investigating at the Gilswine and T. C. Carmichael pad when he overheard one D. Ratsa . . . singing "I wish I were single again." Poor man, Beak is just sure that he is on the bottle again.

Delighted defective detective

Fig Newton got the thrill of his life when he went to save Phlem from total destruction

(Continued on page 5)



Behind John Cobb's all-time record of 403 mph

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by Cordes

Most consumers of alcohol prefer to take their spirits in the form of a cocktail. A wonderfully flexible drink, the cocktail may serve as an appetizer, an after dinner drink, or an excuse for inhaling some exotic spirit at any odd convenient hour that the drinker may yearn for his favorite concoction. Therefore, the next few editions of this column will be devoted to exposing the art of preparing and enjoying the basic cocktails.

It is quite possible to prepare a cocktail out of Creme de Cacao, varnish, ski wax, and panther sweat but it will probably not find acceptance among the general run of the troops. It is recommended that the student drinker confine his activities to the basic cocktails which include the Martini, Manhattan, Old Fashioned, Daiquiri, Side Car, Champagne, Stinger and Jack Rose. Doubtless the most popular of these is the Martini to which we shall now turn our attention.

The Martini

The Martini is made of gin and dry Vermouth. Considerable difference of opinion exists as to the proper proportions that the two should be mixed. Modern Martini connoisseurs tend to a very dry drink composed of five parts of gin to one part of Vermouth. One should expect approximately these proportions if he orders a dry Martini in one of the local liquor dispensaries. For those who enjoy a really dry Martini this writer suggests filling the glass with straight gin and facing Italy for twenty seconds.

The Martini should be prepared with American or London Dry gin and with French, rather than Italian, Vermouth. The drink should be mixed in proportions suiting the consumer and should be stirred with cracked ice, strained and garnished with a stuffed olive. It should be served in a cocktail glass as the stem of the glass protects the drink from the heat of the hand. A warm Martini falls into the same class as boiled beer.

Before we leave you in the hands of the Martini for another week, it is perhaps worth while mentioning a brand new cocktail—The Sputnik.

The Sputnik

1 jigger Vodka
1 pinch of sour grapes
1 dash of bitters

Stir well. Drink while peering into the sky.

Fulbrights

Techmen urged to apply for free travel, foreign study

"I wouldn't trade my year of study and travel in Europe for anything. The extensive travel and opportunity to broaden one's outlook far outweigh any delay in technical education." So states Salvatore Sutura, enthusiastic ex-Fulbrighter and present ME grad student at Caltech.

Sutura provided the following answers about aspects of the foreign study scholarships which affect Techmen:

How do I apply? Professor Horace A. Gilbert, 104 Dabney, is Caltech's Fulbright advisor, and he has the information and experience to make success easy. Present seniors or grad students must apply immediately, because the deadline is next Thursday. But this is also the time for juniors to start planning for next year.

How large are the Fulbright Scholarships? In addition to payment of all tuition and travel costs, an allowance is provided for living expenses. This allowance is about double what is actually needed; however it must be spent outside the U.S.

What did you do with your extra money? Like most Fulbright scholars, I spent the summer and the time between terms traveling. I saw nearly every tourist attraction in Europe, all

at government expense.

How are the scholars chosen? Factors considered include geographic origin, grades and language proficiency. The scholars are chosen to be the best possible representatives of this country. I should point out that science students are especially desirable. For example, married science students are given a special allowance to take their family with them.

What about the language requirements? In addition to highly competitive England, countries such as Norway, Denmark and Holland require only English. It was my experience that some of the successful applicants for other countries had no language beyond an elementary college course. Naturally, however, a language helps.

How are my chances of being accepted? In the past about 30 percent of the Tech students who applied made it. In many cases, the chances for success are much better.

What are the big advantages of foreign study? You can make some really worthwhile friends. You certainly will learn a new language thoroughly. The cultural benefits are tremendous. And understanding between people is definitely improved.

OVERHAUL

(Continued from page 4)

Consider, for example, the following facts: 2.3 of the 43.1 million young people engaged in formal education returned to half-day sessions and emergency or sub-standard quarters; they were greeted by a new record deficiency of 135,000 teachers. And the situation appears likely to get worse before it gets better.

Proposed solutions

Three major proposals have been made to remedy this distressing situation:

- (1) Spend more money, probably through Federal aid.
- (2) Eliminate some of the inefficient educational traditions.
- (3) Use more electronic equipment.

