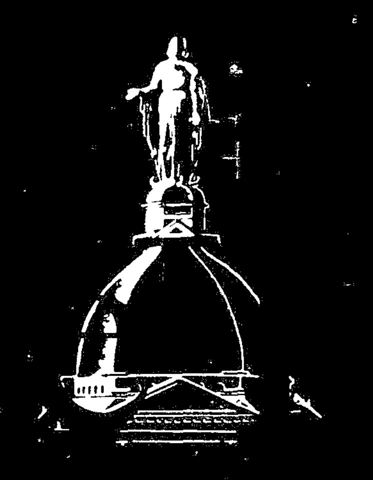
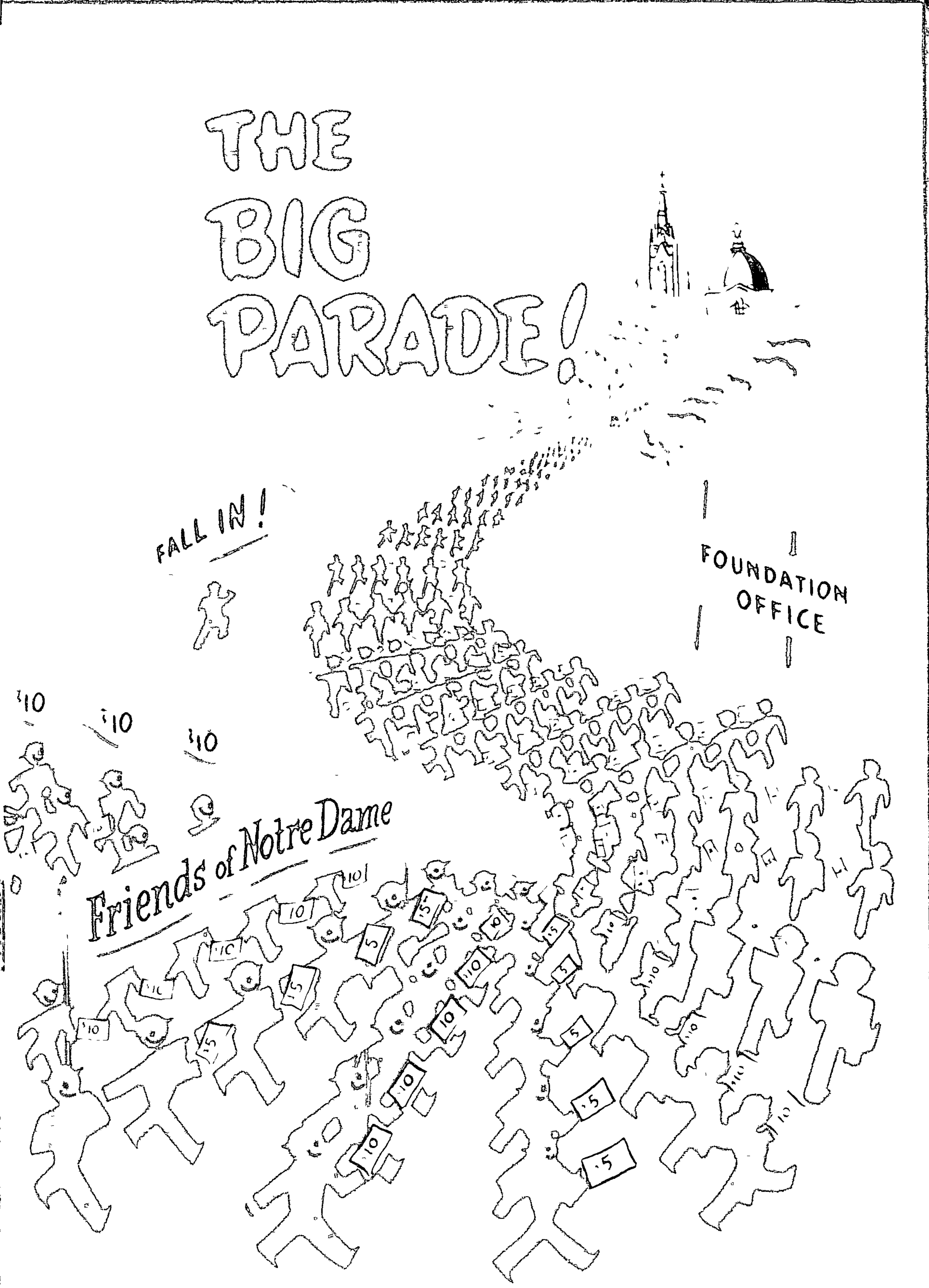


A Magazine of the University of Notre Dame



Annual Small Gifts from Friends Will Provide Notre Dame with Revenue for Expansion of Utilities, and Equipment

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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.

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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.

The LOBUND Institute • Constitutes a research organization of full-time scientists effecting a program in Germ Free Life, Microrgy, 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.

Thar's Gold...

By Joseph M. Dukert

Department of Metallurgy at Notre Dame Offers Important Curricula

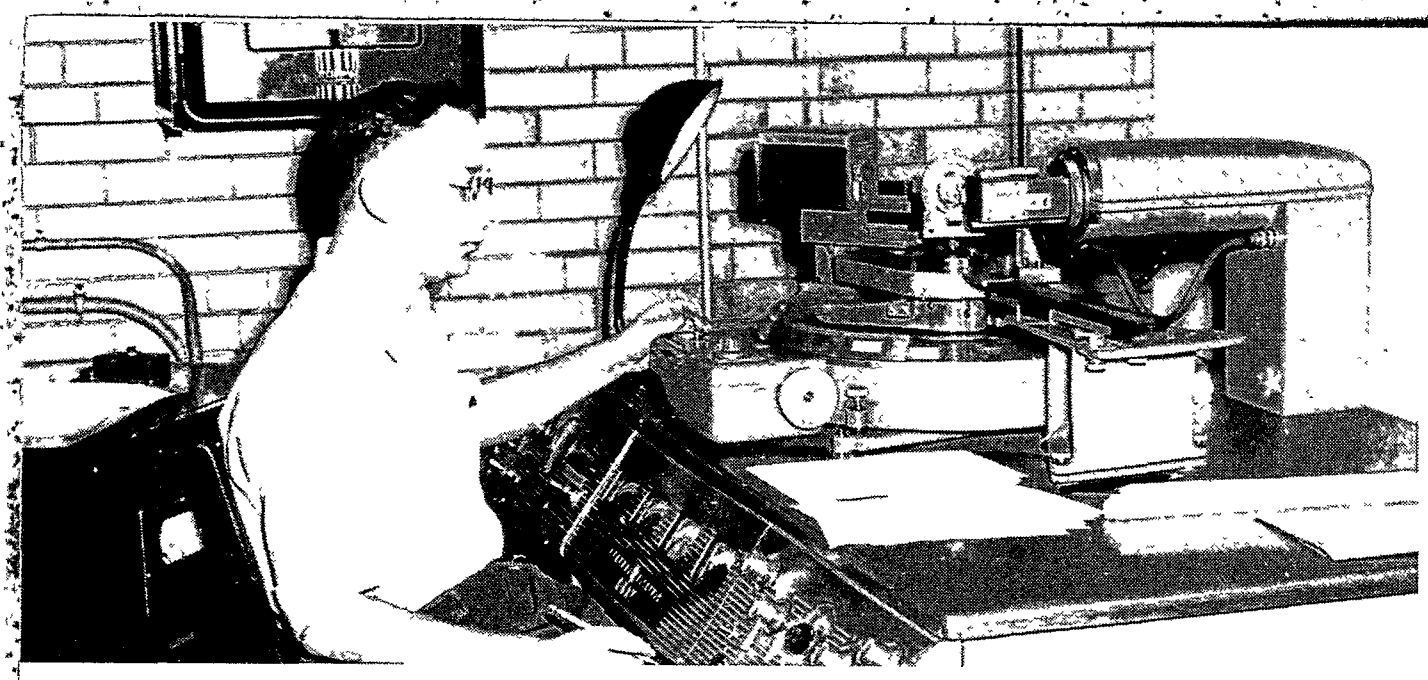
A WRINKLED old man in a black robe placed the clay cup on the fire. Then he stepped back; and the other two men leaned forward intently as the small block of metal in the cup began to change color. Eagerly, they cooled the block and examined the final product. *It was real gold!*

