

Netters Trounce Loyola 5-3; St. Barbara Here

Varsity tennis players will engage Santa Barbara for the second practice match of the season Saturday, Feb. 17, at 1:30 p.m. in Tournament Park.

A close, well-played practice match with Loyola gave Tech's tennis men an outlook for a promising season. Matches were played on Atheneum and PCC courts with the following outcome:

- Singles: Joe Diehl (L) def. Palmer Smith (C), 6-4, 4-6, 6-4.
- Rodger Baier (C) def. Gil Amelio (L), 6-4, 6-2.
- Dick Bush (L) def. Jim LaFleur (C), 6-3, 9-7.
- Ed Eyer (C) def. Tom McNulty (L), 4-6, 6-4, 6-4.
- Tom Emery (C) def. Ed Devine (L), 8-6, 6-2.
- Doubles: Smith-Martin (C) def. Diehl-Bush (L), 6-4, 4-6, 6-1.
- Amelio-McNulty (L) def. Baier-LaFleur (C), 6-2, 6-3.
- Eyer/Emery (C) def. Devine-Price (L), 6-3, 6-1.

Top Doubles

The climax match was the first doubles payoff with Tech's Palmer Smith and Jack Martin defeating Diehl-Bush of Loyola. Both coaches admired the teamwork and strategy employed by the Smith-Martin combination. This coalition should prove to be a strong contestant for the top doubles team of the conference.

Ed Eyer proved his competitive ability with a spirit of determination which was too much for his opponent.

BUTTIN' IN

—by Butler

The Beaver basketball team was close but there was no cigar as the Sagehens squeaked out a narrow 43-41 victory. The difference between defeat and victory was told at the foul line. The Engineers made an almost unbelievably poor percentage of their free throws; getting only nine for twenty-two.

Probably the most gratifying observation made about the game was that Shy's five did not crack when they found themselves ten points behind with minutes to go. During the current season the team has habitually fallen apart when things got a little tough. But Saturday night the Beavers showed plenty of spunk while whittling down the score difference.

Al Sereno was the man that sparked the Engineers' attack. His clever passing and brilliant team work set up score after score. And now that Al has been watching the fouling, he should play considerably more minutes in the games to come.

IH Trophy

Throop Club's victory in Interhouse track virtually clinched

(Continued on Page 4)

Beaver Sports

Throop Takes IH Swimming IH Track Meet Practice, PCC

While debate still rages about the outcome of a hotly contested 880-yard relay, there was no question but that Throop took the Interhouse meet last Saturday. Throop wound up with 52 points for an easy win over runner-up Fleming with 42 points.

Outstanding mark was Bruce Munn's 100 time of 10.7s. Munn, a Dabney man, also made it a double win in the 220. Gil Kitching jumped a very creditable 20 ft. in the broad jump, took the 120-yard low hurdles in 14.7s., tied for third in the high jump, and ran the relay. Ray Heacock took the discus with 109 ft. and the shot with 39 ft. 4 in., as well as third in the broad jump, to win top scoring honors with 12 points.

The 880-yard relay was a beaut, with Dabney winning a clear first, and a close and still-argued finish between Perpall of Fleming and Kitching of Throop. The finish judges finally awarded

(Continued on Page 4)

As a result of the Interhouse track meet Throop Club has increased its lead to 22½ points in the race for the Interhouse Trophy. Fleming House which has held the trophy for the past 11 years is in fourth place at the present time.

The scores in the meet were: Throop, 52; Fleming, 42; Dabney, 33; Blacker, 24; and Ricketts, 3. The Interhouse swimming meet will be held Thursday, March 8, with time trials Tuesday, March 6. Coach Don Garman, the Varsity swimming coach, will assist any men requesting help. The PCC pool is available every afternoon for practice starting Monday.

Interhouse Trophy Standings

Throop	88
Blacker	67½
Dabney	66½
Fleming	62½
Ricketts	42½

Poets Edge Beavers 43-41; Bulldogs at PCC

Sereno Shines on Offensive Against Pomona; Team Gunning for Redlands

Next Saturday night at 7:30 p.m. the Caltech five takes the floor against the Redlands Bulldogs in the first half of a big double-header at PCC. The Beavers will be out to avenge an earlier 49-34 loss to the Bulldogs, who now have a 3-2 conference record.

Close to Win

For the greater part of last Saturday's game with Pomona it looked as if Caltech would record its first conference win. However, Lady Luck would not have it that way, for the Beavers were barely nosed out, 41-43.