The most obvious answer, increased expenditures, has several difficulties, such as local unwillingness to vote higher school taxes, local debt ceiling limits, and limited resources in the poorer states. Well, how about Federal aid? But this clashes head-on with the old states rights objections, the segregation issue, the resistance of the more conservative and wealthy states. These three factors, in fact, have combined to kill school aid bills in Congress for the last two years. Yet, if every American is to be assured of developing his talents to their fullest extent, a worthwhile objective for both the individual and the nation, it seems evident that the Federal Government must not only finance more of the education in the poorer states, but also exercise control over standards and administration as well.

Research in the social sciences has suggested that several of the traditions of formal education are at best inefficient. Why, for example, should secondary education end at the age of 18 when the average person has finished all of his mental growth by the age of 16? In other words, the youth of 16 is as well equipped mentally at the age of 16 to

enter the more mature intellectual environment of the university as he ever will be.

Secondly, there seems little justification for segregating pupils by chronological age; if the primary purpose of schooling is to develop the student's mind, why not segregate children according to mental age? Certainly there are adequate psychological tools available to do the job of separation. Further, this would reduce the biggest drawback of the formal education system, the need to pitch the instruction on the level of the average student. Other attacks have been directed against the system of summer vacations, a hang-over from the days of a largely rural population. Many valid objections have been raised against this reform, but perhaps summer sessions comparable to the winter terms should be more widely offered to those who can take advantage of them.

Robot teachers?

Finally, there is the idea that education has suffered because teacher productivity has not kept pace with that of other workers in the society. And perhaps electronics, especially television, should be adapted to education to remedy this situation. Recent controlled tests have, in fact, satisfied most educators that TV education is equally as effective as classroom education, and certainly cheaper if used on a large scale. In fact, as one leader has observed, "The question is no longer TV or not TV. Instead, the questions are when, where, and how much TV."

But the alternatives are clear. We must (1) induce more college graduates to become teachers, (2) use the present force more efficiently, (3) deny adequate education to a substantial proportion of those who will seek it, or (4) reduce the quality of the instruction offered. No nation can follow either of the last two courses if it expects to maintain a significant position in the world.

Carl

LETTERS

(Continued from page 2)

well in all fields. The entire spectrum of values is abundantly clear in the above mentioned article, these values ranging from the acme of TECH MAN (as exemplified, evidently, by F. H. himself) through music and the theater to the epitome of inferiority, an Oxy man. On the whole, I think that Holtzman's literary efforts exhibit an attitude of most unhealthy intellectual snobbery—an attitude which is disagreeable wherever encountered, but which is especially disastrous in a scientist, who must always be prepared to accept the unacceptable.

Considering his background and experience, it is as absurd for Holtzman to discourse upon athletics as it is for the musical novice, on hearing Liszt's "Transcendental Etude No. 4," to assert that music is all discord and confusion. In general, such irresponsible harrangues, especially when they incorporate not-too-subtle attacks upon neighboring educational institutions, can only reflect discredit upon the California Tech and upon Caltech itself. Let's hope that future articles will be better informed and in better taste than some of the previous ones, and let's all get out and support our athletic teams!!

Mike Rusch

PARENTS' DAY

(Continued from page 1)

ents who are interested may attend the football game between the Caltech freshmen and the Pomona - Claremont freshmen. Since the football game will be at the same time as the tour of the campus, the parents may report either to the Athenaeum or the Athletic Fields at 2:00 p.m.

At 4 p.m. the Caltech Service League will hold a tea where the parents will have the opportunity to meet one another and discuss the things that they have seen during the day.

For those parents hardy enough to face it, dinner will be served in the Student Houses promptly at five forty-five. The menu will include roast prime ribs of beef.

BREWINS

(Continued from page 4)

but alas, it came to pass that it was only a rumor.

The Blacks

Beak understands that M. Taltwa—is on the dramatics war path again. Beak is shocked at this child's play of his.

K. Nadams is having his Bak-ersfield Blues again. It seems that he got a Dear Ken letter. Oh well, he didn't like the place anyway. Especially if she's under 10.

NEWS

(Continued from page 4)

The Defense Department under McElroy continued to worry about Sputnik and mysterious subs off the American coast. The Pentagon is supposedly considering all types of space vehicles to maintain our technological and psychological supremacy, and Nixon asked for increased defense spending rather than a tax cut.