There wasn't anything miraculous about this "gold-making" experiment, though. The action could have taken place in any alchemist's den during the 14th century. What the awed spectators didn't realize was that the original "lead" was a clever fake. The alchemist had actually been working with a heavy alloy of mercury-and-gold that looked and felt like lead. When the mercury boiled off, the stuff left in the cup was real gold; and the alchemist was in line for a neat "investment" from his amazed guests.

What does all this prove? Just that the study of metals is nothing new, even though our present science of metallurgy is only a youngster.

Haphazard bits of experimental knowledge like this had been piling up since the beginning of the Bronze Age; but little was done to organize the data until about 50 years ago. In that half-century, metallurgy has grown from a handful of parlor tricks into the backbone of almost every mass-production industry in the world.

Notre Dame's part in this amazing



This long control-panel operates Notre Dame's X-ray diffraction machine, used to study details in metal less than 1/100,000,000 of an inch long.

development dates back only half that far; but its growth has been just as remarkable. Twenty-five years ago, metallurgy was just a single course in Notre Dame's Department of Chemistry. Now it is a department in itself, with a staff of five professors and fifteen graduate assistants.

At the outset, ND metallurgists had to use make-shift equipment assembled from chemical apparatus. Today, they have temperature-controlled electric furnaces . . . delicate equipment to measure specimens within one-millionth of an inch . . . precision instruments which reveal details a hundred times that small.

From the standpoint of general welfare, it's a good thing that Notre Dame's Department of Metallurgy *has* kept up to date on equipment and theories. Metallurgy itself is out of the minor leagues now. It's vital to peacetime comforts as well as to national security in time of war; and well-trained metallurgists are badly needed.

Metallurgy grads enter various fields

After a metallurgy student graduates from Notre Dame, he may enter a number of fields. His job may begin as soon as some metallic ore is mined — whether it's iron, tin, zinc, or uranium. Here metallurgy is called on to figure out the best methods of separating the raw metals from their compounds.

That doesn't finish the job, though, because pure metals aren't much good by themselves. Some are too soft; some are brittle; some can't be molded into the necessary shapes for tools and machine-parts. The ND-trained metallurgist may be asked to solve some of these difficulties by preparing alloys — combinations of different metals — with special properties to fit each use.

Finally, useful parts have to be shaped from the big ingots that come from the melting furnaces. And here's another opportunity for a metallurgist. It may be his job to find the most efficient way of shaping the parts — sometimes by stamping, sometimes by rolling, sometimes by casting into molds.

It's a big complex series of jobs; and it's the aim of Notre Dame's metallurgy staff to prepare men properly to carry them out.

The author has previously contributed several articles for NOTRE DAME. Maintaining a 93 scholastic average, he will graduate in June, 1951. Mr. Dukert is from Baltimore, Md. He has recently written an article for "The Sign" magazine.

To make sure that its instructors put emphasis on the *right* subjects in the *right* way, the department holds frequent seminars in conjunction with industrial firms and other university faculties. At these discussions, the men get a chance to trade news about current metallurgical progress and advice about special teaching problems. Last spring, one such technical session attracted scientists from England and Canada, as well as top scientists from this country.

According to Notre Dame officials, these conferences have had a double value so far. Besides bringing together the results of recent research in the field, they improve the quality of metallurgy instruction by keeping the professors posted on fresh new ideas and theories.

Techniques not stressed in classes

Nevertheless, the classes at Notre Dame don't stress *techniques*, although every effort is made to interest the students in modern developments. Technical changes have come so fast that it's impractical to fit all of them into the courses; so Notre Dame's courses simply assure the students of a firm background in fundamental knowledge. Basic principles in metallurgy are emphasized along with a thorough grounding in physics and chemistry.

One place in which the department *does* stay up to the minute, though, is in its research activities. Using the most modern equipment and methods, a number of faculty members are now carrying on important scientific investigations for industry and the U. S. Armed Forces.

Typical of these projects is one under the direction of Professor Paul A. Beck, head of the department. His research is aimed at discovering new knowledge about a change in metal structure called "recrystallizations."

You see, metals are built like everything else — out of those tiny natural building-blocks called "atoms." In metals, however, the atoms are always arranged in a very special way — in definite, characteristic crystals, which fit together along irregular boundaries. When the metal is stretched or squeezed, each crystal adapts itself to the new shape by sliding along internal planes. When you pound on metal or roll it under pressure, though, these crystals get all out of shape. They don't "slip" as easily, and the metal becomes hard and brittle.

One way to get the crystals back in shape is by heating the metal. Upon further heating, these new crystals (also called "grains") get bigger, until you can actually see them with the naked eye, and the metal becomes soft again.

The exact laws governing this grain-growth are important. Manufacturers would like to know them before they start stamping out metal parts. They want to know exactly how much heat a partly-formed piece of metal will need to make it soft enough for further stamping. And it's much easier to follow definite standards than it is to conduct separate tests on each new alloy and part.

Research for Armed Forces

For war production, this knowledge would bring tremendous savings in time, money, and material. That's why the Office of Naval Research has decided to sponsor Professor Beck's work in this field.

In studying grain-growth and re-crystallization, one important tool is X-ray diffraction. This process enables Dr. Bernard Cullity and other Notre Dame investigators to study the positions of atoms and other details only 1/100,000,000 of an inch in size. They don't really *see* the atoms, but they do get an accurate picture of where they are. Here's how the big gadget works:

Although X-rays are used, they aren't used in the same way a doctor employs them to study a patient . . . or the way industries use them to inspect metal parts for defects. In the metallurgy de-

One of the ND researchers checks a metal sample for high polish before examining it under a high power microscope.

partment, the rays are directed through a metal sample onto a photographic plate. Some go straight through, but others are deflected by the planes of the metal crystals. By measuring the angles at which the rays are bent the researchers are able to reconstruct the actual positions of the atoms which caused the deflection.

Some of the other research projects at Notre Dame are probably easier for a non-scientist to grasp; but the methods are still pretty spectacular.