Frosh Sports Roundup

by Nick Nicholson

With the season half over, Tech's frosh basketballers have a 2-3 win-loss conference record. Last Saturday we saw them upset Pomona, 67-59, for their second league victory. A change in the line-up, giving Tech three tall men up front, seemed to do the trick.

Johnson High Man

With Curt Johnson starting at forward and Plambeck back at guard, the quintet went to town. Johnson's pivot shots gave him 28 points, high for the evening, while Anson maintained his average with 26 digits. Smith grabbed off eight points while doing some nice defense work, and Watkins got three before fouling out. Plambeck finished up the scoring with two points.

Tech was in serious trouble only at the end of the half, when Pomona led, 34-29. Seven minutes later the Beaverlets grabbed the lead and widened it steadily till the end. The second half saw three of Pomona's starting five fou out in a five-minute stretch.

After Pomona had connected for four points at the start of the game, guard Dick Libbey, making his first appearance since his injury in the Oxy game, dropped one through from 10 feet out. Only seconds later the Beavers stole the ball, and forward Norm Gray tied the score. A subsequent free throw by Al Sereno put the Beavers ahead. Later, Michaelson hit for two, and Butler hooked one in.

Tech Leads

This caused Pomona to take him out with the score reading 9-5, Tech's favor. Things looked good for a while.

Then with three minutes left in the half, Pomona connected on two long shots and a couple of free throws; so after Butler's tip-in, the half ended with Pomona leading, 21-20.

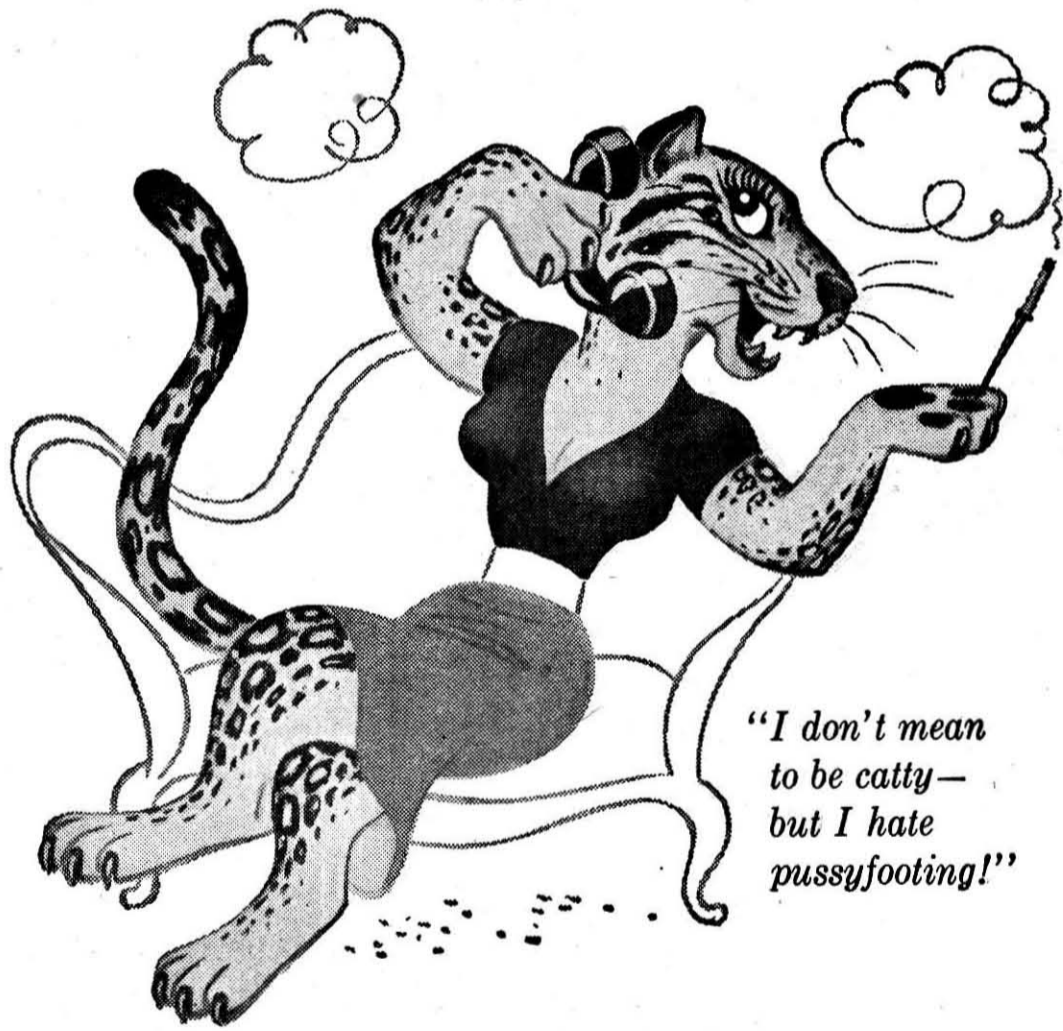
After intermission the boys were fired up more than ever. Following the tip-off a fast-break was started with Sereno passing off to Butler, who put the Beavers out in front again. Three minutes later the score read Caltech 26, Pomona 24. But there came a partial collapse. Pomona put on a splurge before the Techmen had recovered, they were trailing by five points.

