

Member, Associated Collegiate Press

Official student publication of Illinois Institute of Technology, 3300 Federal Street, Chicago, Illinois. Published weekly during the college year. Represented for national advertising by National Advertising Service, Inc., college publishers representatives, 420 Madison Ave., New York, N. Y., Chicago, Boston, Los Angeles, San Francisco. Entered as second class matter October 10, 1940, at the post office at Chicago, Illinois, under the Act of March 3, 1879. Subscription rate 1.00 per term.

MANAGING BOARD

Editor..... HAROLD BURKART
Business Manager..... HERMAN NELSON
Managing Editor..... Burton Fried
Lewis Managing Editor..... Jones Korn
Sports Editor..... James Oldshue
Feature Editor..... Sidney Baker

STAFF

Armour Assignment Editor..... Robert Misch
Lewis Assignment Editor..... Shirley Evenstein
Navy Editor..... Ramon Olson
Exchange Editor..... Alan Grant
Photo Editor..... Gedaliah Katz
Lewis Editor..... Stanley Sourelis

Copy, Rewrite and Headline Editors

Jacob Dumelle, Thomas Kilgariff, Robert Negele and Bertram Pearl
Advertising Manager..... Walter Grengg
Armour Office Manager..... Marvin Quateman
Assistant Office Manager..... Paul Goldsmith
Lewis Office Manager..... James Drain

Cartoonists

Ronald Lind and Roy Boedeker

Typists

Dorothy Jacob, Helen Delich and Deloris Johnson

Faculty Adviser..... Paul O. Ridings
Faculty Financial Advisor..... Raymond J. Spaeth

Honor Without Meaning

Approximately fifty percent of the faculty find that the Honor System has not been working in a satisfactory manner. This was determined from the faculty questionnaires distributed by the June class last semester, the results of which are now compiled.

Their beliefs were no doubt strengthened last month during the week of final examinations. Mass cheating was known to exist in the physics final. Students have reported to the editor of this paper cheating in many of the other exams. These students, however, refuse to report these incidents to the honor board.

In one laboratory, it has been charged, that the reports handed in by some students have been stolen from the instructor's desk, a new cover put on the report, and then have been turned in under a new name. The theft, not limited to one case, forced the instructor to disregard the reports in computing grades.

Action such as this on the part of men who will soon ask to be accepted as members of a profession or as officers of the United States Navy is incomprehensible. Such action on the part of students who voted for the honor system is despicable.

There is no doubt that a great deal of this will be and has been brought to the attention of the Honor Board. There is also no doubt that the board will dispose of the cases that come before it in a just manner. If punitive measures must be meted out in order to carry out a system of the students' own choosing, the members of the Honor Board, who are also students, will comply.