Titanium is new miracle-metal

Take the work of Professor E. A. Peretti, for instance. He's helping to chart the possibilities of a new miracle-metal called "titanium." Strong as iron, titanium is only about half as heavy, and is almost completely impervious to rust. There's plenty of titanium ore around, too; although the process of extraction is still difficult and expensive. Many have suggested that it would make a perfect structural metal for airplanes; and in fact Professor Peretti is working now under a grant from the Air Materiel Command of the U. S. Air Force.

At Notre Dame, various alloys of iron and titanium are being prepared and tested to determine their suitability for various strategic uses. The actual making of these alloys is really a spectacle of fireworks, too. It's done with a tungsten arc, which melts the iron and titanium together at *3400 degrees Fahrenheit!* Only a special system of water-cooled coils keeps the copper container from melting along with the alloy at this terrific temperature.

Temperature at 321 degrees below zero

If the details of these ultra-hot experiments have you perspiring a little, you can always take a quick look at Professor B. S. Lement's work. Just a few hundred feet from the white-hot molten alloy, Dr. Lement is busy at work on an apparatus that lowers the temperature of metals to 321 degrees *below* zero. This device — which employs liquefied nitrogen gas as a cooling agent — is used to study the formation of "martensite" in cold steel.

Martensite is a hard substance that forms when iron and carbon are heated together and then cooled quickly in water. It's the stuff that puts the strength in steel. Recent investigations show that it can also be formed at extremely low temperatures, and this is the subject of Dr. Lement's studies.

Another Notre Dame research project is based on the next step in steelmaking — the tempering process. Since steel is brittle after its quenching bath, it has to be reheated or "tempered" for a short while at a comparatively low temperature to gain toughness. Sometimes, however, the action backfires, and tempering just makes the steel more brittle. So far, nobody seems to know why this happens; but data now being compiled by careful tests at Notre Dame may some day lead to a solution.

This research is carried on entirely in a special room, where a temperature of exactly 70 degrees is kept at all times. This constant temperature is necessary to prevent error in the delicate machine used there to measure minute changes in the length of steel samples during the tempering process. This apparatus can detect changes down to a millionth of an inch; and every step must be taken to assure perfect accuracy.

There are other precision instruments in the Department of Metallurgy, and there is other research work; but these are the highlights. They are typical of the manner in which the whole department is building and growing.

Men recognized and used metals for many centuries before the science of metallurgy came along to open up vast new possibilities for him. Metallurgy at Notre Dame was a "late starter" too. Anybody can see, though, that the science is still growing fast. And Notre Dame is proud of the fact that its department is growing along with it.

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.

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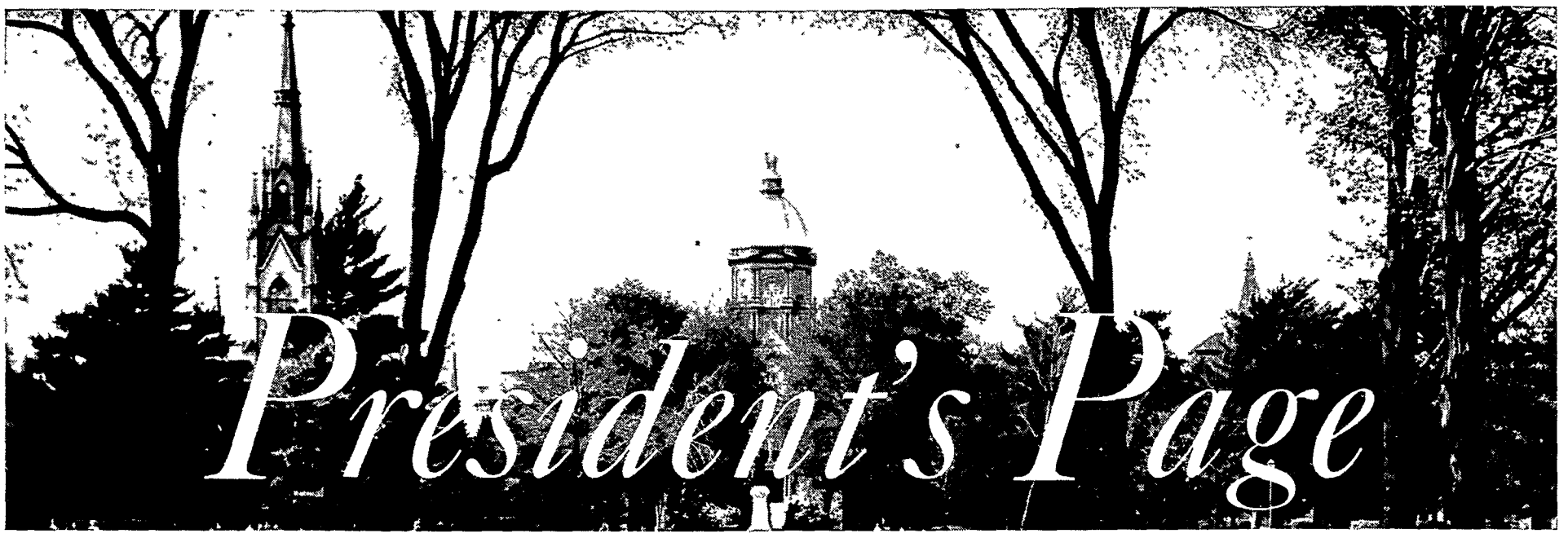


Notre Dame Again Ready to Aid in Emergency

IN AN ERA of changing crises, it is difficult in a page of this nature to advise you confidently of our progress and our plans for 1951.

I can, and do most sincerely, wish that for you and all our world, the year may lift its impending shadows and reveal some pattern for peace.

Gratitude Expressed for 1950 Support

And certainly I can, and again do with deepest gratitude, express our appreciation here at Notre Dame for the generous support and the deepening interest in our problems that 1950 recorded, in our books, and in our hearts.

As you know, the urgency of our needs impelled us to begin construction of the Science Building. And because of its need, and its great significance to the campus, we also started construction on the Morris Inn.

Subsequent conditions have become so grave that at the moment we are not able to predict our action on the construction of the generously provided — and also urgently needed — O'Shaughnessy Liberal and Fine Arts Building, and the Fred J. and Sally Fisher Memorial Residence Hall. If it is not out of line with the program of national safety, we hope that both these buildings will be begun in 1951.

Utilities Expansion Urgently Needed

Urgent in our program not yet provided for, and emphasized with a new urgency by the generous gifts of 1950, is the expansion of our utilities to provide heat, water, light and power, and sewage disposal for the campus. Existing heat and water facilities have been stretched to even their far-sighted capacities by our present expansion, and will not accommodate further strain.

Light and power, and sewage disposal have become problems through local analyses and legislation which involve major decisions of economy on the one hand, and legislated provision on the other, from which we have no recourse.

The proposed programs, as Father John Murphy has outlined in NOTRE DAME and the Notre Dame ALUMNUS, will cost us approximately $3,800,000. And this figure does not solve for us the constantly rising costs of general operation, with which all of you are familiar through business, factory and even home experience.

It may be that the stabilization trends will halt to some extent the rising tide of costs. But as you know from our previous presentations, our income has been hard pressed to keep these costs in sight.