Three fast-breaks followed, gaining six points for the Beavers.

(Continued on Page 4)

Campus Interviews on Cigarette Tests

Number 13...THE OCELOT



Our feline friend may not be from Missouri, but she sure

likes to be shown! She saw right through those thin, quick-trick, cigarette tests and realized you couldn't fairly judge a cigarette's mildness with a mere one puff or a swift sniff. Right on the spot, she decided they weren't

for her! Sophisticated, but shrewd, she knew what she wanted.

The Sensible Test . . . the 30-Day Camel Mildness Test,

which simply asks you to try Camels as your steady smoke—on a pack after pack, day after day basis.

No snap judgments needed. After you've enjoyed Camels—

and only Camels—for 30 days in your "T-Zone"

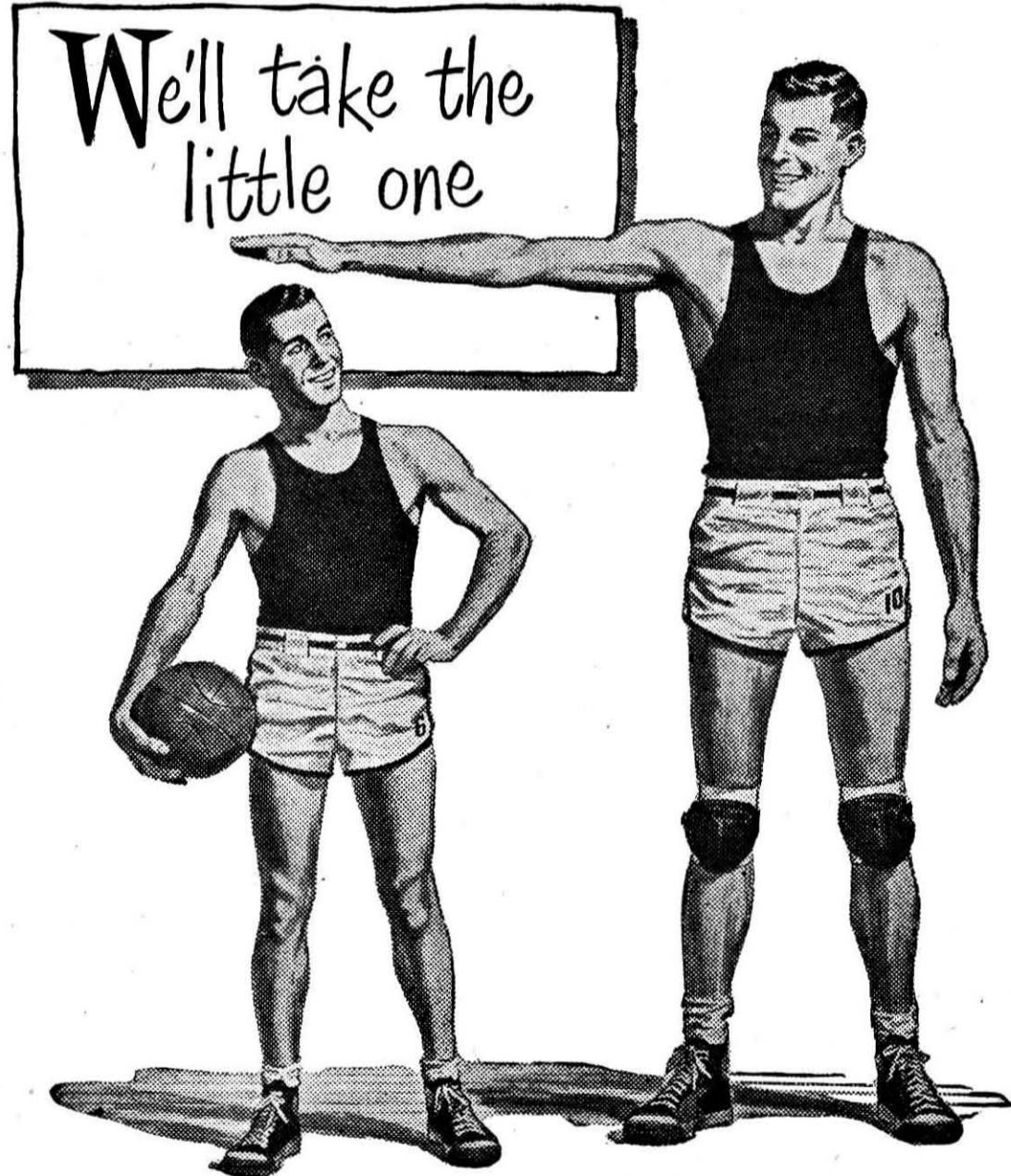
(T for Throat, T for Taste), we believe you'll know why . . .



