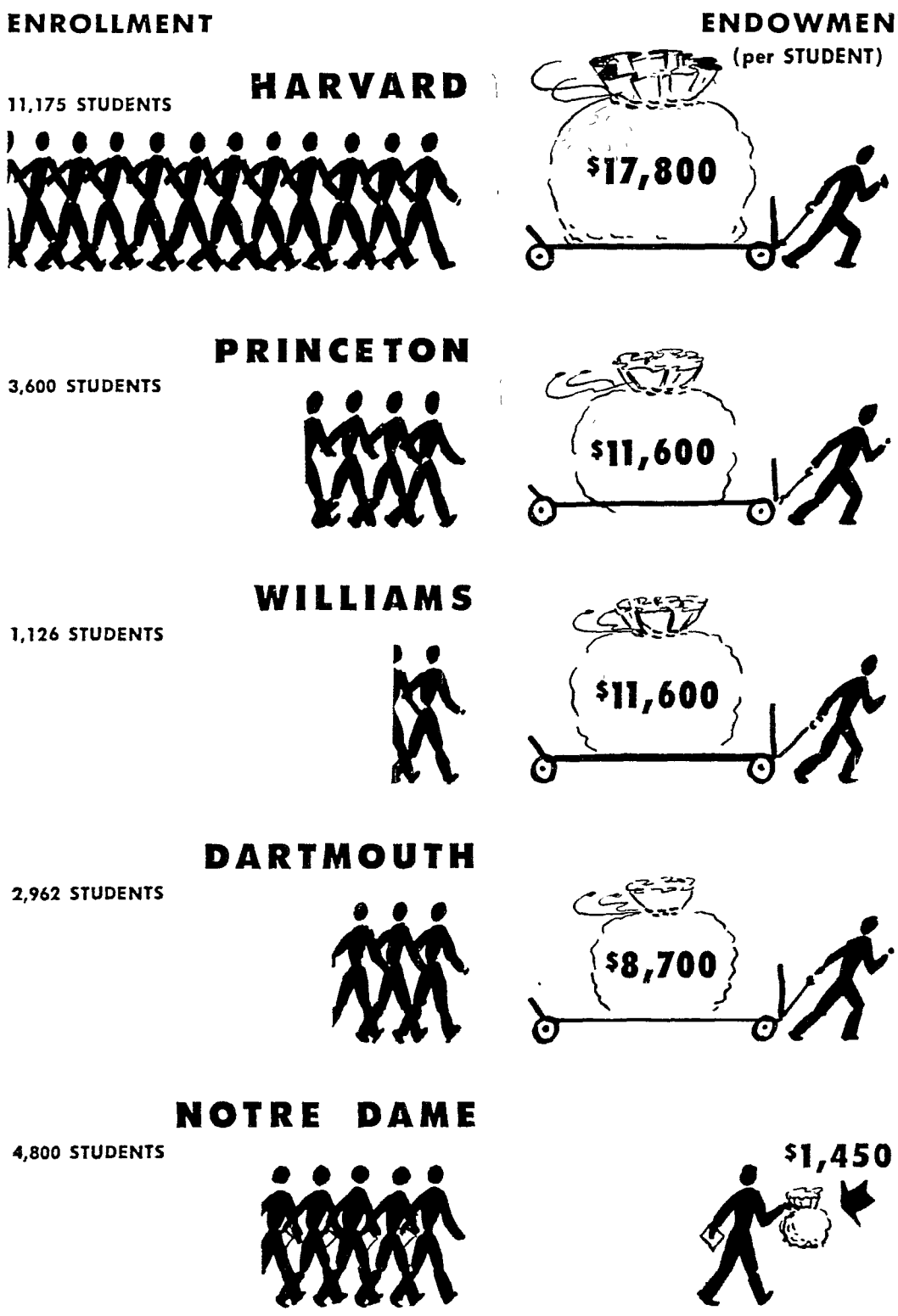
Notre Dame

A Magazine of the University of Notre Dame

SUMMER • 1950



Fifty-seven other colleges and universities have larger endowments than Notre Dame.

VOL. 3 • NO. 3

The University of Notre Dame

UNDERGRADUATE SCHOOL

The College of Arts and Letters • Department of Religion; Department of Philosophy; Department of English; Department of Classics; Department of Modern Languages; Department of History; Department of Economics; Department of Political Science; Department of Sociology; Department of Education; Department of Physical Education; Department of Art; Department of Music; Department of Speech; Department of Journalism; Department of Naval Science; Department of Military Science (Air Force).

The College of Science • Department of Biology; Department of Chemistry; Department of Physics; Department of Mathematics; Department of Geology.

The College of Engineering • Department of Civil Engineering; Department of Mechanical Engineering; Department of Electrical Engineering; Department of Chemical Engineering; Department of Architecture; Department of Metallurgy; Department of Aeronautical Engineering; Department of Engineering Drawing; Department of Engineering Mechanics.

The College of Law.

The College of Commerce • Department of Accounting; Department of Business Administration; Department of Finance; Department of Marketing.

GRADUATE SCHOOL

The Arts and Letters Division • Department of Philosophy; Department of English; Department of Classics; Department of Modern Languages; Department of History; Department of Music.

The Social Science Division • Department of Economics; Department of Political Science; Department of Sociology; Department of Education.

The Science Division • Department of Biology; Department of Chemistry; Department of Physics; Department of Mathematics.

The Engineering Division • Department of Metallurgy; Department of Civil Engineering; Department of Mechanical Engineering; Department of Electrical Engineering; Department of Aeronautical Engineering; Department of Engineering Mechanics; Department of Chemical Engineering.

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The Mediaeval Institute of the University of Notre Dame is a foundation established within the University by the authority of the President of the University and his Council for the study of the thought, history and culture of the Middle Ages.

Laboratories of Bacteriology (LOBUND) • Constitutes a research organization of full-time scientists effecting a program in Germ Free Life, Micrurgy, and Biological Engineering, which is concerned with many basic and applied problems of importance to biology and medicine.

For additional information write to The University of Notre Dame Foundation, Notre Dame, Indiana.

Why Does Rubber Stretch?

The Answer to a Simple Question Requires Intensive Research in High Polymer Physics

By Joseph M. Dukert

ATTENTION, golfers! Would you like to get off 300, or even 400-yard drives, consistently?

Even a duffer can do it, says Dr. Eugene Guth, research professor in physics at Notre Dame. And his system doesn't require any unusual stance, trick club, or long practice, either. All you have to do is heat the golf ball to about 150 degrees Fahrenheit, tee it up quickly, and let fly! Of course, the procedure is a little impractical; and the boys at the country club would probably never stand for it. But it *does* get results!

In the apparatus-jammed rooms of the High Polymer Physics Laboratory at Notre Dame, that little trick is more than just an amusing curiosity. It's one piece in the gigantic jig-saw puzzle of facts that helps to demonstrate Dr. Guth's unique theory on the structure of rubber.

The advice on "hot golfing" is typical of the way in which Dr. Guth likes to describe his theory to interested laymen —and even to lots of fellow-scientists who find it difficult to follow his highly complex proofs.

When the news editor of *Science Service* learned that Dr. Guth had formulated a new and apparently fool-proof solution to the old problem of rubber's elasticity, he wired the University immediately. As the editor knew, Dr. Guth is a theoretical physicist—a man who does little laboratory experimentation himself, but who fills reams of paper with equations and graphs based on the results of lab tests conducted under his direction. Usually, when such a theorizer finally comes up with an answer, it's phrased in obscure 18-syllable words and accompanied by page after page of mystifying figures.

But if *Science Service* expected that kind of reply from Dr. Guth, it was mistaken. The Notre Dame scientist had plenty of technical data to back up his theory, but he also had the ability to explain it in simple terms.

Rubber is made up of tiny chains of matter, called "molecules." A cubic inch of rubber contains about *100 billion* of them, Dr. Guth explained. These molecules—which are actually long links of atoms—have a natural tendency to curve inward, like the old-fashioned springs on a wagon.

Toss a piece of string into the air, and you'll notice that it always falls in a curved form. The long molecules in rubber are like that string — always being shaken about by an inner force called the "Brownian movement," and therefore always tending to remain in a curved shape.

When you stretch a piece of rubber, though, you pull the chains taut. When you release it, they snap back into their natural curved positions. That's why a rubber ball bounces.

Using Dr. Guth's theories as a general framework, the four faculty members and seven graduate students who make up the High Polymer research staff carry on careful measurements and experiments in order to provide new data on the physical properties of rubber and other similar substances.

Dr. Guth is a recognized leader in his field; yet he hardly seems to be the type of man one might expect to find in a job which includes nothing more strenuous than scribbling long formulas and numbers. Still trim and vigorous at 45, he prefers mountain-climbing; hiking and horseback-riding to sitting behind a desk.

"I have a great fondness for the outdoors," says Dr. Guth. "When Spring comes, I find it very hard to sit in my

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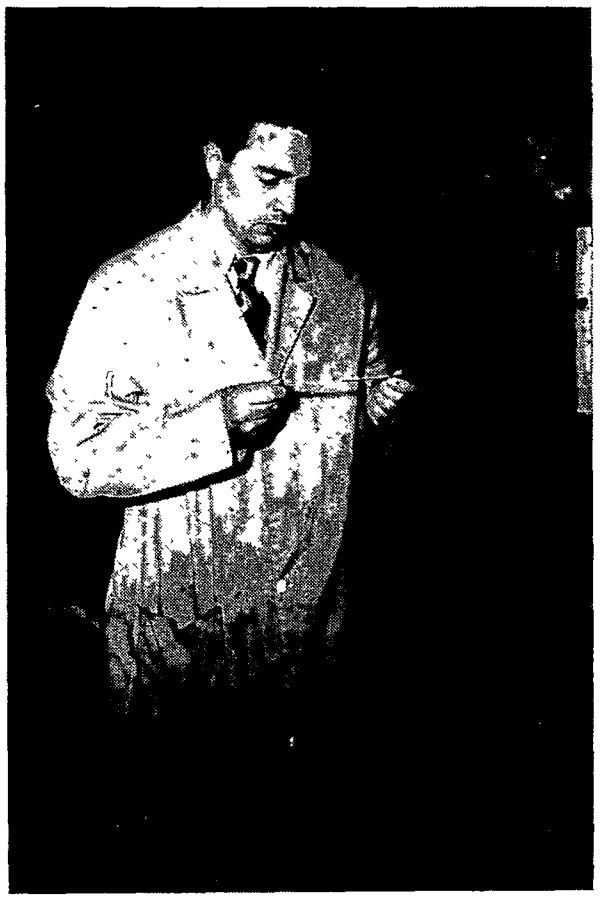
The author is a senior in the College of Arts and Letters and is majoring in Journalism. He will graduate in June 1951, and present plans call for a newspaper job. Last summer Mr. Dukert was on the copy desk of the BALTIMORE NEWS-POST, *and helped to organize the publication of three Catholic parish newspapers in Baltimore. He did general reporting for five Baltimore weeklies last Summer. During his between-semesters vacation, Mr. Dukert is attending ROTC camp and will later be in Summer school in Mexico.*



Dr. Robert Anthony, research assistant, and a test sample of rubber.

office and concentrate. But once I get out in the fresh air, it is all quite different. Some of my best ideas have come to me while I was taking my regular walks around the lakes here at Notre Dame."

A native of Budapest, Hungary, Dr. Guth received his doctorate from the University of Vienna. Later he carried on research at the Federal Institute of Technology in Zurich, Switzerland. It was there that he first took time out from his mountain-shaped graphs to scale some *real* peaks.

"The Alps were right outside my window there," he explains. "I had hiked and climbed before, near Vienna; but in Switzerland I got into the habit of going off on a little climbing expedition every weekend. Now, I still practice the sport whenever I get some time off from my work. In fact it was on just such a vacation trip to the Canadian Rockies that I met my wife."

His work day is never finished when he leaves the campus. He is perpetually inquisitive; nothing can satisfy him until he has found the answer to his problem.

"I have to be very quiet at home now, though," he says with a proud smile. "I have a two-year-old daughter, you know, and I mustn't disturb her while she's sleeping. I don't mind that, though. I like being a family man."

When Dr. Guth joined the faculty in 1937, he had already attained wide recognition for his discoveries and theories in the field of synthetic rubber and plastics.

Since that vital discovery almost half a century ago, Notre Dame has produced a number of important scientific contributions to the field of synthetic rubber in industry. In 1920, Father Nieuwland succeeded in isolating two acetylene compounds which could be hardened into an elastic material resembling rubber. Five years later, arrangements were made for the du Pont Company to take over the commercial development of the substances; and vulcanization changed the tacky compounds into "neoprene"—a synthetic material which surpasses even natural rubber in many respects.

The High Polymer Physics Laboratory —the first of its kind in the United States—was established in 1945 in an effort to carry that tradition still further. Other research organizations had set aside special groups to study the chemical properties of high polymers, but this was the first attempt to concentrate on a study of their physical make-up . . . their strength, elasticity, reaction to heat and cold, etc.