Without our auxiliary operations and the generosity of our friends, we would have faced much sooner either the curtailment of our program or the sharp and generally unfavored increase of student costs.

Campus Facilities Used in WW II

As it is, unless the prevalent "freeze" should reach the warm hearts of our alumni and friends, we anticipate a continuing operation without recourse to higher costs to students, so that deserving young men from everywhere may still enjoy the training of Notre Dame.

Perhaps more importantly, in this critical period of history, we hope that we may be as ready as we were in 1941 to provide for our country not only the corps of men trained in the richest fundamentals of American democracy, but also a physical plant in which the military training of much needed additional personnel may be effected with a minimum of time, construction and expense to the country.

Our campus, which provided the training in World War II for the commissioning of 10,000 ensigns in the midshipman program of the United States Navy, is now even more adequately prepared for whatever physical part it may be called upon to play.

God, Country, Notre Dame

And the spirit of Notre Dame, always in complete harmony with the spirit of America, has a deeper significance in the present struggle against forces which are bent upon the destruction of the particular common roots from which that spirit springs — a belief in God, and in the unalienable rights of man with which that God has endowed him.

Notre Dame plans not only to survive in this crisis, but by prayer and your constant help to remain in this vital hour a contributing fountain of strength for the survival of all.

John J. Cavanaugh, C.S.C.

PRESIDENT OF THE UNIVERSITY
DIRECTOR OF THE FOUNDATION

PLACEMENT BUREAU

By William R. Dooley

What about a job? Mr. Johnson examines a Placement Bureau bulletin.

WHAT we are trying to do in the Placement Bureau is help a man help himself.

We know that even in the most favorable circumstance we can't really get a job for the individual (and in that sense "placement" is a misnomer). In the final analysis, and when all the employment cards are down, he has to get his own job. But we in the Placement Bureau can give him some very substantial along-the-way help, and that is exactly what we are trying to do.

Formally or informally, placement has always been a part of Notre Dame. Innumerable persons, of the faculty particularly, have given (and are giving) of their time to assist students and alumni with regard to employment. But early in 1950 centralized, coordinated placement was established as the full-time activity of one office at Notre Dame. New quarters for the Placement Bureau were officially opened in the Administration Building on April 13, just after the Easter vacation.

Members of the faculty still remain, and will always remain, an indispensable factor in the placement procedure at Notre Dame. Their advisory relationship with the students, their advice and all-around help in the operation of the central Placement Bureau and their own contacts with prospective employers provide the support without which we in the Bureau could not coordinate details and, in fact, could not even function.

With such aid from the faculty, the Placement Bureau arranged in October, November and December, 1950, for numerous employment interviews on the campus for scores of students. Employment demands resulting from the armament program brought industrial representatives to the campus earlier in the schoolyear than ever before. And the interviewing schedule has been much heavier since January.

But we're really ahead of the story. The interviews by industrial representatives are just one phase, although an important phase, of the service that the Placement Bureau offers.

Placement at Notre Dame goes back actually to the days just before the new student comes to the campus to begin his freshman year. In that period he receives from the Testing and Guidance Department, headed by Edward R. Quinn, a Notre Dame graduate in '28, a questionnaire in which he is asked to detail his academic program in high school, his "strong" subjects, his high school extra-curricular activities and something of his ambitions for his University work.

Then in the first few days after the freshman actually reaches the campus, the Testing and Guidance Department gives him a series of six standardized tests designed to measure some of his academic accomplishments, aptitudes and interests. These tests, the results of which are available both to parents and students, are in the following areas: (1) The Social Sciences; (2) The Natural Sciences; (3) The Mathematical Sciences; (4) English Achievement; (5) Scholastic Aptitude; (6) Educational and Vocational Interests.

Mr. Quinn, and Rev. Thomas P. Irving, C.S.C., '04, Richard D. Willemin, '42 and Orville R. Renner of the Testing and Guidance staff, are available to all students, and particularly to freshmen, for assistance with regard to study programs, study habits, vocational selection and other kindred subjects. Utilizing the previously filled-out questionnaire, the freshman test results and any subsequent tests which are deemed necessary, these advisors provide for the stu-

The author is Placement Director at the University of Notre Dame. He graduated from Notre Dame in 1926 and for sixteen years was assistant alumni secretary and managing editor of the "Alumnus" magazine. After receiving his degree and before returning to Notre Dame in 1933, Mr. Dooley was a reporter for the Peoria (Ill.) "Journal-Transcript" as well as advertising and publicity director for the Northern Indiana Public Service Co.

Mr. Johnson confers with Wm. R. Dooley, director of the Placement Bureau.

The services of the Placement Bureau are explained by Mr. Dooley.

Mr. Williams, of Personnel Division, Studebaker Corp., interviews applicant.

Interview continues with Mr. Bagley, Director of Studebaker Corp., District Managers' School.

Subsequently employed Mr. Johnson is a Studebaker sales trainee.

dent what is of specific importance to the Placement Bureau, a tie-up between the present college life and the eventual, after-college occupation.

The Placement Bureau has its offices next door to the Testing and Guidance Department and works in the closest cooperation with it. The test results, the advisory notes and similar informational material accumulated as the result of the service of Mr. Quinn and his associates are all utilized by the Placement Bureau in placement counseling.

For placement, properly conceived and integrated, is not a separate function within a University but is a part, and in a sense the culmination, of the school's testing and guidance, both educational and vocational. Ideally, if a student has carefully planned his educational program, his extra-curricular activities, his part-time and summer work, as well as his general investigation, reading and thinking with regard to a lifetime occupation, he should come up to his actual job search needing only general placement counseling in order to choose the job that is right for him.

The fact of course is that few students, at Notre Dame or elsewhere, reach this ideal state of things and that is one reason why the Placement Bureau is so busy.

It perhaps need not be emphasized here that there are few things more important this side of heaven than that the individual human being find for himself the lifetime occupation that is right for him. Much of his happiness in this life, and in the next too, much of the good that he can do for society, his family and himself, much of the benefit from his college education, channel from his job. If his job is right, he is all the more likely to live a genuinely successful and happy life.

Placement service at Notre Dame is available to senior students and graduate students (as well as to alumni) all through the schoolyear. All colleges and departments of the University are covered. Individual registration and counseling are supplemented in the Placement Bureau by varied, appropriate books, magazines, pamphlets and mimeographed material available to all students. A large and growing file of company literature and regional literature (from Chambers of Commerce) is on hand and is widely used. We also offer printing service, picture service and mimeographing service when, as often happens, the student wants to communicate with numerous prospective employers.

Individual counseling is necessarily limited by time and personnel. In an attempt to bring more placement aid to more students, the Placement Bureau is conducting this year, in conjunction with Professor Christopher Fagan, of the Economics Department of the University, an experimental seminar on occupations and job-finding techniques. The participants in this seminar, 27 Economics majors, mostly seniors, are voluntarily gathering once a week without academic credit for an hour of study and discussion in the employment area. All of the students in this voluntary program are submitting written material such as qualification records and letters, for class criticism, a clinical, cooperative procedure. Visiting representatives from industrial and other personnel offices on occasion speak informally to the group.