More People Smoke Camels than any other cigarette!

**WHEN YOU ARE HUNGRY
WHEN YOU ARE THIRSTY
or
WHEN YOU JUST
NEED RELAXATION
IT'S THE
SKIP INN**
Beer - Plate Lunches
1352 E. WALNUT
Open Till 2 A.M.

**PASADENA BOWLING
COURTS**
970 East Colorado
Headquarters of Caltech Bowlers
Open 11 a.m. to 1 a.m. SY. 3-1341
Special Student Rate before 6 P.M.
except Saturday, Sunday, and Holidays
20c Per Line



THEY'RE both good basketball players. But if we were to judge them the way we judge telephone equipment, we'd take the small one.

You see, telephone equipment occupies valuable space, uses costly materials. Paring down its size helps keep down the cost of telephone service.

Take voice amplifiers, for example. Telephone engineers put the squeeze

on size, came up with a new small type. When 600 of these new amplifiers are mounted on a frame two feet wide and eleven feet high, they do a job which once required a roomful of equipment. Size was cut—but not performance!

This is one of many cases where the Bell System has made big things small to help keep the cost of telephone service low.

BELL TELEPHONE SYSTEM



Film Will Depict Mission of Christ

Catech students will have the opportunity to see a new film entitled "Upon This Rock" in Culbertson on Sunday, Feb. 25, at 8:00 p.m.

This is a Technicolor film on the life of Christ as seen through the eyes of the Apostle Peter. "Upon This Rock" is somewhat unique among religious pictures in that the best modern cinema techniques are used in the production of it, according to Newman Club President Tom Janssens.

In the rapid development of this divine narrative retold from Gospel stories, the audience is carried in spirit from Bethlehem and Nazareth to the Mount of Olives and Calvary.

The Newman Club is sponsoring the full-length movie on the life of Christ, and they will be obliged to charge 50 cents a ticket to meet rental expenses.

TECH REPORTER GETS DOPE

(Continued from Page 1) Where Our Money Goes In order to see just where your room and board dollar goes, Mr. Green has provided the Tech with the summary of accounts listed above, giving the actual first term statement and his estimated for the second two terms. As you can see, the houses are definitely self-sufficient, but little or no nonessential expense is included.

We're at a Loss From budget outlined above we see that, with present services, the houses are losing money. The reasons for the loss are: 1) Increased food costs and wage rates, and 2) 20 vacancies in the houses.

It is rather astounding to note that we are paying more for employees than for food, but unfortunately the houses cannot run without sufficient employees and supervision. "Provision for Repairs" is an annual percentage saved each year for such long-term repairs as painting the houses (two were painted last summer), and furniture, linen, and kitchen replacements, all necessary to prevent the houses from becoming rundown. It is likely that the actual loss will

not be as great as in this estimate because of a) less dropouts than anticipated and b) the cut in bedmaking services.

To justify his statement that costs had increased, Mr. Green cited the recent 13-point rise in the government food index, and an average 4% wage boost in November.

Complaints Were Aired

At a meeting held by Mr. Tanham and Mr. Green at Arden House to discuss the rates situation, and (in response to a that, while it was impossible to number of complaints regarding the food), Mr. Tanham stated improve the red meat situation due to high costs, he would have a ballot in the near future to determine if any very unpopular meals such as chop suey should be eliminated.