A "high-polymer" is any substance whose molecules are *relatively* large (although even the biggest of these "giant" molecules are still invisible

Dr. Guth consults with Dr. Petrauskas, an associate.

under the most powerful microscope). A large number of these materials—like nylon, gelatine, cotton, glue, and many plastics—have a flexible, rod-like structure, similar to that of rubber.

All of these materials have elastic properties at certain temperatures. Your plexiglass windshield may seem pretty solid to you right now; but boost its temperature about 75 degrees and it becomes amazingly rubbery and elastic.

Dr. Guth accounts for these peculiarities by explaining that heat speeds up the movement inside the rubber or plastic molecules and draws them into tighter curves. The whole sample curls up into a more compact mass; then, when it's stretched, it snaps back faster because the inner "springiness" has been increased. That's why *anybody* can hit a golf ball like Ben Hogan or Sammy Snead—at 150 degrees Fahrenheit.

Here again, Dr. Guth likes to use a simple experiment to demonstrate his idea. "Take a wide rubber band," he says. "Stretch it quickly and then touch it to your chin immediately. It's hot! That's because some of the energy that keeps the molecules all bundled up in their horse-shoe shape has been released —in the form of heat."

If you hold the stretched rubber band under cold water for a while, the heat energy is lost. Temporarily, the elastic band remains in the stretched position; it can't snap back to its original size and shape until heat from the surrounding air builds up the internal energy again.

But naturally all the experiments in the High Polymer Laboratory can't be simplified. Most of them require precise measurement — performed again and again to assure accuracy.

In dealing with rubber samples, Dr. Guth and his associates have three basic factors to consider—temperature, tension and length. As one of these factors is kept constant, another is changed gradually. The corresponding change in the third measurement is then recorded, and new graphs are made. The results are passed on to Dr. Guth, who evaluates them and suggests new tests.

In general, rubber contracts when it is heated and expands upon cooling. But general trends aren't much good to Dr. Guth; he must know the precise change, measured to pin-point exactness.

The range over which these experiments are made shows what a painstaking process the scientists must go through. The temperature of a sample is lowered—less than one degree at a time—from about 68 degrees above zero to almost 110 below, Fahrenheit. In another test, a sample of cork was subjected to a pressure of more than 2000 pounds per square inch.

Even radar is used to track down the odd properties of polymers. Radio waves are directed through bits of rubber or plastic; and the pattern in which they pass through reveals more data about the material's structure.

The actual "snap" of a rubber band has been photographed at Notre Dame also. Using ultra-high-speed cameras, the scientists managed to produce a remarkable set of photographs which prove that the retraction of rubber is not uniform. Instead of snapping back gradually, along its entire length, the

NOTRE DAME

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James E. Armstrong, '25, Editor.
John N. Cackley, Jr., '37, Managing Editor.

Contributors' views do not necessarily reflect those of the University. Requests to reproduce material in this magazine should be addressed to the Editor.

Vol. 3 No. 3 Summer, 1950

Dr. Eugene Guth, at work over his graphs and columns of figures which will reveal the secret of some new plastic or high polymer substance like rubber. In inset at lower right is represented the amount of a chemical test that will keep Guth and his staff busy for days on end.

band seemed to tighten up part by part —like the wriggling of an earthworm.

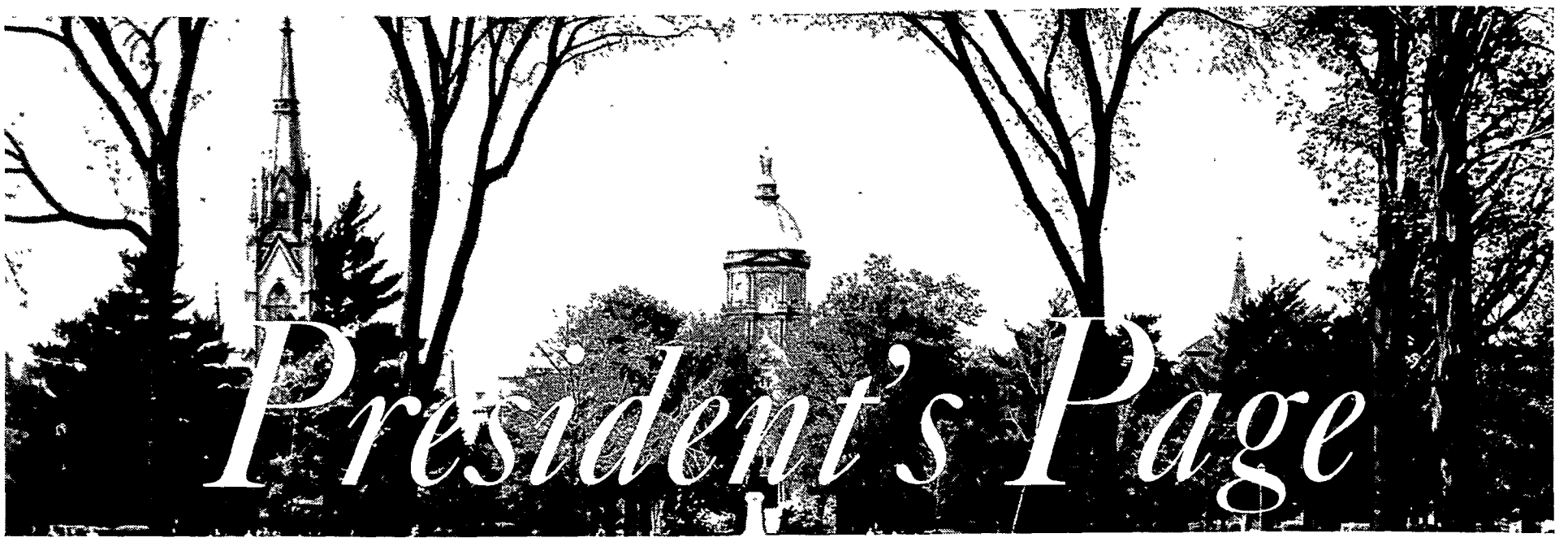
At their present stage, the Notre Dame experiments are still chiefly of theoretical importance, although some of the work done in the High Polymer Laboratory during World War II was turned into direct applications by various industrial concerns. But in the long run, all of Dr. Guth's work will be of practical value, since it will lead to a better understanding of the properties of rubber and plastics.

The Armstrong Cork Company and the General Tire Company have already realized the tremendous possibilities of the Notre Dame experiments and have made several large financial grants to the Laboratory, in order to make sure that the work there continues. Recognizing the military value of better synthetics, the United States Navy is also subsidizing Dr. Guth's projects.

In 1949, the Notre Dame Alumni Club of Chicago paid a formal tribute to the importance of Dr. Guth's work by presenting him with its annual lay faculty award—citing him as the professor who had made the most valuable contribution to the prestige of the University during the preceding year.

It seems quite probable that millions of people will some day look upon Dr. Guth's work in the same way he likes to explain it now—in simple, practical, concrete examples. For each scientific advance in the High Polymer Physics Laboratory at Notre Dame fits a new piece into that gigantic jig-saw puzzle, providing an increasingly clearer picture of the nature of polymers.

This picture, in turn, will provide a more reliable guide in the development of new "tailor-made" synthetic products —cheaper, stronger tires; comfortable, sturdy new furniture; and hundreds of improved household appliances—all more efficient and durable than ever.



In this issue, I am under the extremely pleasant necessity of returning to the theme employed in my last column of *Notre Dame*, an expression of the University's deep and abiding gratitude to Notre Dame's benefactors for important favors received. These have been many in the course of the last three months.

Liberal and Fine Arts Building

Foremost among these recent benefactions is the magnificent gift to the University of a Liberal and Fine Arts Building. This splendid addition to our physical plant will house classrooms, music rooms, art galleries, offices, and other facilities for the various departments in the liberal and fine arts programs.

The University is everlastingly indebted to Mr. I. A. O'Shaughnessy of St. Paul, President of The Globe Oil Company and Chairman of the Associate Board of Lay Trustees, for this the largest single benefaction ever bestowed upon the University. Mr. O'Shaughnessy's gift represents a contribution of $1,500,000. Everyone with Notre Dame in his heart hopes that this distinguished benefactor and friend will have reason always to be proud of his generous investment in the liberal and fine arts which, at Notre Dame and elsewhere, constitute the core of a program of education on the college and university level.

E. M. Morris Inn

No less significant is the benefaction of Mr. E. M. Morris of South Bend, Chairman of the Board of the Associates Investment Company, an alumnus of the University, past chairman and long a member of our Board of Lay Trustees. Mr. Morris has generously provided for an inn at the University which, when built and equipped, will represent an investment of $1,000,000. The inn will contain public and private dining rooms, and living accommodations for approximately 200 guests. It will be situated at the entrance to the University, in the Northeast corner of the golf course.

To the sincere thanks that I here express will be added the gratitude of generations of the University's guests, alumni, students, and relatives and friends of the students, for the fulfillment of this long-established need.

South Bend-Mishawaka Campaign

In addition to these handsome contributions of individuals, Notre Dame has been encouraged by the general support of alumni and other friends. Both in the number of contributors and in the amount of their contributions, the records are well in advance of last year's list at this date.

The support of the citizens of the South Bend-Mishawaka area during an intensive campaign that was waged during the first three weeks of May will remain as a pledge of devotion in this community to Notre Dame. Without any professional assistance and under the Chairmanship of Mr. Harold S. Vance of the Studebaker Corporation, a group of volunteer workers raised more than $500,000 in contributions and pledges from individuals, organizations, business, and industry.

To all who contributed of their time or money to this Community project, I say a word of heartfelt thanks. This effort must prove a source of consolation and inspiration to alumni and other friends of the University everywhere.

Building Schedule

The results of the South Bend-Mishawaka campaign guarantee the additional funds necessary for construction of the new Science Building; an additional $250,000 must be realized this year and next properly to equip the building. Final touches are being put on the plans, and it is expected that construction will begin this summer.

Plans for the inn are already well advanced, and construction of this building should also begin during the summer months. Drawings and plans for the Fisher Memorial Dormitory and for the Liberal and Fine Arts Building are progressing satisfactorily. If these can be completed in time to have the buildings under roof before cold weather sets in, they will be begun in late Summer or early Fall. Otherwise, construction must wait until next Spring.

* * *

Space permits only a final word of thanks to these our benefactors and to Notre Dame, Our Lady, through Whom all our blessings come. May She continue to look with favor upon the University and upon everyone who joins the growing Notre Dame family.

John J. Cavanaugh, C.S.C.

Director of the Foundation
President of the University

How Notre Dame Got . . .

A Million Dollars

By J. P. McEvoy

YOUNG and dynamic Father John Cavanaugh, President of Notre Dame University, could walk right into one of those "Going My Way" pictures without makeup and give Father Bing Crosby and Father Barry Fitzgerald a bad time. I had just heard he had been given a cool million dollars for Notre Dame by an old grad who was not a Catholic, nor Irish, nor an old football player, nor the father of a young one. Sure, and it would have to be the other way in a Hollywood movie called "Rah! Rah! Rockne!" or a Broadway musical titled "Kick Me Kate." But the truth is always making a bum out of Hollywood and Broadway and vice-versa—and who could know this better than meself who went to class with the great Rockne and then wrote post-graduate theses for Ziegfeld and Zanuck.

Father John was packing his bags at the Commodore hotel and dashing for the Century. "The story begins a long way back," he said, "when an Indiana farm boy drove his horse and buggy up to the front steps of Notre Dame and asked to see the President—the same grand old Father Cavanaugh—rest his soul—who was President back in your day. How long ago was that, Mac?"

The author, Notre Dame, '14, has long been a famed scrivener and co-creator of the comic strip "Dixie Dugan". Born in New York City, Mr. McEvoy began at the old South Bend "News" more than 25 years ago. Since 1941 he has been roving editor for the "Reader's Digest" and also writes for the McNaught Syndicate. His Broadway revues include "New Americana", 1928, and "The Comic Supplement", 1925. In 1919, he published poems entitled, "The Slams of Life".