Republican policy will now be to exploit Little Rock and play down Sputnik. Meanwhile, half of the paratroopers were withdrawn from Little Rock and responsibility for order was handed to the National Guard. Faubus continued in his silence and inactivity.

Thacher

Makes you deaf

Clod Greese is having trouble speaking up in class. Beak had always thought that it will make you mumble but until now he wasn't quite sure.

Pawdy boy makes good

D. Clipping finally forged his name into Tech's history. Beak shakes his head at such classroom antics.

Old Uncle Gordo Hughes at a recent exchange was heard to remark, "When I told her I was an Engineer she just laughed."

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Personal Interviews ON CAMPUS

OCTOBER 28

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Football game, show, mixers top calendar

Football is the highlight of this weekend's activities, as the local gridders travel to Pomona Saturday night to face Cal Poly at 8 p.m. at Pomona Catholic High School.

Caltech cheerleaders, songleaders and band will all be present, and interest in the budding Tech-Poly rivalry is expected to reach a new high.

On Friday night the men of Blacker will treat their dates to **Annie Get Your Gun** at the Philharmonic Auditorium, with Mary Martin (**South Pacific**), John Raitt (**Pajama Game**) and a galloping horse.

The remainder of the campus will be occupied with exchanges on Friday evening. Dabney's popularity at Good Samaritan Hospital has occasioned a return invitation by the nurses. Ricketts hosts ever-popular Pomona, while Fleming entertains lasses

Concert tickets now on sale

Student tickets for the Pasadena series of concerts by the Los Angeles Philharmonic Orchestra are now on sale in the bookstore. As in past years, the orchestra, under the direction of Eduard von Beinum, is to present a series of 6 concerts at the Civic Auditorium. Featured artists this year include Robert Casadesu, Yehudi Menuhin and Adolphe Frezin. The final concert of the year on April 9 will be conducted by Bruno Walter. The first concert is Nov. 20. The price of the tickets is \$6 for the season, entitling the holder to a \$9 seat.

from Westridge and San Marino High Schools. Throop's exchange with Occidental women was in the planning stage at press time.

Tournament Park will be busy Saturday, as the soccer junior varsity meets Thacher in the afternoon and the freshmen footballers tackle Pomona-Claremont in the morning. Other action includes a varsity soccer game at Riverside. All water polo meets have been canceled.

Around The Quad

Accelerated growth

A major advance in scientific forestry may be marked by Caltech experiments in which the life cycle of pine trees has been accelerated more than five-fold.

In the Earhart Plant Laboratory, seedlings of the Southern Pine, commercially the most important pulp wood in the United States, have flowered (produced cones) in a period of only two years. In the forest, this process takes the Southern Pine 12 to 15 years.

Debate team

Two freshmen and debate coach Dwight Thomas represented Caltech at a practice speech tournament at San Diego State last weekend.

Stanley Klein and Larry McCombs entered the competition, with Klein winning a certificate of excellence. Thomas announced that Tech would enter a novice debate tournament at El Camino College on Nov. 2, advising interested students to see him on any Thursday evening in room 310, Dabney Hall.

YMCA publishes list; plans lost-and-found action

The dust-covered shelves of the lost-and-found cabinet in the YMCA office, building T1, will be emptied for auction on November first. Included are:

COATS:

- plastic rain
- gray lined windbreaker
- blue windbreaker
- tan top coat
- 2 gray warm-up jackets
- blue warm-up jacket with leather sleeves
- red windbreaker
- brown suede
- blue reversible
- gray dress windbreaker

CLOTHES:

- red jacket
- Caltech sweat
- beige ladies cardigan
- light brown wool polo shirt
- umbrella, black
- ROTC cap
- two caps
- three ties
- pair gloves

BOOKS:

- History of the Modern World, Palmer
- Philosophy, An Introduction, COS

- Log Tables
- Hard Times: Dickens
- Introduction to Philosophy: Castell
- Math Tables
- French Grammar: Fraser et al
- Odyssey
- German/English Dictionary
- Analytic and Vector Mechanics: Edwards
- Ancient, Medieval and Modern History, COS
- Paradise Lost

MISC:

- two triangular rulers
- 13 slide rules
- one slide rule case
- 13 pr. glasses
- 4 pr. dark glasses
- two glass cases
- 14 mechanical pencils
- 15 ball point pens
- one pen
- Ass't car keys
- Ass't jewelry
- Ass't triangles
- long clipboard
- 3 short clipboards
- one handwarmer
- one flashlight
- bike lock
- 4 address books
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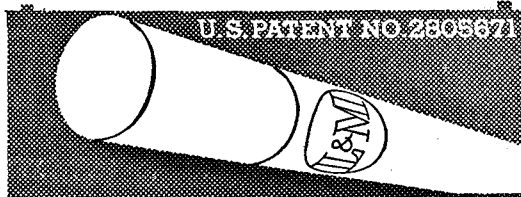
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Interhouse softball nears conclusion

Bob Emmerling sparked Throop's softballers to a 1-0 victory over Ricketts Tuesday, nearly clinching the interhouse softball championship.

Emmerling and Lou Montoya hooked in a fierce 4-inning pitching duel, but Emmerling's first-inning triple down the left field line proved to be the decisive run as the versatile fast-baller scored the game's only run.

Eight Rowdies reached base, but Emmerling's clutch pitching and superb control nipped every scoring opportunity. The Throop star completed a near-perfect day with two outstanding fielding plays.

In other games last week:

On Wednesday, October 16, in a two-and-a-half inning game, Blacker edged out Fleming by a score of 7-4. Tied up at the end of the first inning at 3-3, Blacker scored four more runs in the second while holding Fleming scoreless. The Phlegms could only turn in one run in the top of the third inning and that was the game. The difference seemed to be a few more hits for the Blacker boys and slow Fleming fielding.

Throop triumphs

Throop broke the threeway tie for first place in the Interhouse softball race on Thursday, October 17, by downing Dabney.

The favored Throop team rolled over Dabney by a score of 10-2. After a scoreless first inning, the off-campus men broke into the scoring column and stayed there while limiting the Darbs to two runs. Throoper Bob Emmerling's pitching kept the Dabney team off bal-

ance with only three hits. Throop didn't seem to have much trouble on that count, picking up twelve hits. Dabney produced four errors during the afternoon.

Ten walks

Ricketts' win over Blacker last Friday again tied the interhouse softball standings. At the end of the first week of play, Ricketts and Throop were tied for first, followed by Blacker, and with Dabney and Fleming tied for last.

Ricketts scored heavily on Blacker and took the game by 14-2. After a close first inning, the Ricketts team came back in the second inning to control the game. Blacker's two pitchers gave up ten walks between them in the 2nd inning and that told the story. The walks gave the game to Ricketts, allowing them to score 13 runs on four hits. The 17 Rowdys at bats in that big inning were more than enough to walk off with the 2 inning game.

Darbs win

The Dabney win over Fleming last Monday, October 21, raised the Darbs to fourth place and dropped Fleming to fifth in the Interhouse Softball standings.

Dabney out-scored a sluggish Fleming team by a score of 12-4. Both teams were fairly consistent in their hitting but the Dabney hit average was consistently higher. This was the telling feature in a long five inning game. The Phlegms were slow in their fielding and this gave Dabney a big edge. The Dabney pitcher played Fleming to hit and let his fielders retire the side.

Opinion AS I SEE IT

by Dick Van Kirk

This writer had the opportunity last Friday to view two of Caltech's future opponents in football, as Occidental and LaVerne College stumbled to a 0-0 tie at Patterson Field on the Tiger campus. Occidental, touted as one of the potential dark horses in the SCC championship race this season, abandoned their wing-T offense for three quarters and tried to use a single wing offense. The Tigers were singularly unimpressive in their efforts to move the ball from the single wing, and it was only in the final quarter, when they went back to their T-offense, that they were able to move effectively. I was unable to decide whether Coach Chuck Coker was honestly convinced that his club could operate better from a single wing or whether he was trying to conceal his T-plays from a group of Whittier College players, and coaches who watched the game from the stands.

This weekend Oxy meets Whittier in the first conference game for both teams, and perhaps Coker would like to catch the Poets unprepared for their wing-T offense. This is an unlikely possibility, to say the least. It didn't take much perception to realize that Oxy moved best from the T, and I feel reasonably certain that Coach Don Coryell and his Whittier Poets worry more about defending the T than the single wing.