In response to complaints regarding the buildings and grounds monopoly, Mr. Green said the houses were charged only for one part-time gardener for work in the courts, and it was his opinion "that B & G did a more conscientious job repairing damage than might an outside contractor." Mr. Green has offered, and the Interhouse Committee has accepted, a plan whereby the houses may install their own windowpanes, thus saving money, providing it was done promptly and correctly.

Beefs?

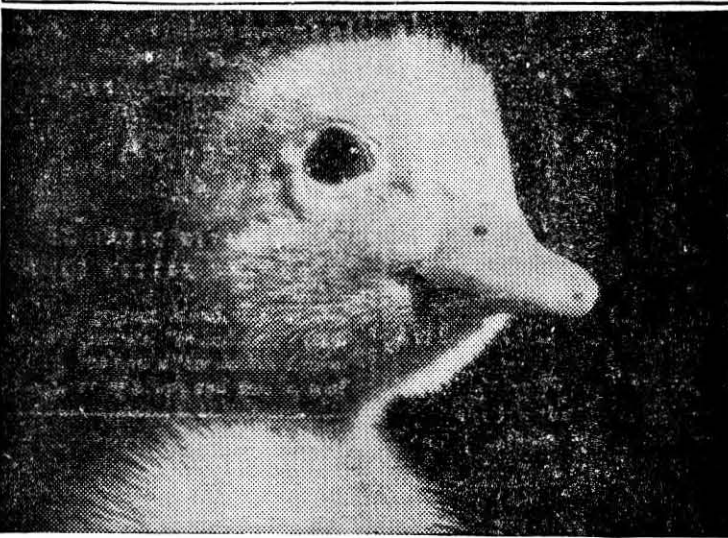
Any complaints regarding food, rates, B & G workers, or excessive damage charges should be taken directly to George Tanham, who as Master of the Houses, is available and willing to discuss any such complaint, and to take such action as seems advisable. However, no complaints should be taken directly to the employees or to the manager.

Your Nearest Camera Shop ALVIN'S PHOTO SHOP Everything for the Photographer Featuring VARIGAM The Variable Contrast Paper 914 East California

CAMPUS BARBER SHOP In Old Dorm Also Agent for LAUNDRY & DRY CLEANING

Voget & Cathey MEN'S WEAR 459 East Colorado, Pasadena

J. Paul Sheedy* Switched to Wildroot Cream-Oil Because He Flunked The Finger-Nail Test



POOR Paul was having a fowl time because his down was up. All the chicks made wise quacks about his upswept hairdo until his shellmate suggested he duck over to the drugstore. "Waddle I do?" he asked. "Get Wildroot Cream-Oil!" the druggist answered. "Non-alcoholic. Made with soothing lanolin. Grooms your hair neatly and naturally without that plastered-down look. Removes ugly ducklings—I mean ugly dandruff! Helps pass the fingernail test!" Now he's engaged—he's lovely—he uses ponds—to swim in! (Isn't he decoy one?) So water you waiting for? Get a tube or bottle of Wildroot Cream-Oil Hair Tonic at any drug or toilet goods counter today. Ask your barber for professional applications. And tell all your webfooted friends it's eggactly what the ductor ordered!

* of 327 Burroughs Dr., Snyder, N. Y. Wildroot Company, Inc., Buffalo 11, N. Y.



BILLION ELECTRON VOLTS

(Continued from Page 1) a short time ago. The working pressure in the chamber will be the order of 10-5 mm of mercury—something not easy to accomplish in a large cavity.

The machine is expected to be in operation sometime this year at the 500 million electron volt level. This phase of the operation will last for perhaps a year to iron out the "bugs" before proceeding to operation at the 1 to 1.5 billion volt level. It is expected that the lower energy problems will present the most difficulties.

Power Room in Basement

A room has been prepared for the installation of the power supply which is being developed by General Electric. The power supply will be installed within the next few months. Other units of the machine are being assembled and tested. These include the radio-frequency cavity and the electron gun. The vacuum pumps are assembled on the main floor of the lab at present, but will be moved to the basement later.

Dr. R. V. Langmuir, who is in charge of the project, stated, "We are slightly behind schedule, but that is to be expected." He was pleased with the progress that has been made since the project was started last year. Dr. Langmuir worked on the 70 million electron volt synchrotron built by General Electric Co.