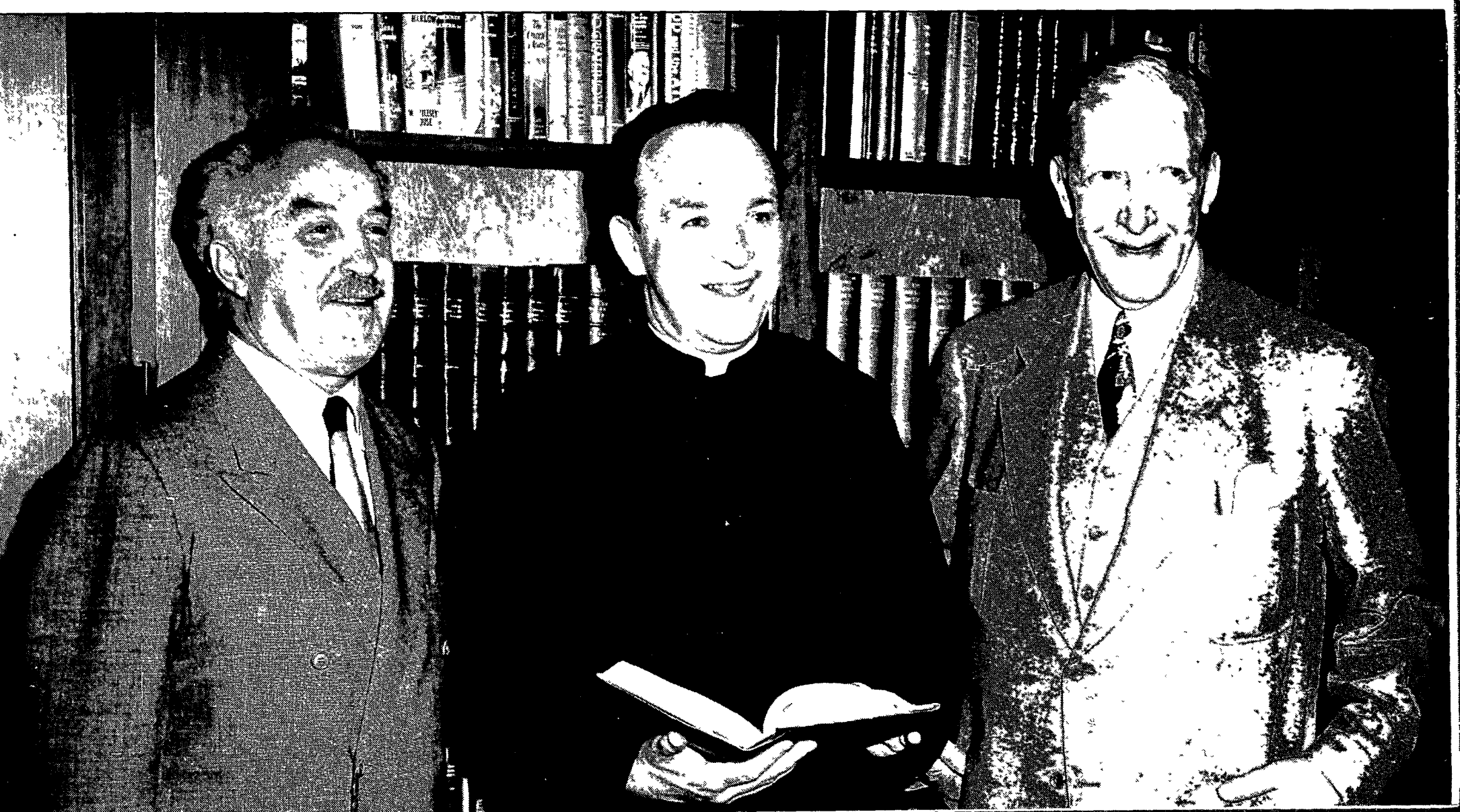
I heard someone murmur "Forty years ago," and looked around and darned if it wasn't me.

Father John continued: "The farm boy said he wanted to go to college but he didn't have any money and could he work his way through? He said "I might as well tell you right way, Father, I'm not a Catholic. I'm a Presbyterian—so maybe you won't have any work for me." Father Cavanaugh said, "If you're so anxious to get an education, I'll find something for you to do around here." The boy said, "I sure appreciate that, Father, but now I've got another problem. What can I do about my horse?"

"Father Cavanaugh laughed and climbed up into the buggy with the boy and drove over to the stables—where the football stadium is now. He called Brother Hugh and said, 'Meet our new student. His horse is coming here also —give him plenty of oats and if there's

(Continued on Page 20)

(l to r): Mr. McEvoy, Father Cavanaugh, and Mr. Morris



A $7,893,300 Question

How Does a University Annually Manage to Spend All of Its Income . . . And Then Some?

By Rev. John H. Murphy, C. S. C.

Several weeks ago a member of the University administration chanced to look in on the Midwest Hotel Show at the Stevens in Chicago. A lady delegate to the convention, startled at sight of a Roman collar in the Exposition Hall, asked her companion what on earth a Catholic priest could be doing in such surroundings. The companion, who happened to have met the priest on a visit to the campus some time before, replied: "Why, that's Father So-and-so from the University of Notre Dame, and I suppose no one in this room has a more legitimate reason for being here. At Notre Dame they lodge more persons than all save our very largest hotels; and they serve more meals each day than the Palmer House."

Grand Hotel . . .

Truly spoken! Approximately 15,000 meals served daily in the University dining halls and "coffee shops"—cafeteria, Huddle, Rockne Memorial. Upwards of 3,500 young men housed for nine months of the year in thirteen separate residence halls. And in addition, the provision of food and lodging for numerous conventions with attendance ranging from a dozen or two individuals to 1,500 men on three-day retreat —or 2,800 youngsters and their chaperons gathered for a Catholic Student Mission Rally.

The customary soda fountains, cigar counters, news and souvenir stands; the auditoriums, Drill Hall, and Gymnasium readily convertible into assembly and exposition halls. And occasionally one of the large dining halls or the Rockne Memorial magically transformed into a grand ball room for Junior Prom or Sophomore Cotillion.

There are the laundry, the maintenance department, the heating plant, the battery of administrative offices, the public relations department, the "reservations" clerks. There is the army of butchers and bakers, cooks and waiters. There are the maids and janitors, the

Father Murphy is Vice-President in charge of Public Relations at Notre Dame. He was ordained to the priesthood in 1938. Father Murphy attended the University of Notre Dame, Gregorian University and the Biblical Institute in Rome, Italy, and Catholic University. He is a native of Racine, Wisconsin.

"house detectives" and house doctors, the carpenters and painters, plumbers and electricians.

The food bill comes to $1,017,500 annually, the milkman alone collecting approximately $6,300 the first of each month. Maids' and janitors' salaries for the year amount to $282,300; their supplies add another $114,000 to the budget. The coal bill comes to $102,000, two carloads a day—or more than 100 tons—being consumed in extremely cold weather. Annual operating costs for the paint shop are $39,200, for the electrical department $35,200, and for the plumbing shop $57,600.

Grand Hotel indeed!

. . . or Big Town?

But perhaps it would be more accurate, in view of the many other departments and operations maintained by a modern University, to speak of Notre Dame not as a hostel but as a municipality of upwards of 5,000 inhabitants.

Here is a listing of *some* of the operations of the City of Notre Dame, Indiana. The operating costs of the various departments have been taken from the Budget for the fiscal year ending June 30, 1950.

Walsh Hall, student residence dorm—one of ND's 13 "hotels."

School system	$2,496,500
Administrative and general offices	690,100
Health service	54,700
Libraries	236,300
Recreational and athletic programs	616,300
Police and fire protection	53,300
Laundry service	91,200
Postal service	30,000
Telephone and telegraph	33,000
Heat, water, sewage disposal	223,500
Power and light	65,000
Roads and grounds	50,000
Publications	63,700

And no possibility of floating Municipal Bonds either!

Overall Budget Picture

The above is only a partial listing of the University's current expenditures. Space does not permit the giving here of a detailed report of income and expense, but the overall picture may be given briefly as follows (again, the figures are taken from the Budget approved for the current fiscal year):

Income (estimated)

Educational and general (incl. all student fees)	$5,435,200
Auxiliary enterprises (athletics, public cafeteria, book store, golf shop, etc.)	*1,730,000
Endowment and investments interest	125,000
Restricted funds (contracts)	527,300
	$7,817,500

* Net income after expenses: $297,200.

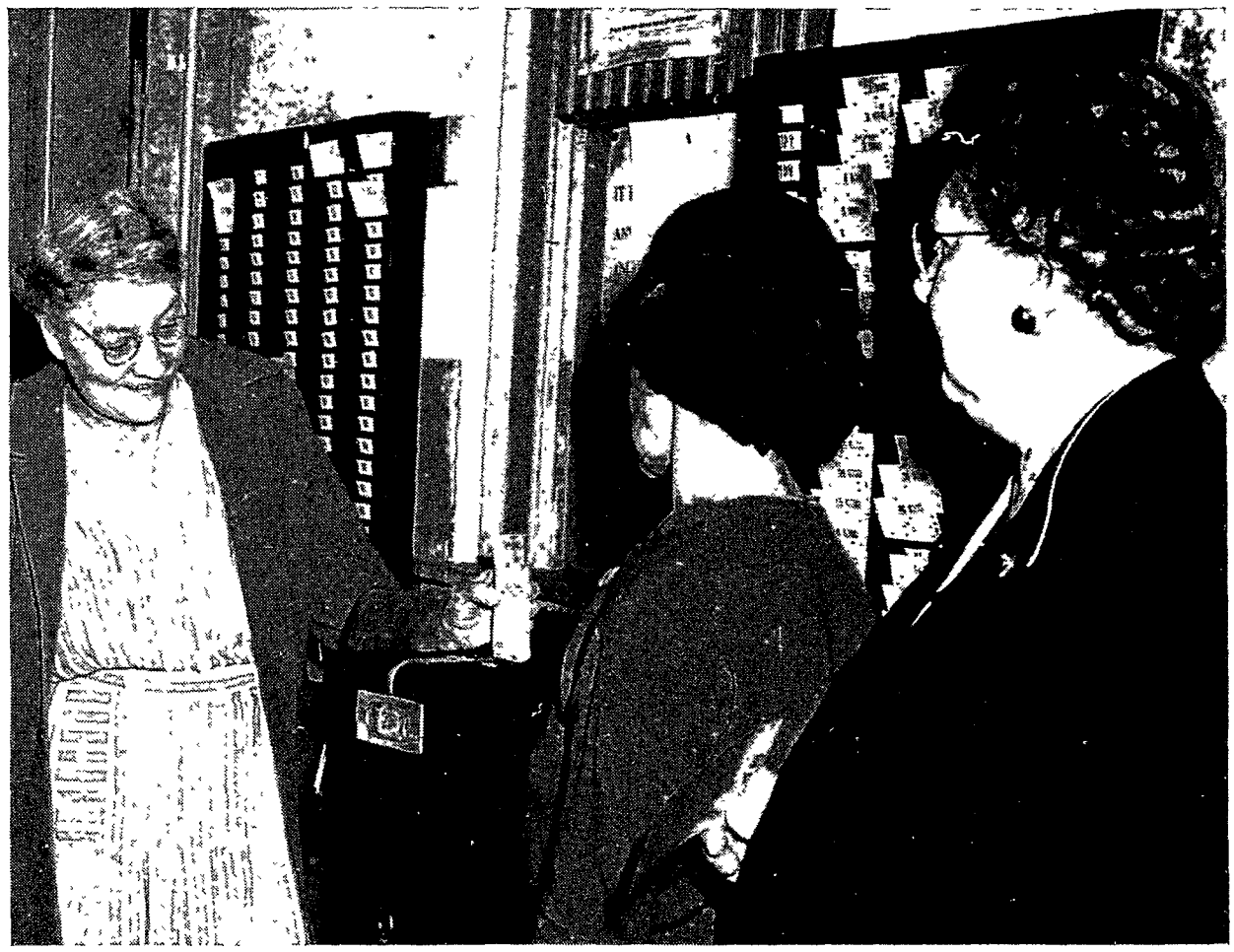
Expenditures (approved)

Salaries and wages (monthly payroll approximately $356,000)	$4,274,500
Supplies and expenses	2,611,600
Repairs and maintenance	200,900
Capital items	279,000
Restricted funds (contracts)	527,300
	$7,893,300

Operating deficit.....$75,800

It is worthy of note that educational and general income—including *all* student fees—fails by approximately $2,500,000 to cover operating costs.

The current Budget with its sizable operating deficit still makes no provision for capital or contingency reserves, or for depreciation. Depreciation, if included, would have increased the operating deficit by some $400,000. However, inability to take it into account is not too disconcerting in view of recent gifts to the University for building purposes. Over the past twelve months these generous contributions have amply compensated for inability to allow for depreciation in the Budget.



Maids' and janitors' salaries, annually, amount to $282,300.

Problems of the City Manager

What does disturb the President and his Council is the realization that, while regular income must be regarded as having just about reached its peak, operating costs will continue to rise. While the prices of foodstuffs and some other items may level off, salaries of both academic and non-academic personnel must be periodically increased. (Incidentally, Chamber of Commerce figures reveal that the University is the fifth largest employer in the South Bend area.) To rising salaries must be added the cost of University contributions to the faculty pension plan, and the prospect of Social Security payments for all other employes.

Completion of the new Science Building alone will increase annual operating costs by approximately $125,000. And before it can be completed, $250,000 must be found to furnish and equip it. Furnishings and equipment for several of the other new buildings will require an additional $450,000.