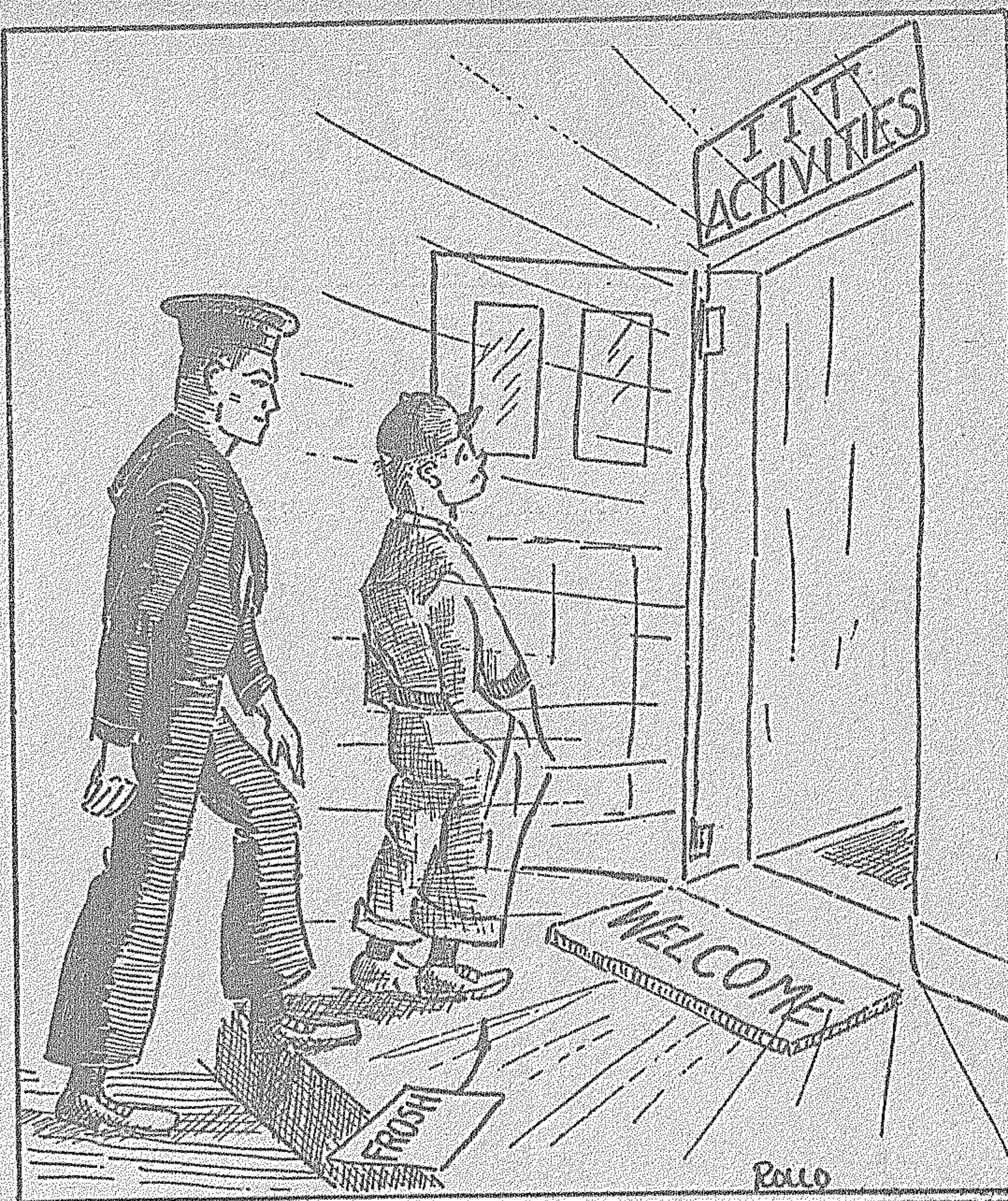
Those who will not recognize the Honor System are not wanted in this institution by the members of their future profession, or by the navy. Such persons should not be allowed a place on the school's deferment quota. Naval students in this category are potential blemishes on the record of the navy and as such should be removed from school.

If the Honor System is to exist on this campus, and the great majority of students are determined that it shall exist, it is the duty of the students to maintain it. This maintenance goes further than the refusal to accept or give aid during an examination. The board has stated that if someone is seen cheating, he should be told, in some manner, that he has been seen and should desist. If he persists, a report should be made to the board.

Obviously it is the lack of compliance with the latter part of the above statement which has caused the faculty to find fault with the system. There are some individuals in every institution who will not adhere to the rules. It is the duty of the honest students to report infractions so that such persons may be weeded out of IIT Society.

HAROLD BURKART

The Welcome Mat Is Out



Research Reports—

Fiber Structures Subject of X-Ray Diffraction Research

(Editor's note: This column will present each week a brief report of the various research projects being carried on at IIT. Since Technology News is the student newspaper of a technical school, these articles will be of a more technical nature than would be possible in an ordinary newspaper, but they will nevertheless be written in such a manner as to be accessible to the majority of the student body.)

X-ray diffraction is among the methods used to find out how the molecules are arranged in a substance. Many questions of structure have been answered in this way, and it will probably continue to be a powerful aid in the future.

One of its applications concerns the so-called "crystalline" structure of natural fibers—the familiar cotton, wool, silk, etc., as well as synthetic fibers such as rayon and nylon. Research of this sort has for some time interested Dr. Edward Bicek, chemistry instructor at IIT, and he is currently investigating it, using an X-ray diffraction unit which he constructed here.

Now the nature of X-ray diffraction is not difficult to understand. A sample of the substance to be examined is exposed to a narrow beam of X-rays. The rays are "scattered" by the substance and then impinge on a photographic plate.

Suppose that the substance being examined is one which has a crystalline structure—common table salt, sodium chloride, for example. In this case, it is found that the X-rays are "scattered" in a certain definite manner upon passing through the salt, so that they produce a regular, sharply defined arrangement of spots on the photographic plate. From this scattering pattern it is possible to obtain information concerning the manner in which the sodium and chloride ions are arranged in the salt; e.g., the distance between adjacent layers of molecules in the salt.

If on the other hand, the material

is wholly amorphous—that is, without any regular, crystalline structure—no such effect will be produced. The rays will blacken the plate in a more or less uniform manner, and there will be none of the sharp spots which characterize crystal substances.