AEC, ONR Responsible The machine was developed

WHY PAY MORE! LONG PLAYING RECORDS (33 1/3 R.P.M.) 30% OFF Free Complete Catalogue and Price List. Write to: RECORD HAVEN, INC. (Dept. C) 520 West 48th Street New York, 19, N. Y.

through a joint survey by the Office of Naval Research and the Atomic Energy Commission, who are providing most of the million dollars required for construction. The general design was suggested by Dr. H. R. Crane, now a research associate at Caltech. The machine itself was obtained from Berkeley where it was originally a quarter scale model for a large bevatron now being constructed there. The bevatron is a proton accelerator, but Caltech is going to use this machine as an electron accelerator.

By using the synchrotron principle of phase stability, electron and X-ray energies up to 1.5 billion electron volts may be produced. Electrons will be injected into the "race-track" at energy of about 1.5 million electron volts by a special accelerator, or "gun." At this energy level, the electrons will have a velocity of about 0.966 times the velocity of light. With such high velocity, the electrons can gain appreciable energy only by increasing their masses, a relativistic effect.

How It Works

Upon being injected into the vacuum chamber, the electrons will be forced around into an orbit of essentially constant radius by the action of the magnetic field produced by the huge magnet which surrounds the chamber. In this case the radius will be about 138 inches. Since the radius and the velocity of the electrons are to remain constant, the angular velocity must

BUTTIN' IN

(Continued from Page 3) the IH trophy for that organization. No doubt heads will roll in Fleming as zealous alumni try to find out what happened to Fleming's "perpetual" trophy. Of course, the boys from the Red machine will toss this prediction out the window as pure poppy cock. But men, I got this one figured. Last place Ricketts holds the key the well known skill of the Rowdy volleyball team will stave off any bid to overcome the off-campus club's lead.

also remain constant.

It can be shown that if the magnetic field is increased in magnitude, more energy must be added to the electrons to keep them at that constant radius and angular velocity. This is accomplished by having the particles pass through a gap across which a radio-frequency of about ten megacycles is produced at such a time that energy is picked up from the electric field.

X-Rays Produced

When the electrons have reached the desired energy, they are allowed to strike a tungsten target from which X-rays at the 1.5 billion electron volt level are radiated. These X-rays, not the electrons themselves, as in a cyclotron, pass through a hollow evacuated tube into the target being bombarded.

It is hoped that this machine will be able to produce mesons, which seem to hold the secret of the "nuclear glue" that makes atoms what they are.

POETS EDGE BEAVERS

(Continued from Page 3) vers. With twenty seconds to play, Gray made the score Pomona 43, Caltech 41. The gun went off, and that was all.

Sereno Hot

As usual, Butler, who is third in conference scoring, led the Beavers with 14 points. Besides playing an outstanding game, Al Sereno's nine points were enough to make him runner-up to Butler. Lineups:

Table with 2 columns: Pomona (43) and Caltech (41). Lists players and scores for both teams.

THROOP TAKES IH MEET

(Continued from Page 3) ed it to Fleming in spite of loud but obviously mistaken claims to the contrary by the timers.

Final results were:

Table with 2 columns: Throop 52 and Caltech 41. Lists various events and winners for both teams.

Dino's NEAREST THING TO SAN FRANCISCAN ITALIAN FOOD AT ITS BEST! open daily 4:30 p. m. to 1 a. m. 2055 East Colorado SYcamore 2-0657 PIZZA - ANTIPASTO - RAVIOLI Take Some Home!

Be Happy- Go Lucky!

If Shakespeare could but live today, He'd really have a thrill, Cause Lucky Strike would surely be The right smoke for "Old Bill"! Anne Garvey Univ. of Conn.

ENJOY YOUR CIGARETTE!... If you're not happy with your present brand (and a 38-city survey shows that millions are not), smoke Luckies! You'll get the happy blending of perfect mildness and rich taste that fine tobacco—and only fine tobacco—can give you. Remember, Lucky Strike means fine tobacco. So get complete smoking enjoyment. Be Happy—Go Lucky today!

LS./M.F.T.-Lucky Strike Means Fine Tobacco

COPR., THE AMERICAN TOBACCO COMPANY

I love you 'cause you do my math And let me drive your car, But those Lucky Strikes you buy for me I love the best by far! Alice Oman Wayne University



Texas miners, grab your picks, As thru those hills we hike; And whether we find gold or not, We'll have a Lucky Strike. Glen Furr Texas Western College