Heating plant and water system enlargements and improvements—essential to these and to future building projects—will cost $900,000. This work must be undertaken by next Summer at the very latest, the money raised this year and next. And if it is found to be more economical to generate our own power, an additional $500,000 will be required to make the necessary installation.

Within the next two years Notre Dame must alter its sewage disposal system to utilize the new facilities that South Bend shall have. This project will cost a minimum of $400,000. Many of these, and of other problems of maintenance the parent does not ordinarily associate with the cost of giving his son a college education. But has anyone ever run a successful school without taking them into account?

Little wonder that the "City Manager" should sometimes toss restlessly on his bed of sleep!

The Answers to the Problems

The answers to the University's problems lie with her alumni and other friends. If these problems are great—and growing, so also is the generosity of Notre Dame's friends and alumni great—and growing. Each year for the past several years the number of alumni and other friends has increased considerably. This increase has been rivalled by the increase in the amount of individual gifts—gifts that compensate for budget deficits, that provide for

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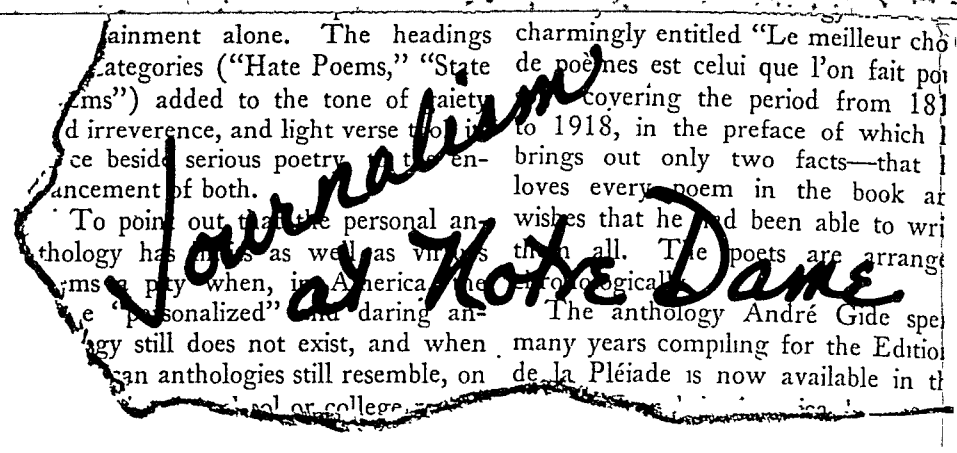
BACKGROUND courses often use audio-visual aids.

TECHNIQUES supplement pursuit of liberal education.



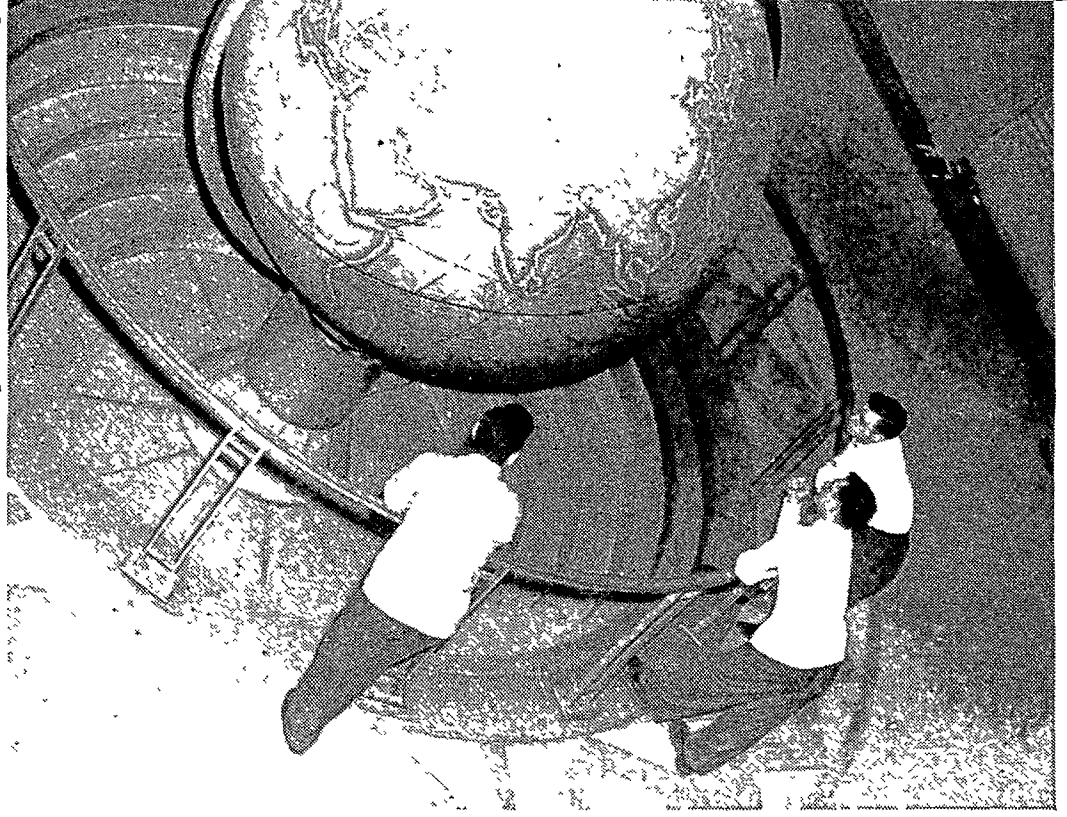
It is impossible for a man to write something worth reading, if he does not already know something worth writing.

Good writing comes partly from having thought out and correlated information; so the Department of Journalism works to correlate what its students know about history, art, world affairs, and literature. Good writing comes partly from skill in writing techniques; so the department has its students write steadily, under guidance.

And because a piece of worthwhile writing deserves to be read, students learn to present their work in formats that will catch and hold the eye.

As the Notre Dame catalog puts it: The aim is to teach a student how to write, to give him something to write about, and to train him in the techniques of publication.

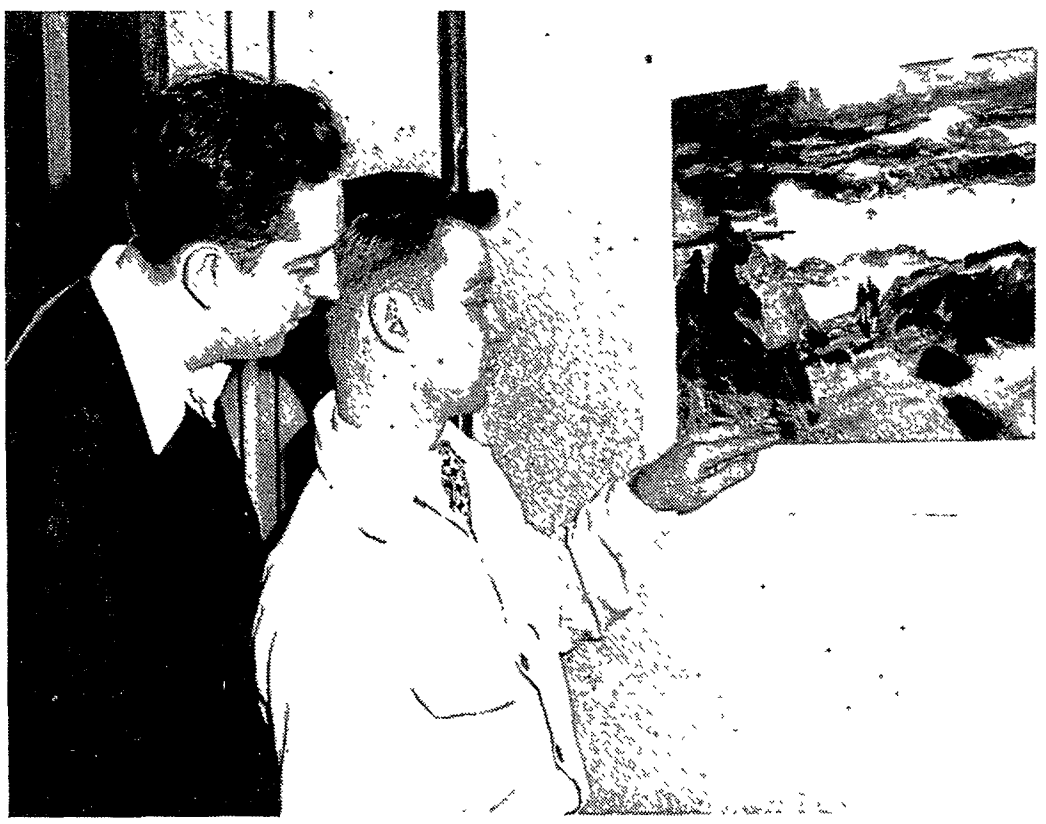
WRITING skills come only through individual attention.



WORLD affairs begin to fit with meaning into a pattern.

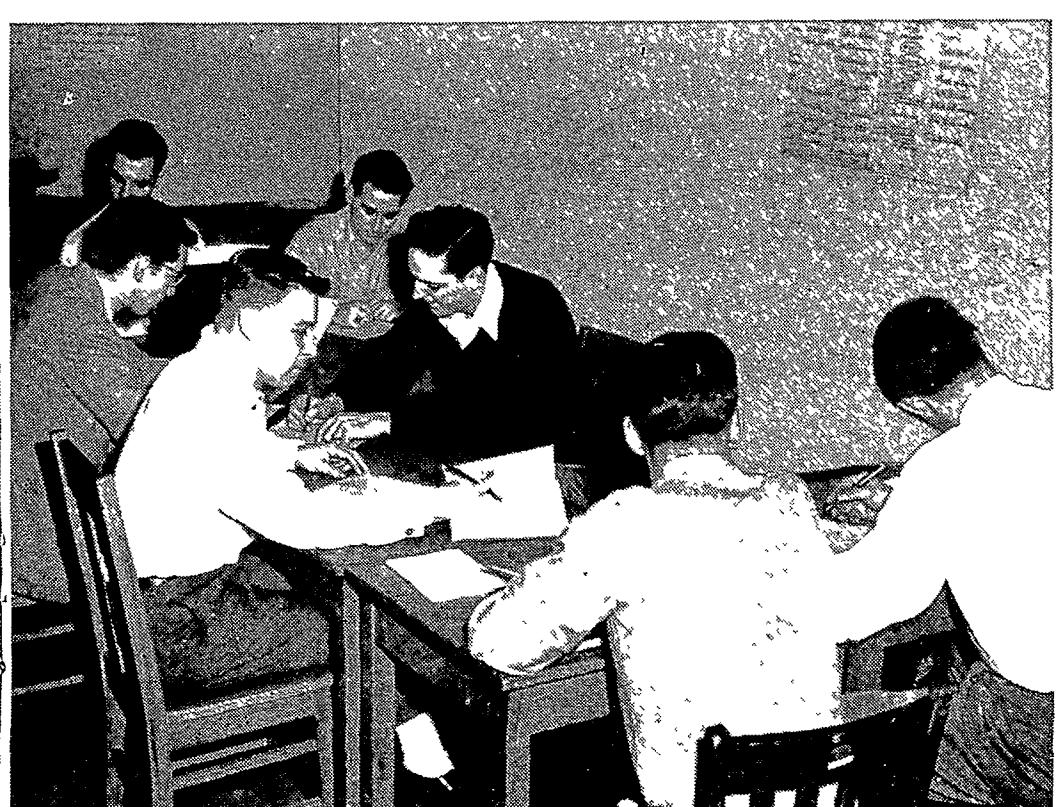
JOURNALISM ART attracts many students as elective.

APPRECIATION of art, music, and drama is stressed.



CAMPUS STATION WND offers radio experience.

PRACTICAL EXPERIENCE grows through editing a weekly.



The Journalist is the department's experimental paper.

The Spirit of Notre Dame

The years between 1922 and 1928 were indeed an era of great transition. The little boarding school became a great University, physically as well as in the visions of its leaders.

★

But in many ways the most significant contribution of Father Matthew Walsh's administration, in the light of later developments, was the stability of spirit that accompanied the shifting emphasis of physical plant and increasing personnel.

★

Under a calm constancy of administration, many dramatic highlights passed as hardly more than the even tenor of a new order. The Four Horsemen! Rockne Resigns! Notre Dame Completes Million Dollar Endowment Drive! Students Frustrate Ku Klux Klan Parade Plans! New $750,000 Dining Halls Replace Refectories! Colonel Hoynes Retires as Law Dean! Arts and Letters Program Revolutionized! Faculty of Laymen Doubles in Six Years! Alumni Association Reorganized on Permanent Basis! Scholastic Magazine Changes Identity!

