

### STEWART EVOLVES AUTO REFRIGERANT

Professor of M. E. Department Finds Cooling System in Intake Manifold

That a basic system of refrigeration exists in the intake manifold of every automobile is the finding established by experiments carried on in the mechanical engineering laboratories by Prof. Frederick C. Stewart of the mechanical engineering department.

Theoretically this system could be converted into a simple cooler for food and drink, Professor Stewart has pointed out. The refrigerant is in the form of fuel on its way to the engine, he said.

In the regular mechanical refrigerator there is a chamber where atmospheric pressure is reduced and a partial vacuum created. The refrigerant boils more readily in this subnormal pressure in much the same manner that water boils quicker at high altitude than at low.

In the ordinary refrigerating system the refrigerant absorbs heat from its surroundings while boiling and thus produces coolness. The pump necessary to draw off the vapor produced by boiling and force it into a condenser is provided by the engine itself in an automobile.

Each stroke of the automobile's piston which draws new fuel into the engine reduces the pressure in the gasoline line, particularly in the intake manifold. In this manner the gasoline boils more readily.

In accordance with refrigeration principles, the intake manifold should be cold. Experiments proved that it is cold, and that in summer temperatures of 70 to 80 degrees the intake manifold is at about 40 degrees Fahrenheit.

Professor Stewart suggests that this could be used as a useful cooler for automobiles. He would detour some of the fuel on its way to the engine and use it as a refrigerant for a cooling unit to a small refrigerator in the car.

To allow for continuous vaporization he would draw the air for the carburetor through the cooling unit. A highly volatile fuel would be required, Professor Stewart says, in order to keep the refrigerator at about fifty degrees temperature in warm weather.

### MURPHY PREPARES BULLETIN

The University of Wisconsin has just published a bulletin on "The Geography of the Northwestern Pine Barrens of Wisconsin," prepared by Dr. Raymond E. Murphy, newly appointed economic geographer in the School of Mineral Industries. Doctor Murphy is the first economic geographer appointed to the staff of the College.

### Machine May Soon Reduce Bootleg Corn Borers Throughout Country

Those sturdy minions of the law who now slow the wheels of progress and pleasure on our roads for the purpose of putting a stop to the nefarious trade in bootleg corn borers may soon be displaced by a machine.

No longer does there exist that fine faith in the instinct of fair play of the aforementioned insects, the trust that they will cease to travel on the exact date that those college boys who wore the uniforms and asked the questions this summer returned to school.

Farm machinery experts of the College have come to the realization that the corn borer doesn't play fair and have ruthlessly gone to work designing a machine whereby whole families of the little creatures will be destroyed in the corn fields, without even giving them time to reach the highway and try to sneak past the vigilant officers.

Not content with this attempt to reduce the *zoo de vivre* of the Commonwealth, the agricultural mechanics are busy fabricating an apparatus by which they hope to take the down-trodden vegetable gardener off his hands and knees, wipe the perspiration from his brow, set him on a metal seat and watch him drive away.

Even the pigs, it appears, can not escape the modernizing influence. Instead of the old fashioned way, when

a pig could expect a little variety in the food he was given, experts are trying to find just the degree of fineness to which swine food should be ground, and the pigs seem doomed to a dreary round of sameness.

Furthermore, the once popular diversion of guessing at the number of diphtheria bacilli that were floating about in one's glass of milk threatens to become entirely a thing of the past. Never a bacillus will enter a home by way of the milk bottle if the farm machinery department succeeds in completing its projected electrically heated sterilizing apparatus for use at the farm.

The personal touch in agriculture must go, too. For the busy researchers have produced several acres of potatoes, and several more of corn, entirely by machinery. And the grim shadow of doubt is being cast upon the very sure, sure tests being conducted at the College to determine whether artificially cured hay is not superior. Time, and the cows, will tell.

And many a round, soul-satisfying course is to be left unsaid because of new accessories to facilitate plowing in stony ground. . . . And silos are to be filled entirely by machinery. . . . And milk is to be strictly prohibited from getting sour—if the experiments come out all right. . . .

### Dispensary Gives Treatments For 18,000 Students

Over 18,000 treatments were given in the dispensary in Old Main and 495 patients were treated in the College infirmary last year, Dr. Joseph P. Ritenour, College physician, made known yesterday in his annual report.

The dispensary issued 2,918 excuses for a total of 16,588 class hours during the year, the average excuse amounting to five and one-half hours. Corysae, or cold in the head, was the most common ailment treated, with a total of 2,409 cases for the College session.

Patients treated in the infirmary included 136 freshmen, 95 sophomores, 92 juniors, 68 seniors, 41 graduate students and three special students, with the total number of days spent in the hospital amounting to 1,590. The average stay of each patient was three days and the long-

est that any one student was confined, 23 days.

In addition to the usual examinations given members of the freshman class at the beginning of the College year, 691 students were given physical examination in the dispensary and 170 health certificates were issued for those employed in restaurants, dining rooms, and kitchens in the community, Dr. Ritenour said.