LaVerne came into the game labeled a passing team, but the Leopards made their biggest gains of the day by rushing. Ken Colbert, LaVerne quarterback, completed 13 of 18 passes, but netted only 86 yards on his 13 completions. The LaVerne halfbacks were continually breaking away on quick opening dive plays, which may have gained their effectiveness from the odd defense which Oxy often employed different defenses, defensive man in the line directly opposite the offensive guard on each side and another directly opposite the offensive end, with a single linebacker in the big gap from guard to end. LaVerne ran easily through this defense, but when the Tigers employ different defenses, such as a goal-line defense, the LaVerne team was stopped cold. The Leopards displayed a big,

Coach Gene Rock puts basketballers in practice

Varsity basketball practice began a week ago last Monday, and already a few things are apparent. One is the new coach, Gene Rock, a standout basketball player for UCLA in '46, seems to concentrate a lot more on fundamentals and defense, something that's been lacking in the past few years. Another is that the team is greatly bolstered by two Oxy transfer students: John Stene, a junior, and Bob Emmerling, a senior, who came to Tech last year and promptly set a new mile run record. Also, Sonny Nelson is back in playing shape and should see plenty of activity this year. Another is that where last year there were approximately four good men trying for the first string, this year there are ten.

Dave Blakemore, up from the frosh team, is performing well, and could press the more experienced players for their positions. Others who are out are Ray Magdaleno, Jack Bass, Dave Singmaster, Ron Arps, and Dave Meese. After soccer and football are over, last year's lettermen Dick Van Kirk, Glen Converse, and Fred Newman will join the team.

Due to lack of players, practice is now being held only three times a week. The team lacks height, especially since some of last year's players have not yet joined the team. The more people who show up for practice, the better the team will be because the team will be able to practice oftener. If anyone is at all interested, practice is at 4:15, Monday, Wednesday, and Friday.

hard-charging line, but their backs looked far from outstanding.

Both teams appeared to be playing below-par ball, and if Caltech runs into one of these teams on such a night the Beavers could easily walk away with the game. Unfortunately Caltech also has a habit of not playing up to its potential, and on days like that the Beavers have trouble with almost anything in short pants.

* * *

Coach Ed Preisler's frosh footballers, after suffering a 50-12 defeat at the hands of the Oxy frosh last Saturday, host Pomona-Claremont day after tomorrow at 10:00 a.m. Be there early and you may get a choice seat on the fifty yard line. Anyway, try to be there. Who knows, maybe some of the frosh athletes are complete egotists!

Soccer team ties Pomona for upset

Among the few events of last weekend was a varsity soccer game between Caltech and Pomona. It was Caltech's first game of the season. The score was 2-2; Tech won a moral victory.

Caltech's goals were made by B. F. Grey, a new member of the team who is a research worker. The first goal was scored on a pass from Dick Dietz; the second was made on a free kick awarded when Pomona touched the ball. When the second goal was scored the Pomona goalie didn't even see the ball, because a quick thinking Luis Baez was standing in front of him.

In general the team has a lot of talent but needs conditioning; some men are back from last year and several new graduates have joined.

Harriers start season brightly

According to Reed Saunders, last year's cross country team captain, this year's chances seem bright. Three returning lettermen, Saunders, Jerry Hansen and Mike Rusch, are expected to lead the team. Up from the Frosh are Tom Keil and Jon Uncapher, who along with trackman Wes Shanks and service returnee Loren Linstrom, will provide supporting depth. The first meet is the 28th with Paz Naz. November 1 is the first conference meet with Redlands.

HELP!
Do you have dreams of unbounded ambition? Do you yearn for fame and glory? Can you write pages of undying prose? Can you write? If you fill any of the above qualifications, the sports staff needs you. If you are at all interested in sports (and who at Tech isn't?) see either Steve Emanuel, F 51 or Dave Singmaster, R 28 and become a bona fide sports writer. Better hurry though; our staff is almost full.

The following changes have been made in the water polo schedule for this fall due to the flu epidemic.
Santa Monica at Caltech—cancelled
L.A. State rescheduled to Nov. 20, 3:30, at Caltech
Orange Coast at Caltech—cancelled
Pomona-Claremont rescheduled to Oct. 30, at Pomona
L. B. State, Nov. 19, 4:00 at Caltech.

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FOR CAREER EMPLOYMENT
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DuBridge discusses future financing of higher education

If American parents want college education for their children as much as they want television sets and automobiles, they'll have to foot the bill, either by personal contributions or heavier taxes.

That is the gist of what Dr. L. A. DuBridge, Caltech President, said last week to some 400 trustees of 19 Southern California colleges and universities.