This, then, is also a way of determining to what extent the structure of a substance is, or is not, crystalline. Dr. Bicek applies it particularly to high polymers—compounds in which the molecules are several thousand times larger than those of ordinary substances.

In fibers such as cotton, wool, silk, etc., these polymers take the form of long molecular chains. It is thought that these are lined up approximately parallel to one another, and that for small regions are so regularly arranged that they may be considered "crystalline".

Dr. Bicek plans to investigate this regularity using X-ray diffraction methods. Such data affords, at present, the nearest thing to having an actual picture of the atomic and molecular arrangements. At present there are many unanswered questions concerning the structure of these fibers.

SUCH IS LIFE

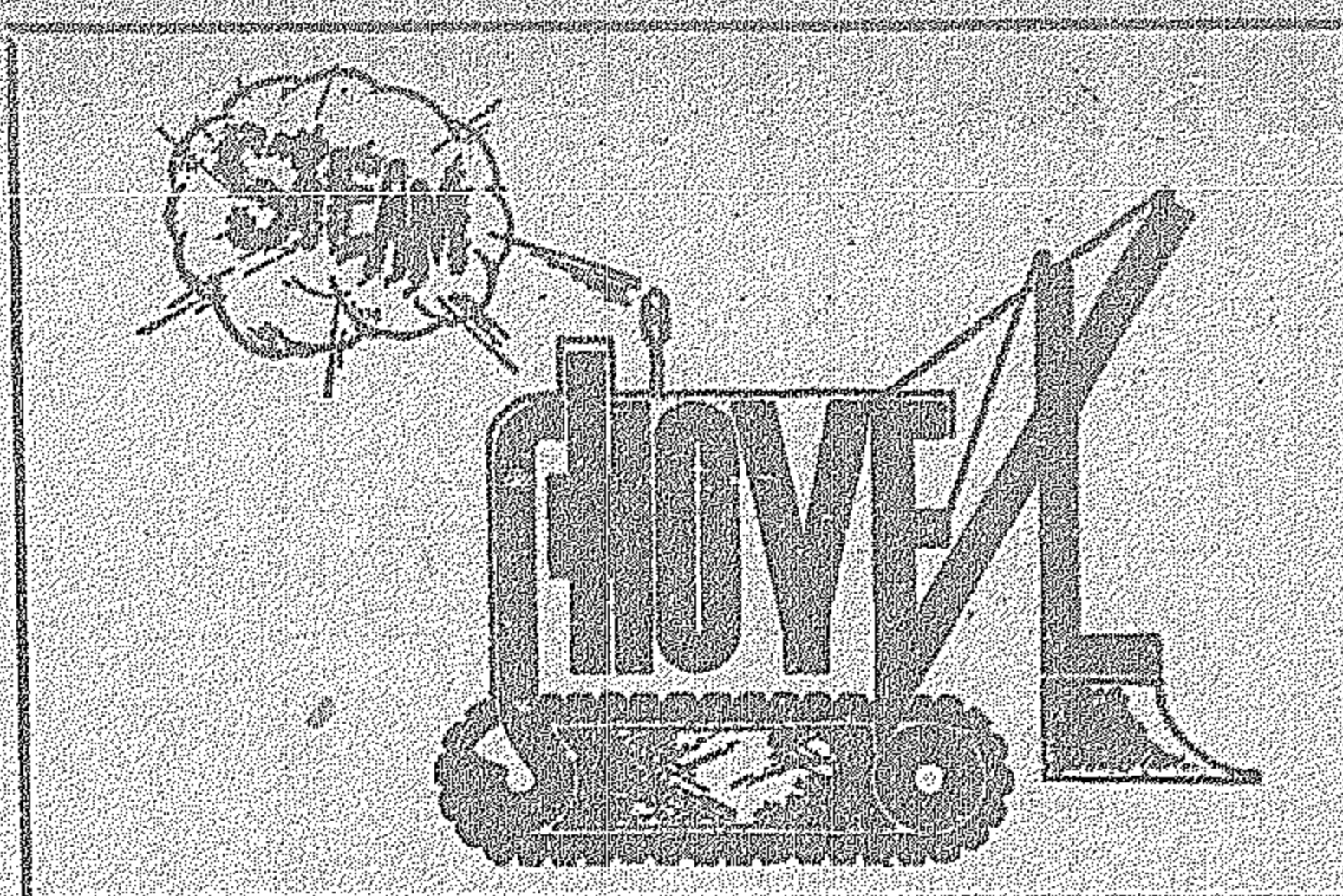
To one interested in the study of that member of the human family known as a college student, the beginning of a term is one of the best times to view this creature. The interested person should collect a bevy of chorus girls as lures. A devotee of the subject made the following observations at one college.