### RECEIVES RESEARCH POSITION

Andrew Ormsby, a graduate of the College of the City of Detroit, was appointed last week to the department of civil engineering as research assistant. He will do research work at the sewage treatment plant east of town succeeding Ralph R. Cleveland, who has been transferred to the department of grounds and buildings.

### PICTURE FRAMING CUSTOM BUILT MUSIC ROOM

### 2 GRADUATES ACT AS CHAPERONES

Misses Hoffeditz, Senior President Of '31, Keller '29 Assume Positions Here

Two recent Penn State graduates are among the new chaperones for the women's dormitories this year. Miss E. Louise Hoffeditz '31, president of the senior class last year, has taken up her duties at the Alpha Omicron Pi house while taking up graduate work in psychology. Miss Margaret Keller '29, former president of Y. W. C. A., is studying in the chemistry department and is in charge of the Theta Phi Alpha house.

Miss Marion Cheyne, transfer student from William and Mary College and co-organizer of the Kappa Kappa Gamma chapter here, has assumed her duties as chaperon there. A graduate student, Miss Olga Snyder, has moved to the Chi Omega house while Miss Marian J. Kerr, of the music department, holds forth at the Kappa Alpha Theta house. Miss Louise J. Hurlbrink, of the German department, will be in charge of Delta Gamma's home.

Freshman dormitory on Foster street will be chaperoned by Miss Margaret De Haven, a pre-medical student, and Miss Florence Dolton will serve in the same capacity at the Fraser street dormitory. Ivy Inn and Foust's will be under the supervision of the Misses Iona Nestle and Mary Maneval. Dean of Women Charlotte E. Ray, Miss Marie Haidt, and Mrs. L. Louise Sorell will act as chaperones at Women's building, McAllister hall, and Grange dormitory.

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### Campus Bulletin

Seniors must have their pictures for *La Vie* taken at the Photo Shop this week. No appointments are necessary.

Student Union requests that no fraternities hold house dances the week-ends of Dad's Day and Alumni Day.

Each fraternity will be allotted twenty-five bid cards by Interfraternity Council. Additional bid cards may be secured at the Nittany Publishing Co.

All freshmen interested in obtaining a copy of the *Intercollegian* magazine, should apply at the Christian Association rooms on the third floor of Old Main.

An overnight retreat to the Christian Association cabin at Shingletown Gap will be conducted on Saturday. All freshmen interested in the High Beaver Club will sign up for the hike at the Christian Association room.

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WANTED—To buy one study table Phone 466-J. 1tpdHe

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**LOST**—Friday, Sept. 25, Kappa Kappa Gamma pin. If found return to treasurer's office. 1tchHe

**LOST**—On Saturday night on or near Allen street, man's white gold wrist watch. Name Harvey Kiow on back. If found, notify Kiow, Phi Sigma Delta. 1tpfHe

**ROOM WITH BOARD**; also table board; home cooking, at the Coll Club, 132 Barnard St. Phone 887-J

**WANTED**—Cooking in a fraternity by reliable woman. Phone 382-W. 1tpdHa

**LOST**—Black and pearl Sheaffer pen. Initials R.J.L. Reward if returned to A. T. O. House. 1tpr

**BOARD**—\$6.00 per week. Apply at Garman Club, 206 West Beaver Ave. Phone 535-M. 1tpdHe

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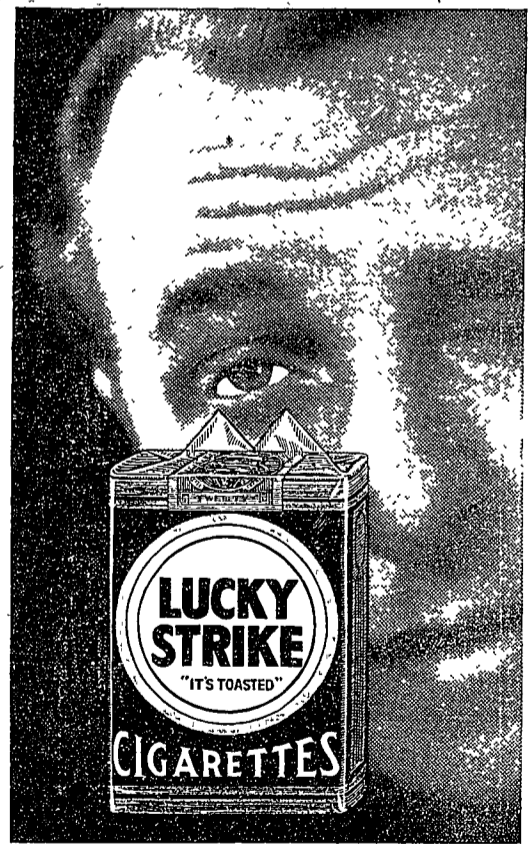
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