★

Those were a few of the headlining events in each of which volumes of rich tradition reside. But in the quiet dignity of the President they found no corresponding flint to strike the spark of sensationalism. The result was that just as inevitably as Father Sorin achieved the Golden Dome and the Golden Lady surmounting it, so did Father Walsh bring to the Notre Dame campus the student, the faculty, and the physical developments of a turbulent time, without the strained sharing or the distorted perspectives of that turbulence.

★

Notre Dame spirit is something that men feel, that men give their lives for. It is the spirit that is both cause and effect at Notre Dame. It is as beautifully spiritual as the graceful Patroness, and as ruggedly virile as Frank Leahy's line. It is as quietly academic as was Dr. John Cooney. It is as eloquently aggressive as is Dean Clarence Manion. It moves the student to Daily Communion instead of the Daily Worker. It led 10,000 Notre Dame men to defend their convictions in World War II, and 327 of them bought for us the blue chips of liberty with the red chips of life. It was this spirit, which partly came with Father Sorin, partly was here even then, that Father Walsh never allowed to be submerged in the physically Greater Notre Dame.

A G

(Eighth in a series of articles on the history of Notre Dame, adapted from the book, "Notre Dame One Hundred Years," by Rev. Arthur J. Hope, C.S.C.)

POPES, legislatures, Bishops, its own Councils, have changed many times during the 108 years that the University of Notre Dame has grown about the shores of its little Indiana lakes.

Size of its enrollment, periods of extreme poverty, attacks of adversity, have varied through these years.

But so deeply rooted is Notre Dame's teaching in the rich Christian heritage, and so deeply rooted is its tradition in the proper political philosophy of its native land, that in the mind of man Notre Dame has meant Notre Dame in the same basic essentials through all its history.

That is the answer, perhaps, to the unity of spirit of alumni and of friends; the answer to the unity of purpose of its administrations and faculties; the answer to the clarity of its program for the future.

Support of Notre Dame stems not from a particular group of students, not from a man as president, not from the blueprint of any one building, but from belief in a Process, a Process which joyously and confidently accelerates the progress of young men toward their destinies under God.

Certain periods might have excused a departure from this progress. The twenties, known to history as the years of flaming youth, of prohibition, of intolerance, of fabulous speculation — were certainly not years in which a Catholic boarding school, just emerging into the academic stature of a major university, might expect to remain untouched by the turmoil.

Enrollment skyrocketed after World War I, to a point where more than half the students of Notre Dame were living off the campus. Only freshmen were able to secure their meals in the old dining halls. Spearheaded by a veterans group of mature minds, the overflowing stu-

reater Notre Dame

New and Yet the Same

Rev. Matthew Walsh (1922-28) Consolidates Campus. Expansion and Growth in Spirit to Create a "Greater Notre Dame" Pattern for Subsequent Eras of Transition.

dents entered with relish the many attractive channels which beckoned young minds to a new young world.

Vice-presidencies under Father John Cavanaugh and under Father James

Lyons Hall.

Burns, the invaluable experience as overseas chaplain, and his own great personality, combined to bring to the leadership of Notre Dame during most of these years (1922-28) Rev. Matthew J. Walsh, C.S.C., '03, a man whose administrative genius was almost providentially attuned to his time.

He was quick to recognize that Notre Dame was traditionally a boarding school, and was suffering greatly from its enforced role as only a day school for the majority of its students. In six short years, through courageous erection of five residence halls (two temporary and three permanent) and the building of the present magnificent Dining Halls, he had restored the nature and the vitality of Notre Dame. Notre Dame had raised $1,000,000 for buildings. He spent $1,650,000.

He knew that teachers were needed for overcrowded classes. In his six years as president, the lay faculty was doubled in size, because there were not priests enough to fill the need.

And for the churning spirits of the unprecedented student body of 2,500, he fostered campus organizations, extra-curricular activities in all fields, new publications in which voice was freely given to the young thinking. He sanctioned the great rise of Knute Rockne and the teams under him, though not without the courage to enforce a proper perspective when public adulation threatened to unbalance the athletic and the academic values.

Morrissey Hall.

Father Walsh held to the anchor of the past, but was quick to raise it when it was advantageous to move to a new spot in the rich stream of the period. He was equally quick to lower it when there was any deviation from the course he knew. And so skillful was this maneuvering that the voyagers of the era were conscious only of an experienced and understanding direction.

There is little doubt in the minds of those who are familiar with Notre Dame that each of its Presidents have in their own way served a special Providence for the University.

Howard Hall.

Because the world about him was so certain that it had entered a new a permanent prosperity, a new mastering of material by man, it was only logical that the fact escaped contemporary observers, and participants, that here was possibly one of the greatest of Notre Dame's critical eras. Fire, poverty, war—these leave usually a single way of escape, and however courageous or brilliant the leader in those periods may be, his course is almost automatically charted.

Father Walsh could have taken many paths. It is a tribute to his leadership, and another evidence of the favor of Our Lady, that the path he seemed to follow as if there were no other, was the path of permanence, the path that made of the Greater Notre Dame of that epochal time the proper pattern of a Greater Notre Dame of another era, after another war had rocked the world.

5,000 for Dinner

By Daniel J. McCarthy

IN one day: 15,000 meals, 1600 gallons of milk, 1,000 loaves of bread, 30,000 paper napkins.

In one week: 1,000 pounds of coffee.

In one year: over $10,000 breakage in china and glassware.

These figures give some idea of the enormous job being done by the University of Notre Dame dining hall. Take another look at them. 15,000 meals. That's enough food to feed a family of three for over four and one-half years —probably longer; for few families of three will consume the amount of food that three average Notre Dame students put away at each meal.

Catering to the appetites of these Notre Dame students is the job of Mr. David C. Ford. Mr. Ford, who received his B.S. degree from Cornell in 1921, took over the managership of the Notre Dame dining hall seven years ago

In his seven years at Notre Dame, Mr. Ford has turned up a number of student likes and dislikes which complicate his job somewhat. The dining hall seldom serves cauliflower, turnips or squash. "We've found from experience," says Mr. Ford, "that most students won't eat them." N.D. men seem to be partial to three vegetables: peas (and here, canned peas are preferred over the frozen variety), corn (creamed and kernel) and canned beans (green, wax and string). Every so often, however, they'll go for some carrots and spinach, and so these vegetables are served about every ten days.

Notre Dame students also like their meat well-done, says Mr. Ford. This results in an unusual amount of cooking shrinkage, and, coupled with bone and fat loss, makes it necessary for the dining hall to figure on one pound of dressed bone and meat per serving to insure enough solid meat for every student.

The student who prefers turnips to beans, or who likes his beef rare, has to accommodate himself to the menu. "We have to cater to the majority in the matter of menus," says Mr. Ford. "Some students ask me why we don't serve sweetbreads or liver. Well we've found out that most of the fellows just don't care for these foods."

The author is a senior in the College of Arts and Letters and is majoring in Journalism. He lives in Ironton, O. Mr. McCarthy is a student assistant in the Department of Public Information. He was formerly on the editorial staffs of the SCHOLASTIC and DOME, *student publications.*

Located on the southwest corner of the campus, the dining hall occupies a site 232 feet wide by 206 feet long. It is constructed of brick and Indiana limestone and was designed by Cram and Ferguson of Boston, who designed the Cathedral of St. John the Divine in New York. There are two huge dining rooms at either end of the building. Between these rooms are the kitchen and the cafeteria. The latter is patronized largely by off-campus students and university employees.

Each of the dining rooms is 206 feet long and 62 feet wide, with a 30 foot ceiling; and each will likewise seat 1,000 students comfortably. Four steam table serving sections in each dining room provide eight cafeteria-style lines, easily accommodating all the diners between 7 and 7:45 in the morning, 11:40 and 12:40 at noon, and 5:30 and 6:30 in the evening. In addition, the cafeteria seats more than 200, and serves well over this number of patrons at each meal.

A faculty dining hall is located on the second floor, above the reception hall just inside the main entrance. This dining hall, however, is used only for special occasions.

Approximately 400 men and women from the South Bend area are employed at the dining hall. This labor force—large enough in itself certainly—is supplemented at meal time by 160 part-time student workers. These students do most of the bus boy work—cleaning off the tables after use and carrying the dirty trays, dishes and silverware to the scullery. A number of students also work in the scullery and dishwashing departments.

There is someone on duty at the dining hall at every hour of the day and night.

Raw meat for the Irish arrives in carload lots at Dining Halls.

Notre Dame Dining Halls serve 15,000 meals daily during school year.

The bake shop, for example, operates on a 24-hour basis: the pastry crew works a day shift and the bread and rolls crew works at night. The bake shop's sugared breakfast rolls are probably its most popular products, though students also appreciate the abundance and variety of fresh bread. As a whole, the student body seems to show a slight preference for rye bread. However, Mr. Ford says that they still make about the same proportion of rye, white and whole wheat.

When the dining hall first opened its doors in 1927, it obtained most of its beef, poultry, vegetables, milk and eggs from the Notre Dame farms run by the Brothers of the Congregation of Holy Cross. Now, however, all food comes from outside sources. Meat, of course, is the most expensive single item in the food line. But even excluding meat, the normal, everyday inventory of canned goods and staples amounts to $30,000.

In addition to storerooms, the dining hall basement also includes several refrigerator rooms, a vegetable preparation room and a butcher shop. All canned goods are opened in the vegetable preparation room and poured directly into the aluminum cooking vessels which are then wheeled on trucks to the kitchen. Two potato peelers handle all the vegetable peeling. The use of smooth-skinned potatoes of uniform size results in a waste of only about ten per cent. The butcher shop adjoins the beef cooler and is equipped with an overhead trolley to facilitate handling the huge cuts of meat.

The biggest problem Mr. Ford faces as manager of the dining hall is trying to outguess the students. How many of them will visit South Bend restaurants for their Friday dinner? Will many students take weekends, or will exams keep them close to the campus? Even the weather is an important factor, says Mr. Ford. When the first nice day of Spring rolls around, students like to rove from the campus for their meals. A rainy day, on the other hand, will result in a much larger attendance at meals.

The dining hall, with the rest of the university, obtains its drinking water from one of the several artesian wells on the campus. These wells, only one of which is used at a time, provide excellent drinking water, so pure that there is no need to chlorinate it. Nevertheless, the water is tested daily by a technician at the student infirmary. Service water for the dining hall is pumped from the lake. It is softened and pre-heated at the university's power plant before being piped across the campus to the dining hall.

The dining hall also has its own ice plant, and manufactures a ton each day throughout the regular school year. A ton a day, however, is the capacity of the plant, and so, in Summer, it is necessary to supplement this supply from outside sources.

Cafeteria-style meals haven't always been the rule on the Irish campus. From 1927 up until the war years, when the Navy came to Notre Dame, meals were served family style.

Here's a Sunday menu from 1928 which is practically the same as today's: BREAKFAST — orange, broiled ham, buns, grape nuts, tea, coffee or milk. LUNCH — chicken broth, roast chicken and dressing, mashed potatoes, green peas, head lettuce, thousand island dressing, ice cream and cake. DINNER— assorted cold meats, potato salad, stewed tomatoes, pumpkin pie. About the only difference between this and a Sunday menu today is the substitution of either boiled or scrambled eggs and sometimes bacon for the broiled ham served at breakfast. Today's students get both coffee and milk at breakfast, two glasses of milk at lunch, milk and coffee, (or tea or cocoa) at dinner.

With all its equipment, serving the number of people it does, it's easy to see why the Notre Dame dining hall is rated as one of the largest institutions of its kind in the country—at least under one roof. Although originally intended to serve only 2,000 students, it has managed to keep pace with the growth of the university, and today is serving over twice that number. And with young men all over the nation (and the world too for that matter) still clamoring for admission, with a new residence hall going up on the northeast corner of the campus, it looks like Mr. Ford might have to raise that order for 15,000 meals.

A Notre Dame Student Visits . . . .

Trappist Gethsemani

A VISIT to the famed Trappist monastery in Gethsemani, Kentucky, was made by thirty-seven Notre Dame students during mid-semester vacation.

Leaving by bus, this group spent three days in prayer and meditation among the monks who have now become so well-known through the literary efforts of Thomas Merton, the "Talkative Trappist."

Mr. Moresco's diary is an interesting version of a Retreat with the holy men of Gethsemani.

NOTRE DAME is grateful to Joseph L. Moresco, sophomore, Staten Island, N. Y., Robert J. Winschel, senior, Erie, Pa., and the "Scholastic" for permission to reprint an interesting story of a Retreat with the Trappist Fathers.

Friday

We arrived at the monastery at 5:40 p.m. As we entered the guest house, we were struck by the inscription in the Main Hall — in bold, black letters was written, "God Alone." How completely these two words described the life of these monks we were to discover in the next three days.

Father Francis, our moderator, greeted us most cordially, making it a point to learn our names. Before we could begin any banter with him the clanging of the dinner bell called us to chow. Immediately after a hearty meal we went to the church for Compline and Salve Regina. As we passed back to the guest house one of the men saw a placard near the door which read "Women Forbidden to Enter This Enclosure Under Pain of Excommunication."