He reminded his audience that

the Russians' recent success with missiles and the satellite stemmed from the fact that their government may at will mobilize its best brains to the service of the state. "Our best brains," he said, "are free for many pursuits. We prefer a free society, but an important part of keeping it free is to feed a fraction of our great wealth back into a first class educational system."

"Unfortunately," he said, "the

American people are not used to having the student and his parents pay directly the full cost of higher education. They are used to having it provided practically 'free' at the state institutions and for from one-third to two-thirds of the actual cost at private institutions. But now, as we try to double the capacity of our educational plant, we are beginning to realize how much it costs and that somehow the bill must be paid."

Billion a year

Dr. DuBridge estimated that it would cost the nation a billion dollars a year, for the next 15 years, just to build the necessary

classrooms, laboratories and dormitories, and that annual operating costs for higher education would rise from 3 billion dollars today to 6 or 8 billion dollars in 1972. He said that there were only three ways such expenses could be met: 1) increased taxes, 2) increased tuition charges, and 3) personal gifts.

He pointed out that a sizable increase in tuition charges, often recommended today, would not only be unfair to all but the rich, it would also automatically drive more and more students to state colleges and universities.

Taxpayer gets stuck

"So Mr. Taxpayer is going to get stuck anyway. He can take his choice whether voluntarily to direct part of his funds to the private institutions or let the state tax away an even larger amount for expansion of state institutions."

Too many people?

The rapid growth in college enrollments, Dr. DuBridge said, has raised a "seething question in America." Are we encouraging too many young people to enter college?

"If we complain of large enrollments solely on the basis of financial costs, we are on pretty weak ground. Less than 75 cents out of every \$100 of Gross National Product is spent on higher education. That will hardly bankrupt us.

"If we fear that standards of achievement will be—or have been—lowered to accommodate greater numbers, we are on

firmer footing. The great danger to the coming generation is that for lack of facilities, and more especially for lack of competent college teachers, the quality of higher education will fall rapidly as the total numbers rise."

Varying standards

Neither the denial of entrance nor the lowering of standards is necessary, Dr. DuBridge asserted. He said the solution to the problem lies in the fact that educational standards vary widely from one institution to another.

"Through the diversity of our institutions, we can reserve the high-cost, high-quality institutions for the very able students and provide more economical opportunities for the less able or less ambitious."

Control over the total enrollment, he said, could be exercised at the state level, with state institutions imposing standards of admission to keep enrollments within predetermined bounds.

Dr. DuBridge concluded: "In all discussions of the future of higher education, it is important that we keep in mind the essential contribution that higher education in America makes to national welfare and security. . . It is not our idea of democracy to educate a limited number of people and make all of them work for the state. We want to educate many people so there will be enough to work for national welfare as well as for national security."

FLU EPIDEMIC

(Continued from page 1)

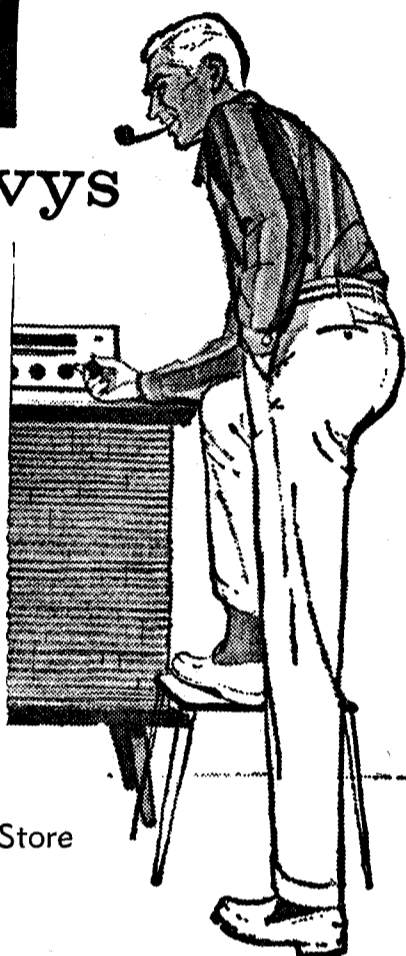
To date approximately 150 Tech undergraduates have been ill enough to be listed on the health center reports as officially suffering from some degree of upper respiratory infection. These range from just a severe cold to the flu itself. During the peak days, the Center found itself too occupied with ailing students to devote much time to keeping accurate records and publishing detailed reports.

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