If this experimental group counseling procedure is successful, it can in time be extended to other groups within the University. The participants should eventually be not only seniors and graduate students but juniors as well, and maybe sophomores.

THE PICTURE STORY

At Notre Dame every year scores of employers conduct interviews with hundreds of students. Typical of this activity are the Studebaker Corporation of South Bend and Thomas M. Johnson, who received his A.B. as a Philosophy major in June, 1950. The process by which Mr. Johnson was employed as a Studebaker sales trainee is outlined in the accompanying pictures.

The emphasis on counseling, whether individual or group, with the objective of helping a man help himself, does not of course diminish the importance of campus interviews by employers. In fact, we are convinced that in proportion as the student knows himself, knows what he wants to do and knows something about finding a proper job for himself he will be of increasing interest to the men who interview him, on the campus and off, and will result in being a more valued employe.

Interviewers in all classifications from all parts of the country are coming to the Notre Dame campus in increasing numbers. Knowing in advance (at least two weeks in advance if possible) the personnel needs of the companies, we arrange interview schedules and have the student interviewees read the company literature and fill out the company qualification records. Interviews normally are on the basis of 20 or 30 minutes per man.

While the interviews are usually conducted in the special interview rooms of

(Continued on Page 22)

Our Lady's . . .

Embroiderer

By Ken Thoren

EVERYONE knows the story of the humble juggler who tossed his hats, rings and bells for Our Lady because it was the best way he knew of to show his devotion. However, few people are aware that a modern counterpart of this story is being enacted daily on the University of Notre Dame campus. The gift being offered, though, is not juggling but embroidery.

Our Lady's embroiderer is Pastor Villaflor, a little, talented Filipino who came to Notre Dame in 1905 . . . and stayed.

From his room where he bends over the embroidery rack, slowly stitching his beautiful liturgical vestments, Pastor can look over at the Grotto and up at the shining Lady on top of the golden dome. His is a quiet life. In fact, it is so quiet that relatively few on the University campus know he even exists.

Those who have seen him have either caught a quick glimpse of the diminutive Filipino as they passed his ground-floor window in Corby Hall or else have seen him when he comes out occasionally to take a breath of air or work in his small garden.

Pastor doesn't need to be surrounded by people to be happy. He never attends Saturday night movies in Washington Hall, the Notre Dame auditorium, or athletic events in the Fieldhouse. Long ago he gave up going to football games.

As for nearby South Bend, he says: "Oh, no, I haven't been in the city for many years. Once, though, I go there lately. I almost forget.

"When I hear the plight of my people right after the war, I went, with a Brother, to buy some things. But I get sick in the store and have to come back. Have never been to town since.

"Now Brothers and students go buy the things I want. I send over $2,000 worth of articles to Philippines. My people need things—still, and I have no use for the money."

But Pastor is certainly no recluse. He likes nothing better than to talk with friends. He is a pleasant man with an affable personality. His speech still has a heavy trace of lyrical Spanish in it. It is hard to realize he is nearly 70. He is small, less than five feet, erect, and he moves with a kitten's quickness. His fingers are long and he uses them constantly while talking like a person making wall shadows for children. His skin is a rich walnut color with an almost electric glow about it and he has a wide wholesome smile.

His eyes are mere dots behind metal, thin-rimmed glasses but they twinkle brightly—especially when he is reliving the past. He wears a butcher's apron with *Pastor* embroidered in blue across the top.

Right after attending Mass each morning he puts on the apron and then spends the day reading papers or letters from the Islands, playing solitaire, caring for the small garden outside his window in warm weather and embroidering his beautiful garments for Notre Dame's main church, Sacred Heart.

Like the legendary juggler, he looks upon his work as an act of devotion. Pastor's craft is an art, handed down in the Villaflor family for centuries. It is delicate work and has restricted him to do less of it during the past few years. He first designs all the vestments—a Latin flavor permeates them for they are distinguished by bright colors and rich patterns — and then traces the drawings on to material. Agonizing hours of meticulous sewing follows.

Right now Pastor is working on a Benediction veil and has almost completed a cluster of grapes in the pattern. Each tiny grape is the size of a dime and is shaded in many hues of purple threads. He hopefully expects to finish the garment within four months. "I can't do much at a time, any more; tears get in my eyes—I must stop."

Mr. Villaflor.

Some of Pastor's vestments were exhibited at the St. Louis Exposition, in 1904, and at the Chicago World's Fair, in 1933. He has embroidered the most treasured vestments used at Notre Dame. As much as $5,000 has been offered for a single piece of work. But he never sells them. "I do not need money and more important, they are my gifts to Our Lady."

When people ask Pastor why he continues to do such painstaking work, his answer is always the same. "Our Blessed Mother, She has been very good to me. The only way I can repay Her is by making these robes. I love what I do. I have good education but I could not be happy at anything else. There's a feeling down here—it tells me She likes my work."

Pastor lives alone in a narrow, cluttered room on the ground-floor of Corby Hall where many of Notre Dame's Congregation of Holy Cross priests reside. Souvenirs and memorabilia stuff the combination living quarters and workshop. Walls, shelves, tables and cabinets are weighed down with things Pastor has collected through the years.

His love for flowers is apparent. They fill the room as much as they fill his pieces of embroidery. Many bouquets shine against the amber walls—velvet and paper flowers and fresh-cut blooms from the Notre Dame greenhouse.

Just enough space is left free to allow passage to a small wooden table near the room's one window. It is here that Pastor likes to sit and talk or else pass his free time playing solitaire.

Off in one corner is his embroidery rack. Whenever "tears in his eyes" make

(Continued on Page 17)

The author is a senior, majoring in Journalism and will graduate in June, 1951 with an A.B. degree. He is editor-in-chief of the "Scholastic," student news weekly at Notre Dame. Mr. Thoren worked as a student assistant in the Notre Dame Sports Publicity Department last summer. During the 1950 football season he wrote various features for the "South Bend Tribune." His home is in New Rochelle, N. Y.

UTILITIES And Notre Dame

University Urgently Needs Aid in Expansion of Steam Plant and Other Facilities

By Rev. John H. Murphy, c.s.c.

Plant engineer checks control valve in campus 3-mile underground tunnel system.

Father Murphy is Vice-President in Charge of Public Relations at the University of Notre Dame. He wrote an article entitled "A $7,893,000 Question" in the Summer, 1950 edition of NOTRE DAME.

The University of Notre Dame was almost sixty years of age before its residents came to know the blessings of central heating. The first plant, erected in 1899, would be judged crude and primitive according to present standards; but its designers were so pleased with their creation that a scale model was dispatched to the Paris Exposition of 1900.

In the summer of 1932 the stack of this plant was brought crashing down to prepare the way for the Students' Infirmary building; the University's private railroad station was razed at the same time, and for the same purpose. A few months earlier Notre Dame had acquired a new heating plant.

Again the last word in efficiency of design and operation, its four huge boilers sent steam surging through an elaborate network of tunnels to the far reaches of the campus. There was considerable satisfaction in the thought that, while repairs and alterations would have from time to time to be made, the new plant was geared to handle Notre Dame's future expansion program.