The service in the church was very impressive, reaching a dramatic climax when, in complete darkness, all the monks made an examination of conscience as a solitary light shone on a reproduction of Mary and the Christ Child high on a stained glass window behind the main altar. It seemed like a quick look into Heaven itself as we

The holy men of famed Gethsemani, Trappist monastery, meditate in prayer.

stared at that beautiful image. After services we retired.

Saturday

We rose this morning at 5 a.m. and headed for the church and morning prayers. After prayers we had our first meditation, conducted by Father Andrew, our retreat master. Very appropriately "Heaven" was the topic of discussion, a discussion which gave us all a more realistic picture of God's kingdom than we had known before. Low Mass followed the meditation. We recited the Rosary in common as a thanksgiving, then went over to breakfast. After breakfast we returned to the church for High Mass and our morning conference, entitled "Holiness." This conference pointed out the true, Christian concept of holiness as contrasted to some of the false and abstract ideas which are so prevalent.

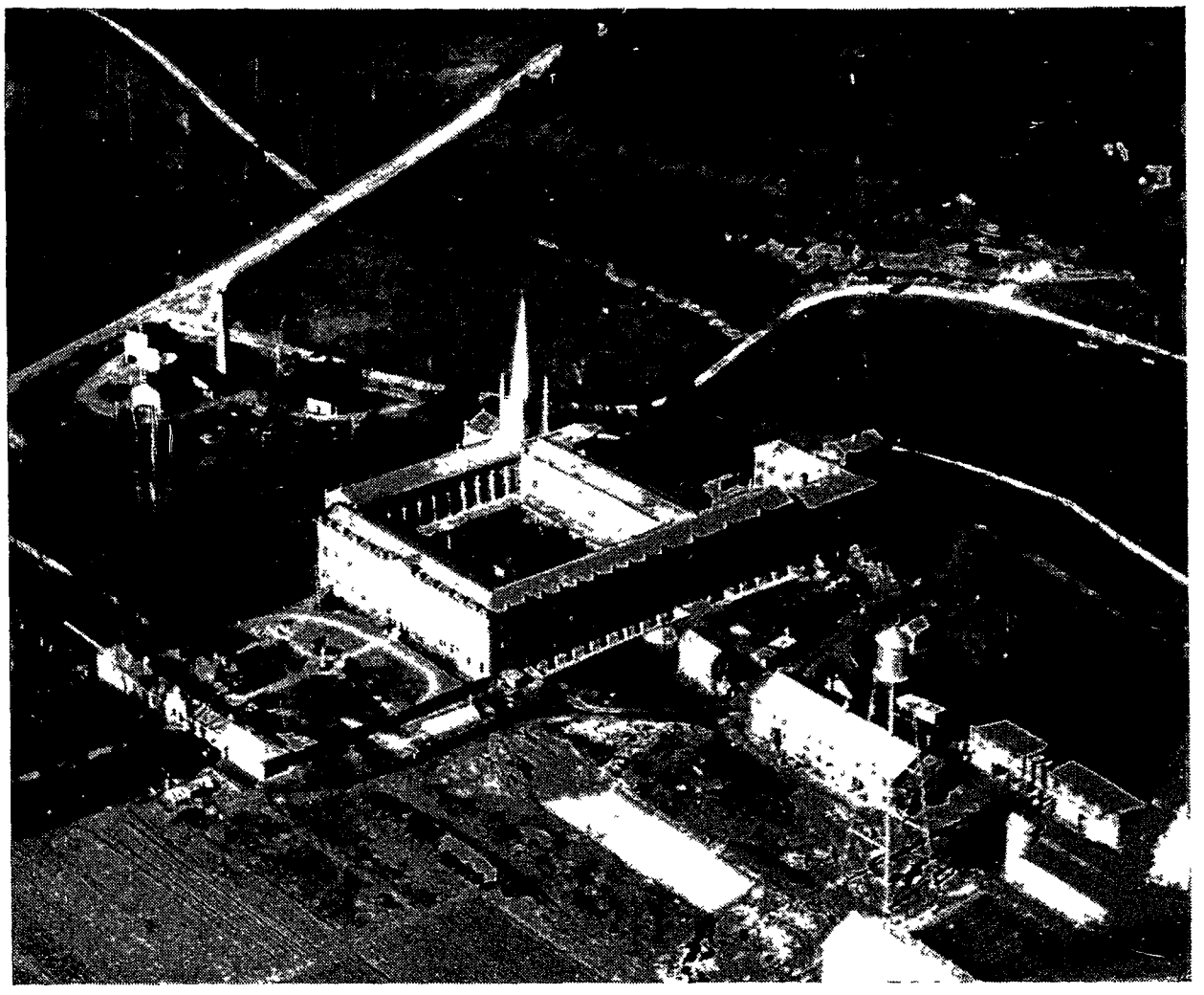
After this talk, extracts from Father Eugene Boylan's book, *This Tremendous Lover*, were read to us, expressions of the perfect relationship between husband and wife. A visit to the Blessed Sacrament and the Stations of the Cross followed lunch, then a second part of the conference on "Holiness." Prior to the singing of Vespers confessions were held. The ceremony of Vespers was awe inspiring, the chanting of the monks like a magnificent orchestra playing praises to the Lord. At 6:30, after supper, we again attended Compline, receiving the Abbott's blessing for the night.

Sunday

Today, the Lord's day, we rose again at 5 a.m. Following morning prayers and meditation we heard Mass and said the Rosary. Breakfast followed. At 8:45 we attended our first conference of the day, followed by High Mass. After dinner we were taken on a tour of the grounds by Father Francis. This man's ready wit and gracious manner added a nice touch to his various explanations and answers to our many questions. We paused for a moment at the monastery graveyard where Brother Joachim, the "man who got even with God," is buried. We saw the grave of a monk who had formerly been a circus clown and who had just renewed his Baptismal vows when he died. "There is no doubt where that clown is playing his tricks now," remarked Father Francis.

From the cemetery we passed around the grounds, observing the various occupations in which the monks were engaged. All the farming necessary to make the monastery self-sufficient along these lines is conducted by the monks.

Entering the cloister we were led to the part of the building comprised of the monks' cells, each cell six feet square which contained, without exception, a hard straw mattress, three clothing hooks and a Crucifix bordered by two holy pictures on the wall opposite the bed. True poverty, simplicity and frugality are the bywords here.



There are 175 monks at Gethsemani.

It was during this walk that Father Francis told us about Father Louis, better known as Thomas Merton. Before *Seven Storey Mountain* was published, Gethsemani had 70 monks. Since then, the number has jumped to its present total of 175. Concerning Merton and his famous books, Father Francis said, "We figured that Father Louis was on the verge of publishing a great work because of the long hours he spent in the monastery's vault of priceless books. He would read for five or ten minutes and then meditate over the material for half an hour or so." When Merton began submitting his manuscripts in great profusion it caused no surprise at Gethsemani. He is held in great esteem by his fellow monks, an inspired, very holy man whom Father Francis regards as "one of the greatest poets in the world today."

Supper was a welcome respite after Vespers. Following Vespers we had another extremely interesting conference, this one dealing with Peter's denial of Christ as compared with the betrayal of Judas, a conference which drew the moral that, no matter how far we fall, we must never despair. Compline and Salve Regina brought Sunday to a close.

Monday

Another day of 5 a.m. rising. The routine proceeded much the same as the preceding days, and the conferences were again most interesting. The first dealt with the Passion of Christ; the second, material success as compared with spiritual gain. The third conference treated husband and wife relationships and the proper union in marriage.

After an 11:30 lunch we once more visited the Blessed Sacrament and made the Stations of the Cross. Vespers at 4:30 were followed by supper and our last conference. Here we received the Papal Blessing and had our religious articles blessed. We retired at 8:30 after Compline and Salve Regina.

Tuesday

Today we rose at 2 a.m. and attended Matins and Lauds. This activity was not on the regular retreat schedule. At 5:20 a.m. we had our last meditation conducted by Father Andrew who, we found out, had attended the Notre Dame Graduate School for one year. After Mass at 6 we ate breakfast, leaving by bus for Notre Dame at approximately 8 a.m. Our return trip took us through Indianapolis for a chow stop and then on to the campus by 4:30 that afternoon. The Retreat was over.

All-American

Bob and roommate Marty O'Connor.

The author graduated from Notre Dame in the 1950 class, having majored in Journalism. He is a native of San Diego, Calif., and served with the U. S. Army, during World War II, in the Pacific area. Mr. Monahan was student assistant in the Athletic Publicity department at Notre Dame, and is now on the South Bend TRIBUNE *staff. He received the O'Donnell Gold Medal for obtaining the highest scholastic average throughout his four-year course in Journalism.*

By Harry Monahan

NOTRE DAME has a new cover boy candidate for this fall. At least if all the camera shutters recently aimed in Bob Williams direction are any indication, the Baltimore quarterback is going to be a favorite at the drug store magazine racks in September and October.

Bob hit the headlines during the 1949 season as the gridiron's surprise All-American of the year, so that with the opening of spring practice he had a busy time cramming all his obligations into 24 hours. Class work, spring football practice, fan mail, picture appointments, and an occasional movie with roommate Marty O'Connor or Jerry Groom, captain-elect for the 1950 season, helped keep Bob's spring schedule as busy as his fall one had been.

Duty called Bob out of the sack between 6:30 and 7:00 a. m. to lay out vestments in the chapel of Cavanaugh hall where he served as sacristan. After Mass he picked up his roommate for the trek to the Dining Hall and breakfast. Of course since Bob did not have a class until 9 a.m. any morning there was a strong temptation to slip back into bed for a few more winks after Mass, and Bob sheepishly admits he fell to the temptation occasionally. Marty would give some statistics on the subject, if Bob would give him the chance.

Eight o'clock brought the mail and more requests from young fans, in addition to letters from parents, brother Hal, who is foreign correspondent for the *Baltimore Sun* now stationed in Berlin, and best girl.

Bob was amazed by the requests he got from the kids. They requested everything, including his helmet, shoes, shoulder pads and monogram sweater. As an aftermath of the Johnny Lujack era, Bob received one letter addressed to the University of Notre Dame at Connellsville, Pa.

During the season the hall mailman slipped 50 letters a week under the door of 157 Cavanaugh, although the mail did fall off a little during the spring, fortunately for Bob's full schedule. Bob answered every letter himself whether they just wanted his autograph or were credulous youngsters like the one who wanted to know if it was true that the Notre Dame team practiced with lead weights on their shoes so that they could run faster in the actual game when the weights were removed. But this writing chore had to wait until evening because just reading the mail and the last minute preparations usually brought Bob right up to the warning bell for his 9 o'clock class.

Tuesday, Thursday, and Saturday Bob had a full morning with classes at 9, 10, and 11 o'clock, but Monday, Wednesday and Friday, he loafed through with classes at 9, 11, and 1:15 o'clock. That 10 o'clock spot on Monday, Wednesday and Friday was good for dashing off answers to fan mail. But when the photographers hit campus it was not unusual to see Bob in the Stadium or on Cartier field in a familiar green and gold uniform posing for some shutter-mechanic. One day it was Gus Pasquerella for *Saturday Evening Post;* later Mike Elkins came on assignment from Stanley Woodward and *Football Illustrated; Look's* Frank Bauman followed; and *Sport Life* concluded the parade by some color shots for them.

Bob was originally planning to major in journalism, but became interested in radio work, particularly in the sports field, and transferred to the speech de-

Mr. and Mrs. Williams tour campus.

With best girl at "Huddle."

Bob Williams

partment. His slight southern accent should give him a good radio personality, and his calm temperament will certainly be an asset and an improvement in a field plagued with hysterical mike monsters.

Noon time means the same thing for other Notre Dame students, and Bob joined the parade to the Dining Hall with Marty and Jerry. Coach Frank Leahy's noon meeting with the team was next on the schedule.

Aside from the one afternoon class on his schedule Bob had the afternoons free for relaxation, answering mail or studying.

The visiting photographers took advantage of Bob's free hours to take pictures of—Bob's free hours. An untold number of flashbulbs popped in Room 157, the Grotto, the Rockne Memorial and the photogenic lobby of the Commerce Building. While the photographers were busy loading film holders or filling out expense accounts, Bob took advantage of the respite to get his class work up to date before the afternoon practice session.

The grunt-and- groan sessions on Cartier field took a large and strenuous period out of every afternoon for Bob. But even here he was not free of the camera sleuths.

The magazines and newspapers gave the 1950 Irish eleven a lot of attention during spring practice.

The team is young, and inexperience is an important factor to be reckoned with. They lack nothing in spirit, but, as Bob explains:

"What the veterans do by instinct, our sophomores have to learn and remember. The split second difference in reflexes might just be the margin to produce a touchdown for or against a team."