First came a senior who, as he saw the females, ran his tongue over his lips, emitted a low moan, turned glassy-eyed and sank to the ground. This subject, being more dead than alive, was of little use to our observer so stepping over his prone form he passed on.

From around the corner of a build-

ing came a series of howls similar to that of a wolf pack in full cry and several juniors and sophomores descended on our little group and left our hunter lying helpless on the ground. This is the college student in his prime but we have no data on them as our observer was too helpless at the time and he lost his notebook and pencil.

Finally our informer ran across the last species of the college student, a freshman. This phenomenon approaching the bait, said, "Can you tell me the way to Room 13?" Then looking up he said, "—Gulp, a girl," and fainted dead away. Well?—



After a bit of a breathing spell we now knuckle down to those lads who have those unfortunate experiences of life, so it says here.

Wonder who established in the minds of the bystanders of the Junior Stag why anyone should yell or scream "Kill the mug" when the plug of the projection machine was pulled in the middle of a dull? and uninteresting? picture. Among many, Bill Krone was seen to be open mouthed and wide eyed. Does anyone wonder why? Maybe they are students of visual education.

From the looks of the situation it seems that the lads at the Senior Stag were all in the upper brackets in the income tax this year. Not only was the game financially exclusive but it was operated in the atmosphere of the vast space behind a piano. Innocent bystanders believed that termites had invaded the piano.

Late last semester Dr. M. H. Heins, mathematics instructor, became a member of the C.P.P.C. (Cigarless Proud Papas Club), when his wife gave birth to a baby boy. Heins was so excited that day, that he came to school cigarless. In order to make up for this neglect, he dismissed his class.

Two former B.T.O.'s, namely Alan Grant and Harley Flanders, extend a challenge for any B.T.O. to test his prowess. The pretty auburn haired lass, who has brought misery to these two Armourites can be reached at Sag. 9325. Just ask for Cecyle and it is guaranteed that in two minutes you'll be an S.T.O. All right now fellows here's your chance, grab that phone.

Recent winds have seen the addition of several new operators notably Frank Kutcheck and Wally Grengg to the visual education staff. Could the reason for this lie in the arrival of visual education's secretary, blonde Betty Soule.

For the benefit of new readers to the "Steam Shovel", the editor thinks it is fitting to point out and classify the various honorary titles prevalent on the campus:

1. Heading the list is the BTO or big time operator, who never takes "no" for an answer.
Example: George Schober a/s.
2. Then comes the MTO or mean time operator, who sometimes takes "no" for an answer.
Example: Tom Kilgariff.
3. Next on the list comes the STO or small time operator, who will accept "no" for an answer.
Example: Harley Flanders
4. Lastly there is the SSTO or smallest small time operator. This type becomes the future hen-pecked husband.
Example: Bob Havlick

In a class by himself is the BMOTC or the big man on the campus, who gives the impression (to the frosh) of the professor, genius, and what have you. He is not necessarily a BTO.

Example: Burt Fried.

A/S Doug Snyder seems to have liked Kalamazoo, Michigan quite a bit as after the swimming meet he took the last train bound home (meaning IIT). By the way, what was that hotel that he visited to lay down for a while after an evening of inebriation with his partner in crime, and why leave after just being in for a minute. Must have been bad service, eh fellows?

Our boy Backus is really turning out to be the South Side's biggest wolf. Lately it was heard "What a dish, what a chassis whew" from this gay Cassanova. That description, my fine friends, is of Alyce Taylor, a Morgan Street belle, who must be quite the thing. So determined was he to whip up a deal without competition, that he was seen to be slyly slipping knockout drops in her escort's beer. But to his dismay he found that the drops had lost their potency. What a system?

Gus Barnes is having his troubles keeping off the company of many of the girls at Lewis. It appears that he is not trying very hard to get rid of Selma Josephs. This may explain the red marks on those hankies in Gus's weekly laundry.

The latest weekend diversion for the "eager beavers" of Quarters #2 and #4 is indoor skating. According to the experts, the system is to skate around in twos or threes, (wolf pack style) until likely prospects fit by and then peel-off for the kill.

"I have now lived", said Jim Oldshue in an ecstatic sigh, after covering a section on inertia in Mechanics. It seems that Jim never knew where those wild formulas came from. Maybe he thought that they just happened.

—BROTHER ALOYSIUS