That was eighteen years ago. In the interval Notre Dame's student body grew from 3,000 to more than 5,000 young men; there was a corresponding increase in the number of priests and lay faculty members. Some twenty-five new buildings were constructed, and steam tunnels were lengthened. Still, Brother Irenaeus, c.s.c., and after him Brother Borromeo, c.s.c., managed to keep the student body and faculty reasonably comfortable and happy.

In the course of the years improvements and economies were effected. A mobile crane was purchased at second-hand, several thousands of tons of coal were stockpiled, and the student body learned to their dismay that school would keep open in spite of frequent and prolonged strikes at the mines.

One of the Brothers devised a unique system of lights whereby plant engineers would know at all times whether steam were passing through the giant reducer valves into the various classroom and dormitory buildings. Installation of a central control system which permits the heat to be turned on or off and temperatures regulated in any building on the campus from a central panel in the plant, cut fuel costs approximately $61,000 in the little more than two years it has been operating.

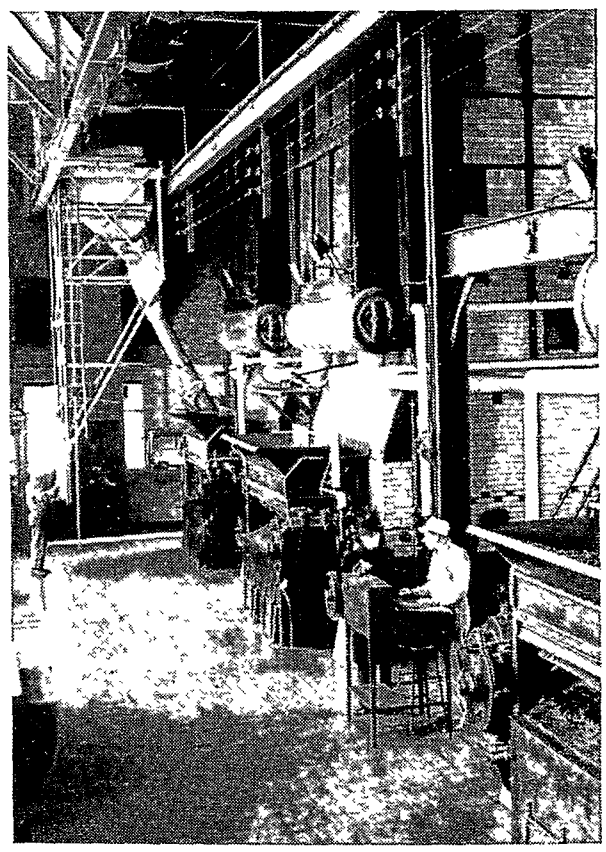
The University's water department is also operated by steam plant personnel. Three deep wells for drinking water and one for utility purposes are kept in constant operation, supplying the one million gallons that Notre Dame requires daily; in summer daily consumption rises to 1,500,000 gallons.

A pipe line from St. Joseph's Lake feeds water into a separate system of mains for fire protection. Pressure on this system is maintained at seventy-five pounds, but Brother Borromeo, c.s.c., who doubles in brass as chief of the University's up-to-the-minute fire department, can order pump pressures increased to one hundred and twenty-five pounds.

State officials, who long have looked with disfavor on this three-way system of water supply, recently decreed that the University must convert to a single system whereby potable water shall be used even in the utility and fire protection mains. This will necessitate extensive changes in the existing network of mains, the dropping of another well, installation of machinery to remove iron from the drinking water, and erection of a 500,000 gallon water tower, a necessary — but by no means attractive — addition to Notre Dame's skyline.

A firm of consulting engineers was brought in to sketch out the new water system. And because fifteen to twenty years is considered the normal life span of boilers and other heating equipment without extensive alterations, they were asked to examine our heating needs as well.

Still a third feature was incorporated



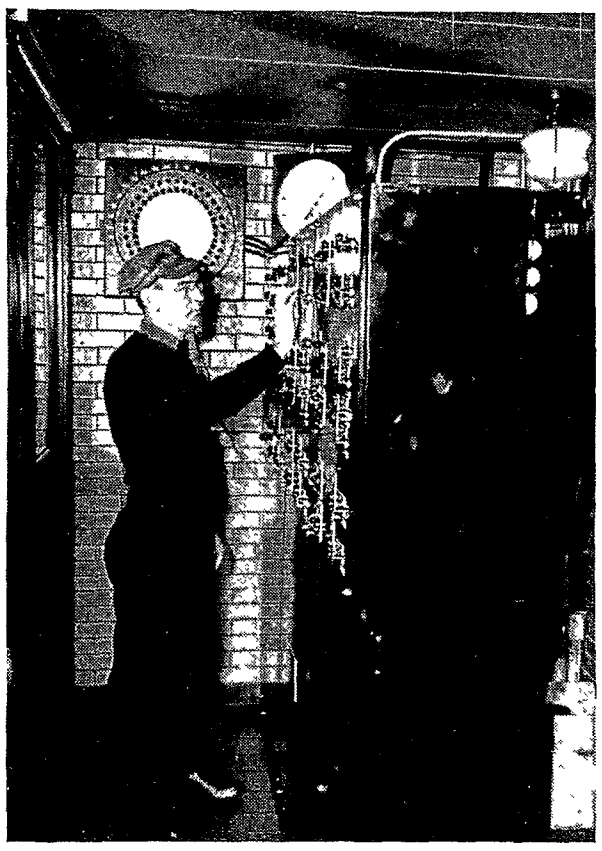
Brother Borromeo, C.S.C., chief engineer, talks with assistant in steam plant.

in their study. Our plant employees, as though they had not already enough work to do, had long argued that generation of our own electric power would represent a further economy for the University. Waste steam could be utilized for this purpose, through installation of several steam turbines; and two diesel generators obtained from the War Assets Administration would serve as stand-by units.

The University is presently using electricity at the rate of 6,010,000 kilowatt hours annually, and our demand will rise tremendously wtih completion of the new Science Building alone. Compare that with your annual household needs!

The three-way study was completed. Plans for the new water system were drawn up and approved. The contention of our plant engineers that it would be more economical to generate our own power than to continue purchasing it, was borne out. The initial cost of construction and installation (approximately $600,000) could be written off over a twenty-year period, increased operating expenses absorbed, and the University still would save from ten to fifteen thousand dollars a year. Minimal necessary improvements and repairs to the eighteen-year-old heating system were computed, and found to be considerable.

And then the blow fell! A heating plant which less than twenty years before had been constructed to take care of all future expansion, now was described as totally inadequate — even after the recommended improvements.



Brother Beatus, C.S.C., at control system which has saved $61,000 in last two years.

At best it would handle only two more buildings. Not even the four for which working drawings and funds have already been received, and two of which have already been started. To say nothing of the additional dormitories, the student union, field house, maintenance building, etc., the need for which has been apparent to all for a long while.

In all fairness it must be said that no one twenty years ago could have foreseen that at the mid-century mark Notre Dame's population would be in excess of 5,000. Had they been able to foresee it, then it would also have been apparent that not even twenty-five new buildings would be enough to house and feed, to educate and recreate, this huge family.