Occasionally the practice schedule would give the team an afternoon off and after the Old Timer's game closed practice on May 13, the footballers were able to see how the other sports were doing. On those afternoons when the Irish baseball team was home, Bob could be found in the WND radio booth along the third base line of the Cartier field diamond broadcasting the game for the students in their residence hall rooms. Bob was following the precedent set by his predecessor Frank Tripucka, who was sports director of WND at one time, and has the example of another former Notre Dame quarterback to encourage him in his radio ambitions. George "Snake" Ratterman is now a sportscaster in Buffalo when he isn't burning up the pro gridiron.

Bob also called the play-by-play for the several home basketball games and

Touchdown pass.

was at ringside for the 1950 Bengal Bouts. The student reaction to his work was good, and the Baltimore radio executives might well consider adding this local celebrity to their staffs for off-season work. We say "off-season" because he will surely be a hot pro prospect following the final game of the season against Southern California in Los Angeles on December 2.

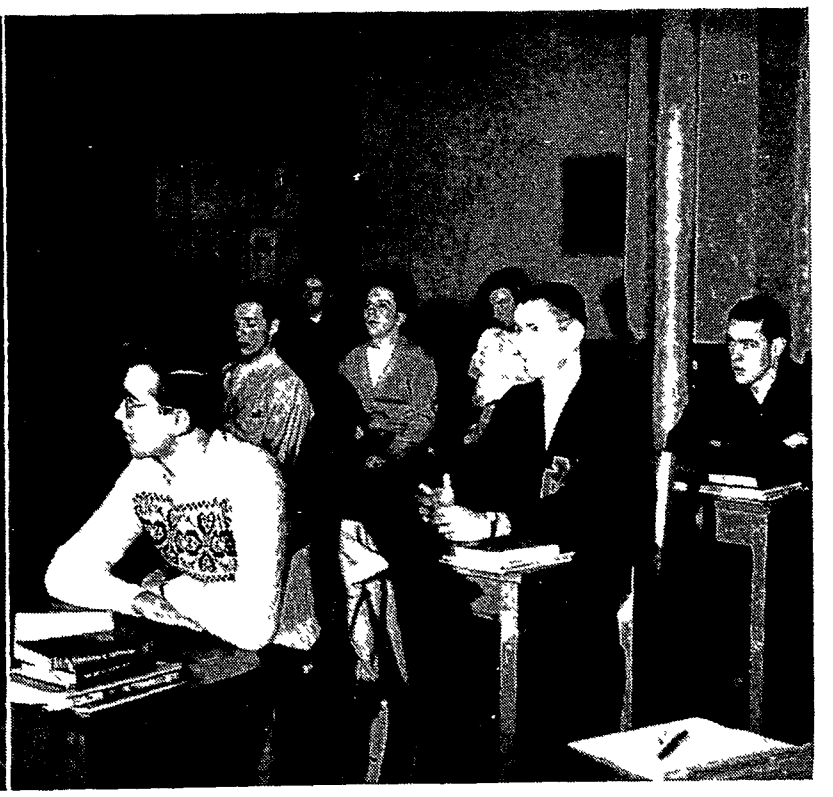
Following an evening meal which revitalized the squad after the heavy practice session, Bob usually adjourned once more to his Cavanaugh room to hit the books again and maybe get more fan letters answered. If the class work was light, Bob, Marty and Jerry went to town to enjoy their favorite extra-curricular activity—the movies.

Bob was also busy on the speaking circuit when week-end plans would permit him to leave the campus and he made an impression there almost equal to the one he made on the football field. He was a big favorite at high school banquets and maybe *Look's* forthcoming cover showing Bob surrounded by bobby sox autograph seekers has a small percentage of authenticity. On Universal Notre Dame Night, Bob and the Rev. Thomas Brennan, C.S.C., spoke at Utica, N. Y. Mr. Edward J. Sweeney, secretary of the Notre Dame Club of the Mohawk Valley, expressed a typical reaction to Bob's personality in a letter to the Athletic Department:

"Words cannot adequately express the graciousness and humbleness of Bobby Williams. For a young man of his age he controls himself to a degree most of us around this area have never before witnessed from any individual with the prominence Bobby has attained thus far in his young life."

Bob attends Mass.

Williams is senior in Arts and Letters.



A MILLION DOLLARS

(Continued from Page 7)

anything to do, let him work his way through, too.'

"The boy finished college," said Father John, "and went on to become one of the most successful investment bankers in the country. A few weeks ago he told me this story and said, 'Now you know why I've always had a warm spot in my heart for Notre Dame. I never got over a Catholic school doing all that for a poor Protestant farm boy.' And then, just to show he meant it, Ernest M. Morris of South Bend, Indiana, gave Notre Dame University a million dollars."

"That's wonderful," I said, "How many boys do you have working your way through school now?"

"We have 830—working all or part of their way," he said, "and I'll give you a Believe-it-or-Not—the total profits from all our athletics including our justly famous football team nets about $200-000 a year—but it costs us $350,000 a year to help the boys who are working their way."

I said, "Most people think football pays for everything at Notre Dame."

"They also think all the students are Catholics and all the teachers are priests," said Father John, "but one out of every ten boys is a non-Catholic and while we have 86 priests on the faculty we have 72 non-Catholic teachers—top men, too. The head of our Mechanical Engineering is a Baptist; of Mathematics a Jew; of Electrical Engineering, a Presbyterian—and the head of our Chemistry School where synthetic rubber was born and which today is admitted to be one of the best in the world—is a Quaker."

Father John glanced at his watch and I started to go. "Wait," he said, "what was that story you told at a football dinner years ago when I was a student —about how you worked *your* way through Notre Dame?"

"It was something like your friend Mr. Morris," I said, "except for the horse and buggy and the million dollars. I was a farm boy, too, from southern Illinois—down in 'Egypt' and when I came to Notre Dame in the fall of 1910 I asked to see the boss. One of the boys said, 'President Cavanaugh's office is right up those steps.' So I went up and knocked at his door and that great organ voice boomed melodiously, 'Come in!' and I walked in confidently in my shiny, new mail-order suit.

"Father Cavanaugh rose and warmly shook hands with me. 'What can I do for you, son?' he asked. I told him I wanted to go to Notre Dame and he asked me if I had made my arrangements. I said, 'No—I'm making them now. And I might as well start in and tell you that I haven't any money.'

" 'That's too bad,' said Father Cavanaugh, "We can't buy anything around here without money—what was your idea?' I told him that I had come to work my way and he said there weren't any jobs, they were all taken. 'Come to think of it,' said Father Cavanaugh, 'the boy who takes care of Old College hasn't come back yet. You can take that job—but if he shows up—out you go.'

"Well—I scrubbed floors and made the beds in Old College where a handful of priests and seniors lived and I was as busy as all seven of Disney's Little Dwarfs. I had a room all of my own and I used to swim in the lake before class and I was never so happy before or since.

"But one day Father Cavanaugh called me to his office and the axe fell. 'The boy has come back,' he said, 'you'll have to find a job in South Bend. Of course you can't make enough money there to pay your tuition so I've invented something here for you.'

"I got a job as office boy for $4 a week on the South Bend *News*, paid $1 a week for my room which was the corner of a boarding-house hallway screened off with chicken wire. Breakfast at Kables was six cents—3 cents for coffee and 3 cents for doughnuts—(happy days!). And for my lunch and tuition at Notre Dame, I am proud to say, I functioned as the lowest form of collegiate life. I was the student waiter who waited on the student waiters."

"When I first heard you tell that story," said the President of Notre Dame as we shook hands at the elevator, "it made a deep impression on me. Do you know why? Because at the time, I, too, was working my way through Notre Dame."

(*Ed. Note*: Notre Dame receives many lovely letters. The following letter from Mr. Smithe is presented because it combines several circumstances we would like to recommend to your attention. The generous contribution of course is helpful and appreciated. But the conviction of the merit of the University, educationally as well as morally, is most stimulating. The mention of Bob Considine's widely read column on Notre Dame's financial needs, and the mention of John Coleman, distinguished New York member of the Notre Dame President's Committee, point up our major hope—*your* realization that Notre Dame's greatest source of hope for help lies in the continuous telling of the Notre Dame story).

May 19th, 1950

Notre Dame University
Notre Dame, Indiana

DEAR FATHERS:

It affords me great peasure to enclose my check in the amount of $500 as a contribution to the Notre Dame Science Centre Building Fund. I am prompted in this partially by reason of the fact that my two sons are now students at Notre Dame where they are, to my mind, deriving greater benefits, educationally and morally, than would be possible at any other university.

In addition, I have great admiration for the many fine works being carried on at Notre Dame, and after reading Bob Considine's recent enlightening article, realized the financial handicaps which are encountered as compared to more heavily endowed universities.

Finally, I welcome this as an opportunity to express concretely my appreciation of the courtesies extended me and my family by John Coleman whose activities in the interest of Notre Dame are so well known.

Sincerely,

/s./ Edgar A. Smithe

ND RECEIVES ALUMNI CLUB GIFT

Jack Griffin presents $5,000 check to Father John Murphy, vice-president, from St. Louis Alumni Club.

National Meeting of Medicinal Chem Society

A new type of weapon for combating the virus diseases, including polio, mumps, and the common cold, may result from research described to 500 chemists at the American Chemical Society's second national medicinal chemistry symposium held at the University of Notre Dame.

The research, still in the exploratory stage, is an outgrowth of the successful synthesis of the drug chloromycetin, Dr. Harry M. Crooks, Jr., of Parke, Davis & Co., Detroit, Mich., told the symposium, which is sponsored by the society's Medicinal Division. Dr. Crooks was one of the chemists who synthesized chloromycetin—the first antibiotic to be made artificially.

Now Dr. Crooks and his colleagues are trying to create a better drug by altering the structure of the synthetic chloromycetin, and it is by this means that they hope to find a compound which can be used against virus maladies.

Synthetic ACTH has been brought closer than ever before by rapid recent progress toward isolation of the anti-arthritis drug in pure form, the chemists attending the American Chemical Society's Second National Medicinal Chemistry Symposium were told.

Purification of the compound undoubtedly will be announced "within a few months," Dr. E. E. Hays, director of biochemical research of Armour & Company, Chicago, announced.

Optimism on the outlook for the synthesis of cortisone, the other new weapon against arthritis, also was expressed. In the light of recent research, the "situation looks favorable for total synthesis," Dr. Harold L. Mason, professor of physiological chemistry at the Mayo Foundation, Rochester, Minn., declared.

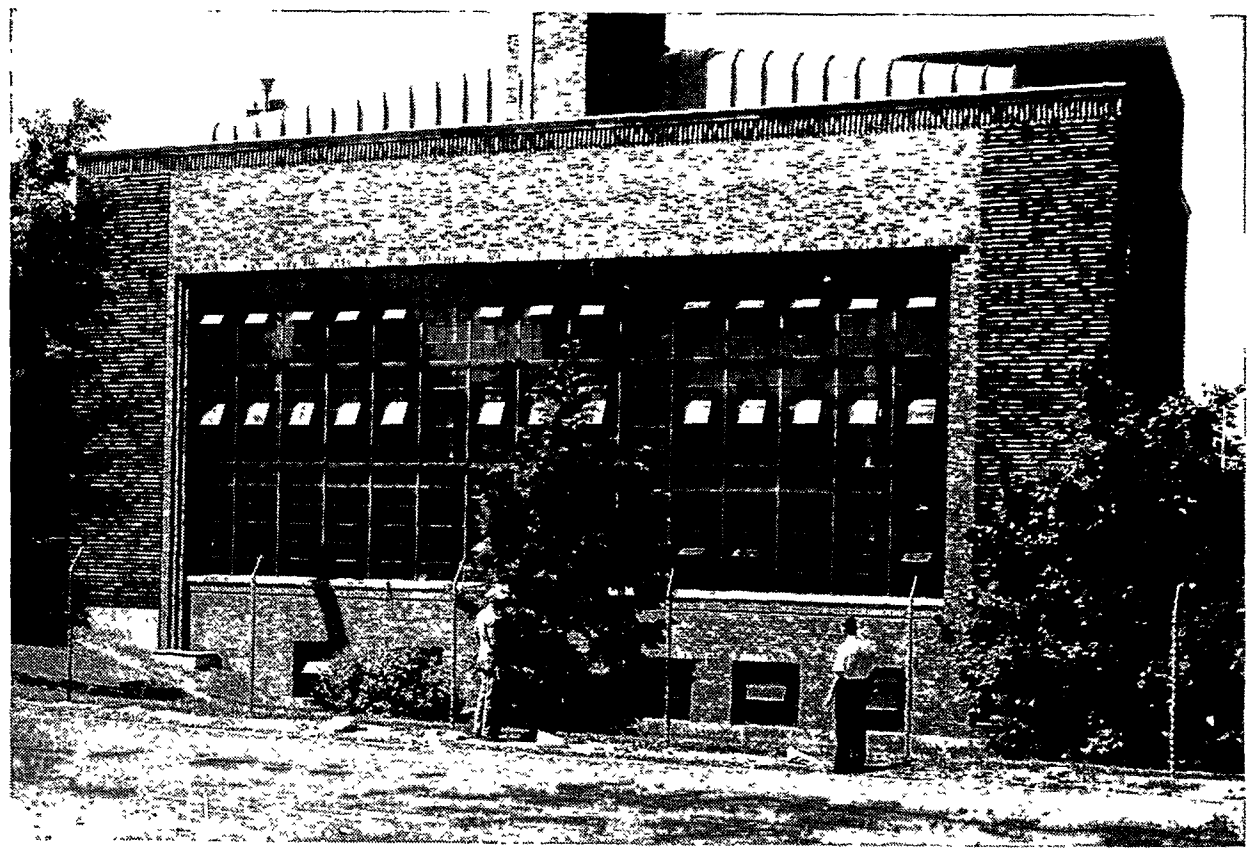
A centuries-old Egyptian drug for controlling muscular spasm may prove a valuable aid in combating angina pectoris, the most painful of all heart diseases, it was indicated at the final session of the second National Medicinal Chemistry Symposium.