The estimated cost of these alterations and enlargements is $1,500,000! That is already $100,000 higher than the figure given in the last issues of the ALUMNUS and of NOTRE DAME. The page on which these needs were listed — along with others which may be treated in a future article — was appropriately titled "Going UP!" The composer was merely being prophetic, not facetious. And if present trends continue, there may have to be still further revisions upward.

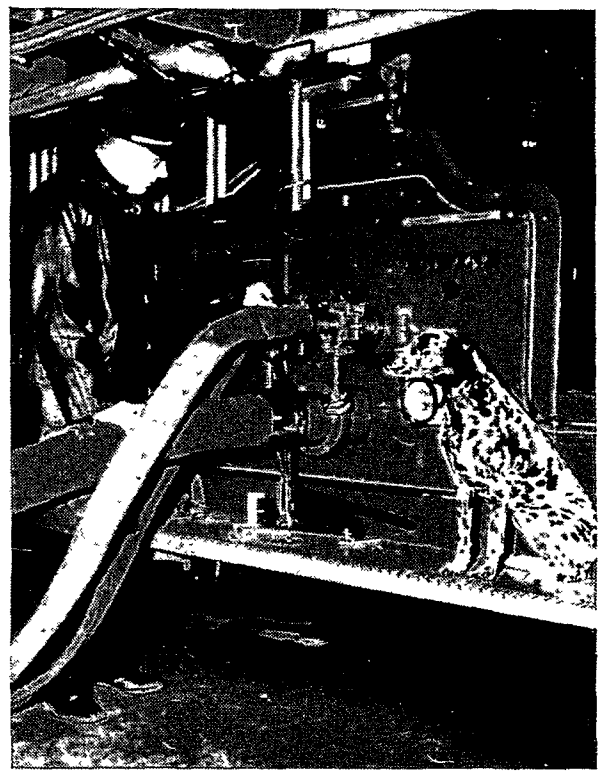
Unfortunately, there is no choice left us in the matter of these alterations. If we wish properly to care for the physical welfare of our students — and we do — we must accept the recommendations of the consulting engineers. And if we wish to go ahead even with our immediate building program — again, the answer is in the affirmative—we must act on these recommendations at once. There is no alternative left us; next year will be too late.

Where is the money to come from for these urgent needs? That is a question which still puzzles the President of the University and his Council. In all probability we cannot expect large sums for this project from individual donors; it does not carry the appeal of a radiation chemistry laboratory, or of a library building.

But we may hope to realize the necessary funds through the generosity of our many alumni and of the parents of our students, past and present. They are close enough to the University to see our domestic problems most clearly, and to appreciate them.

Too, we may count on the generous cooperation of Notre Dame Foundation governors, chairmen and committeemen who are continually bringing new friends into the Notre Dame family. No contribution from these friends and alumni is too small, because the number of potential benefactors is so enormous. You might count them for yourselves just within the circle of your acquaintances.

Father Sorin founded this University of Our Lady with four hundred dollars in his pockets, and in his heart a spirit of indomitable faith in his Heavenly Patroness. It would be unthinkable that our faith in Her should be less strong, who have but to look around us and see the miracles She has already worked!



Pumper operations are explained to local fire fighters as Belle, the mascot, attentively looks on.

Author's Note:

Since the above article was written, the University's consulting engineers have informed the administration that approximately twenty percent would have to be added to their $1,500,000 estimate.

The cost of constructing the new Science Building and of equipping its undergraduate laboratories—together with a portion of its research facilities, will top original estimates by $700,000. And increased costs of building and furnishing the Inn may run as high as $500,000.

Work has begun on the Science Building and the Inn before the most recent price increases. And the utilities problem is one which must be met whatever the cost. None of this money is on hand. All of it must be raised in the face of rising operating costs and of drastic cuts in sources of income, with the very real prospect of a drop in student enrollment to the 1925 level. Here is a major challenge to our faith—and good works!

Excerpts From Father O'Hara's "Religious Bulletin"

The exodus of freshmen from the basement chapel immediately after the Communion of the Mass indicates the hickory Catholics still abound in this country. For the benefit of these men it is solemnly announced that it is not a mortal sin to remain for the priest's blessing, and not even a venial sin to remain for the Last Gospel. . .

★

It isn't only the freshmen who make the mistake of regarding school as merely a preparation for life. It IS life, the only life some of you will know. It is a rare and singular favor to go through an entire school year without the death of a student. It is safe to predict that this year will be no exception . . . one or more of us will take the final examination. It behooves us to make the most of the day.

★

Notre Dame football has done more than any one thing to spread devotion to frequent Communion among the school boys of America.

★

A review of certain events of the past week is in order. It should remain just between ourselves. You have done some things wisely, some unwisely. You took the hint (delivered with a brick, of course) that the University was offering two Novenas of Masses for your departed relatives and friends, and the list of names handed in increased 400%.

★

Candles at the Grotto . . . perhaps a hundred . . . still burning at 11:00 p.m. . . . exams? You wouldn't think so to look at the spotted records in hall chapels these mornings . . . and the team needing prayers. . .

★

This week's red hat (two classes) will be conferred on those lay cardinals who have announced that they have seen "The Sign of the Cross" and find nothing wrong with it. A feather in the hat will distinguish the candidates whose simple innocence blinded them to the filth of this picture; a button (or perhaps three or four buttons) will be worn by those of depraved taste.

Progress

(Tenth, and last, in a series of articles on the history of the University, based on "Notre Dame, One Hundred Years," by Rev. Arthur Hope, C.S.C.)

NOTRE DAME administrations had enjoyed most of the familiar attributes, of the priest, the scholar, the man of common sense, the man of vision, in fact all of the good things that God so often sees fit to supply in lieu of experience.

It remained for a young man with the restlessness of the Latin and Irish ways of life, the experience of a cosmopolite, and the grass roots techniques of his Hoosier background, to bring about a truly effective and lasting liaison between the campus of a modest religious university and the business thinking, and the men who were doing this thinking, in America.

Father John F. O'Hara received his start in Ann Arbor, Michigan — within two months, however, of being a born Indianan. When he was 17, his father was appointed consul at Montevideo, Uruguay. For three years he attended schools and worked in the exciting world of Uruguay and the Argentine, developing a keen appreciation and a sincere friendship for the Latin-Americas.

After finishing college at Notre Dame in 1911, he answered his vocation and was ordained in 1916. After special preparation, he began at Notre Dame in the fall of 1917 the first four-year

*Father O'Hara was appointed Titular Bishop of Milasa in December, 1939, and joined the Military Ordinariate of the United States in January, 1941.

...s at Notre Dame
In a Difficult Era

Rev. John F. O'Hara (1934-1939*), Joins the Forces of Notre Dame and American Business Methods and Leaders to Develop University

course in foreign commerce in an American University.

To many alumni, it is even more significant that in 1918 he became Prefect of Religion, when Father Charles L. O'Donnell became a chaplain in the U. S. Army.

Because no one will ever settle satisfactorily the great question whether Father John O'Hara did more for Notre Dame in establishing its College of Commerce, or in guiding the magnificent religious program of its World War I and post-war student religious life. Both contributions are monumental, and have obscured many other contributions of his tenure, immediate and long-range.