The drug, called khellin, has a far more lasting effect than other comparable compounds now used in treating agnina pectoris, Dr. Rene Wegria, assistant professor of medicine in the Columbia University College of Physicians and Surgeons told the group.

The Egyptians discoverd long ago that khellin, which is obtained from a plant technically known as *amno visnaga*, was a potent agent for relaxing the muscles, and it became a useful weapon for fighting bronchial asthma, intestinal spasm, and other ailments characterized by drastic muscular contraction.

A few years ago, Dr. George von Anrep, internationally known professor of cardiac physiology in the University of Cairo, showed that khellin had a marked activity on the coronary vessels. His initial experiments along this line produced highly encouraging results, which were picked up and confirmed in the United States.

Khellin also has been found promising as a means of treating coronary sclerosis, in which the flow of blood to the heart muscle is shut off by constriction of the artery supplying the blood, Dr. Wegria said.



Notre Dame steam plant was built in 1932.

A $7,893,300 Question.

(Continued from Page 9)

building needs, that will take care of furnishing and equipping these buildings, of mounting operating costs, and eventually of endowment needs.

One alumnus, one friend tells another about the work that Notre Dame is doing for the youth of America and the world, for the future of America and the world. He tells, too, how all can help further the education of this youth, help guarantee what this future shall be. And because Notre Dame is doing this work, because Notre Dame has such an attraction for so many different types of people, thousands each year contribute to, associate themselves with, this worthwhile effect to the extent of their ability. Remembering this, Notre Dame feels that in the years since her founding, she has never received a small gift, an insignificant contribution.

* * *

Seeing in his mind's eye this throng of friends and associates, each stepping forward to offer his aid, the "City Manager" smiles faintly and rolls over for a last time before dropping off to sleep.

And as he does so, his attention is captured and held by a sign written in the sky! Outside the windows of Corby Hall up over the roof-tree of the Church, the clouds hover low and black. But outlined sharply against the darkening sky is the lightsome figure of the Golden Lady atop the Dome, thrown into sharp relief by powerful floodlights!

No need to worry unduly over salaries and food and light and heat bills, so long as the Lady is up there watching over Her "hotel-manager", his employes and his guests. No need to fear for the operations of the University so long as She stands guard day and night, in stormy weather and in sunshine, over the City of Notre Dame, the City of Our Lady!

The editors of NOTRE DAME are sincerely grateful to Mr. John P. Burns, Managing Editor, Notre Dame ALUMNUS, without whose cooperation this issue would not have been possible.

Hugh Dean (r), vice-president in charge of manufacturing, General Motors Corp., receives 'Man of the Year' award from ND Detroit Alumni Club president, Thomas Moran, while Father Theodore Hesburgh, C.S.C., executive vice-president of the University, looks on.

LOBUND Dedicates New Germ-Free Life Labs

A stock colony of germ-free animals for scientific research was begun recently in conjunction with dedication ceremonies for a new Germ-Free Laboratory in the Laboratories of Bacteriology at the University of Notre Dame (LOBUND).

The new apparatus in which the Germ-Free Animal Colony will be reared is designed to house approximately 1,000 animals at one time. From this huge tank, which is entered by a diver who must dive through a germicidal solution before feeding and caring for the animals, the animals may be removed several at a time to smaller germ-free apparatus for scientific research in medical problems.

The Rev. John J. Cavanaugh, C.S.C., President of Notre Dame, announced during the dedication ceremonies the establishment of LOBUND as "an Institute for Research in the Life Sciences."

Speaking at the dedication ceremonies of LOBUND's new Germ-Free Life Laboratory, Dr. J. R. Blayney, Director of the Walter G. Zoller Memorial Clinic at the University of Chicago, declared that the "germ free animal technic has now positively demonstrated that dental decay in the white rat does not occur in the absence of microbic life."

Dr. Blayney described experiments seeking the cause of tooth decay which are being conducted in LOBUND in collaboration with the Zoller Memorial Dental Clinic.

Dr. Charles F. Kettering, Vice-President and Research Consultant of the General Motors Corporation, Detroit, Mich., concluded the first day of the dedication program by declaring that there are enough natural resources on the earth to keep civilization going for at least 2,000 years. And by that time, he added, the human brain should have been able to discover additional conservation methods.

"Nature is here to tell us her secrets if we ask her in her language," Dr. Kettering said of both his research and that of LOBUND.

Also on the program were: Dr. Charles DeKoninck, Dean of the Faculty of Philosophy at Laval University, Quebec, Canada; Dr. Robert Chambers, Professor Emeritus at New York University; Dr. Ira L. Baldwin, Vice-President of Academic Affairs at the University of Wisconsin; Dr. Bradley Dewey, President of the Dewey and Almy Chemical Company, Cambridge, Mass., and Chairman of the Advisory Council for Science and Engineering at Notre Dame; Rear Admiral T. A. Solberg, U.S.N., of Washington, D. C., Chief of Naval Research; Dr. Oram T. Woolpert, Director of the Biological Department of the U. S. Chemical Corps, Camp Detrick, Md.; Dr. John H. Teeter, of New York City, Cancer Research Administrator of the American Cancer Society and the Damon Runyon Memorial Fund; and Mr. Watson Davis, of Washington, D. C.,

Annual Writers' Meeting Held on ND Campus Again

The second annual Writers' Conference was held at the University of Notre Dame recently. Heading the workshop was Miss Caroline Gordon, author of "Women on the Porch" and "The Forest of the South." She is known as a novelist, critic and short story writer. Others on the staff included, Father Leo Ward, C.S.C., Professor J. F. Nims, Professor Richard Sullivan and Professor John T. Frederick.

U. S. Leads in Education

Time, April 3, 1950, says that "since V-J Day we have built in the U. S. 150 *new* four-year and two-year colleges, and expects us to add 75 of these in 1950. Our 1808 colleges and universities and 2½ million students give us No. I world ranking. But the competition will be keen if we are pinched."

Excuse, Please

The name of John Parchem, co-author of *Supersonic Speedway*, Spring, 1950, NOTRE DAME, was inadvertently omitted from the article. Mr. Parchem is an assistant professor in the Department of Aeronautical Engineering, and graduated from Notre Dame with a B.S. degree in 1944. During the past year he has been studying at the University of Michigan.

Campus Maintenance 'Musts' . . .

● Costs to maintain more than fifty buildings at Notre Dame have skyrocketed — the annual expenditure for coal amounts to $102,000 (see, "A $7,893,300 Question," page 8). The four sketches below are representative campus structures — present and future. YOUR GIFT, whether large or small, will be a direct aid to the University's program of training moral, responsible leaders — and providing facilities for its 5,000 students.

COAL—
18,000 TONS, YEARLY

ELECTRICITY—
6,010,000
Kilowatt hours
YEARLY

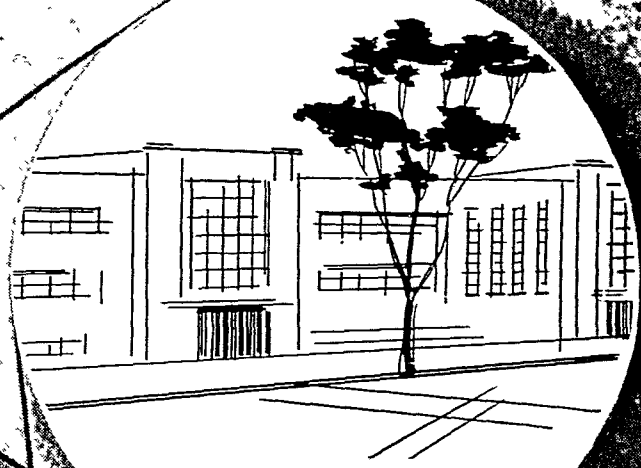
WATER—
1,000,000 GALLONS
DAILY

LIGHT
POWER
WATER
HEAT
SUPPLIES

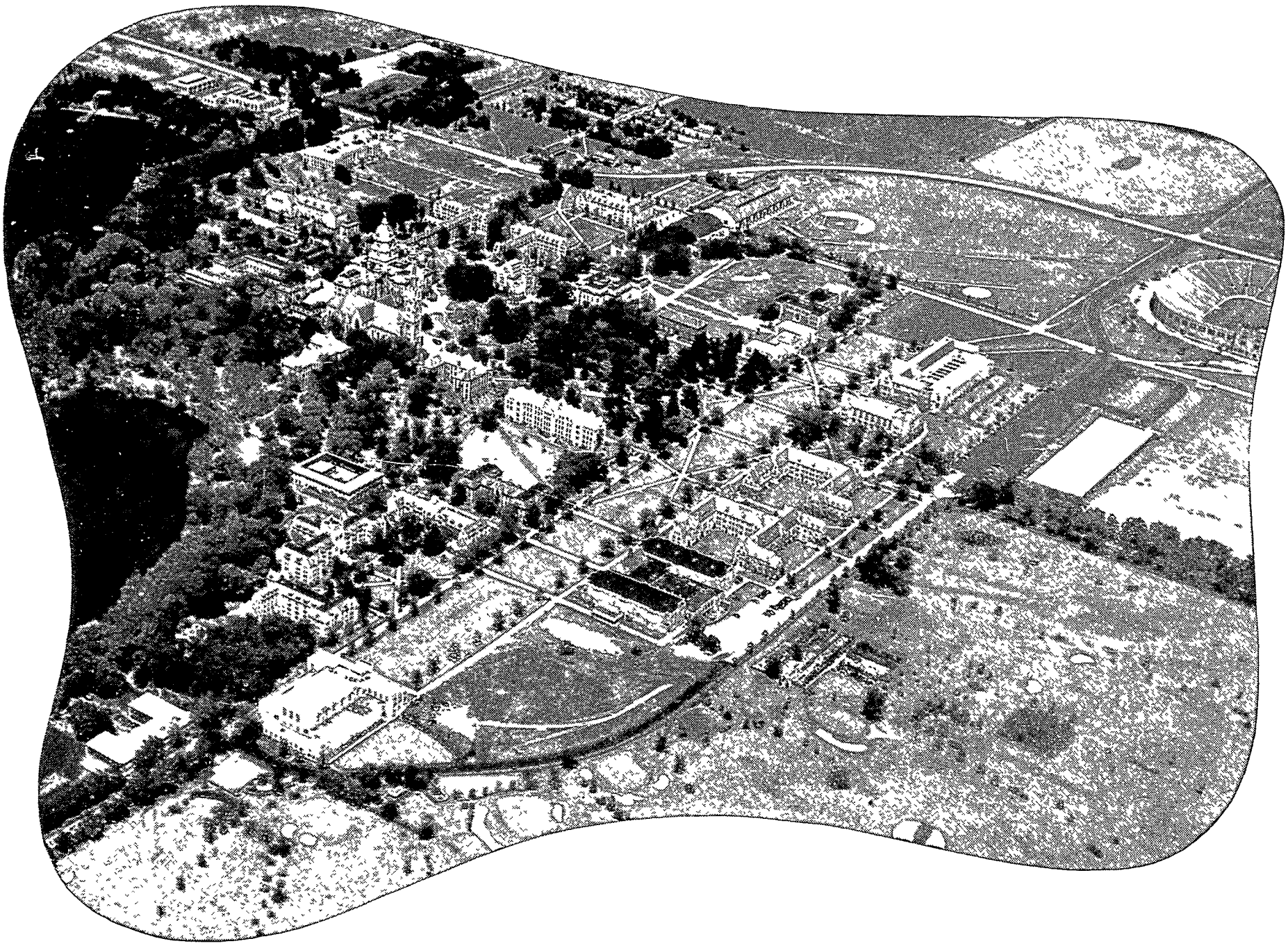
Sorin Hall

Alumni Hall

College of Commerce



Science Building



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