Certainly, the personal preference is for the friendly, practical, sharp priest who was always available to the student for spiritual advice that seemed custom-built for its time, and for its clientele. The Religious Bulletin, which he founded and edited, became a pattern for those engaged in the religious guidance of youth. Not content with his day-to-day influence on the student, he launched the first religious survey of students and alumni, testing the logical lasting effects of Notre Dame education. The searching survey was of mutual benefit to campus and to alumni.

Daily Communion flourished under his administrative genius, without any of the pious threats or emotional stimulants that missionary zeal sometimes produces. The Holy Eucharist became in a real way the Bread of Life to thousands of young men each day, an example of a humble but virile Catholicity that has been ever since the shining case history in hundreds of schools and homes. The fact that Father O'Hara and his staff made confession available in the hall chapels nightly, and Communion available not only at the Hall Masses but in other chapels until noon daily, was the contribution of a good businessman to his religious convictions.

Notre Dame was not yet ready, nor was the nation, for approaching the inevitable financial liaison between the private school and its philanthropic friends. But Father O'Hara saw this situation shaping, and made many friends through his keen insight into business and its problems. Many of these friends in subsequent years have shown a reciprocal interest in the problems of his University.

Biology Building

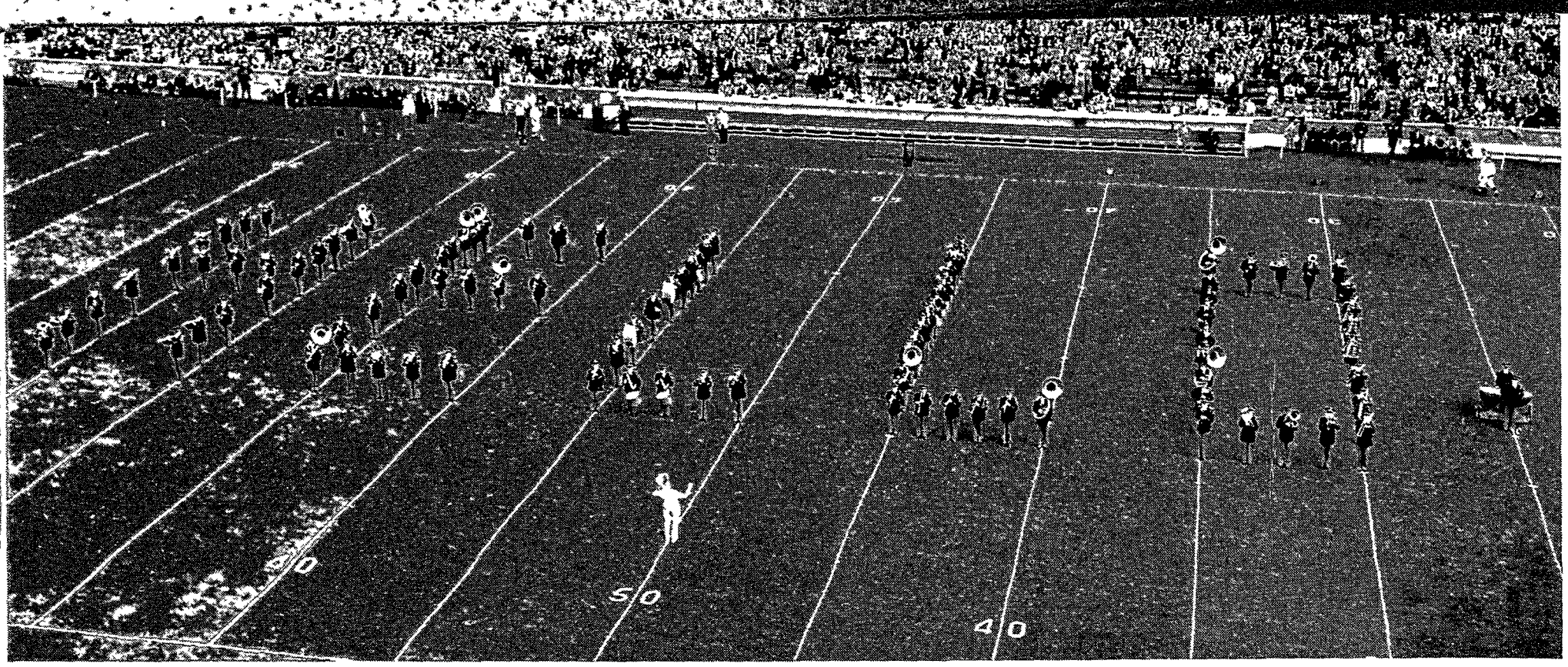
Father O'Hara was made vice-president of Notre Dame in 1933, and was active president during the long illness of Father Charles O'Donnell, succeeding to the presidency in 1934.

For a man of unusual business acumen, it may seem strange that one of the great objectives of Father O'Hara as president was the development of the Graduate School. This school is, of common knowledge, and common experience elsewhere, the heaviest of the institution's financial burdens. But Father O'Hara saw in it the rich contributions to Church and society and to students, the rise in University prestige, the congregating of scholars, and the interesting of business and industry and government. LOBUND is one of the fruits of his faith and of his enthusiasm for the work of Prof. Reyniers and his staff. Many other departments instituted the doctorate, and priests were sent to study for graduate teaching and research. The *Review of Politics* is testimonial to his appreciation of the learned publication as a proper part of higher education.

Many European scholars, fleeing from the Nazi and Fascist and Communist persecutions, found a welcome at Notre Dame soon reflected in the radiation of a high scholarship in many of the new graduate fields of study.

That all study required adequate housing is evident in Father O'Hara's building program which included three new residence halls of a permanent, traditional style — Cavanaugh, Zahm and Breen-Phillips — and several other significant buildings including the Biology Building, the new Post Office and the Infirmary.. He also brought to successful completion the Rockne Memorial.

His retirement to become Bishop and Military Delegate, and his subsequent appointment as Bishop of Buffalo, are still writing the same rich history in broader fields that fills the pages of the years in which he was so much a part of Notre Dame.



The Notre Dame Band is a leading attraction at all home football games.

Pick Up Those Feet

by
H. Lee Hope

A momentary hush falls over the stadium; the football teams have returned to the locker rooms after the pre-game warm-up; suddenly the public address blares: "Ladies and gentlemen—The University of Notre Dame Band." The Marching Band begins a performance which, combined with other appearances, makes it the most active organization on the Notre Dame campus.

The total of annual appearances numbers about sixty, including: five or six football games, eight team rallies and send-offs, a dozen basketball games, a track meet or two, several military reviews for Navy and Air Corps R.O.T.C. units, banquets, commencement, South Bend parades and the annual concerts complete the list.

The 1950 football season marked a deliberate attempt to adapt marching band shows to television techniques, resulting in fewer picture formations and more movement, with the emphasis on footwork and marching routines. Also, care was taken to provide material for TV cameras with their close-up shots. The success of the attempt to please the TV audience was best measured by the "fan-mail", which increased twenty-fold over previous years. The 1950 trips of the football Marching Band were to the Navy game in Cleveland, and to the Tulane game in New Orleans.

In addition to football trips, the Concert Band takes extended tours each spring to make the Notre Dame Band perhaps the most widely traveled college band in the U. S. In recent years the band has traveled in 30 states presenting 84 concerts from Connecticut and

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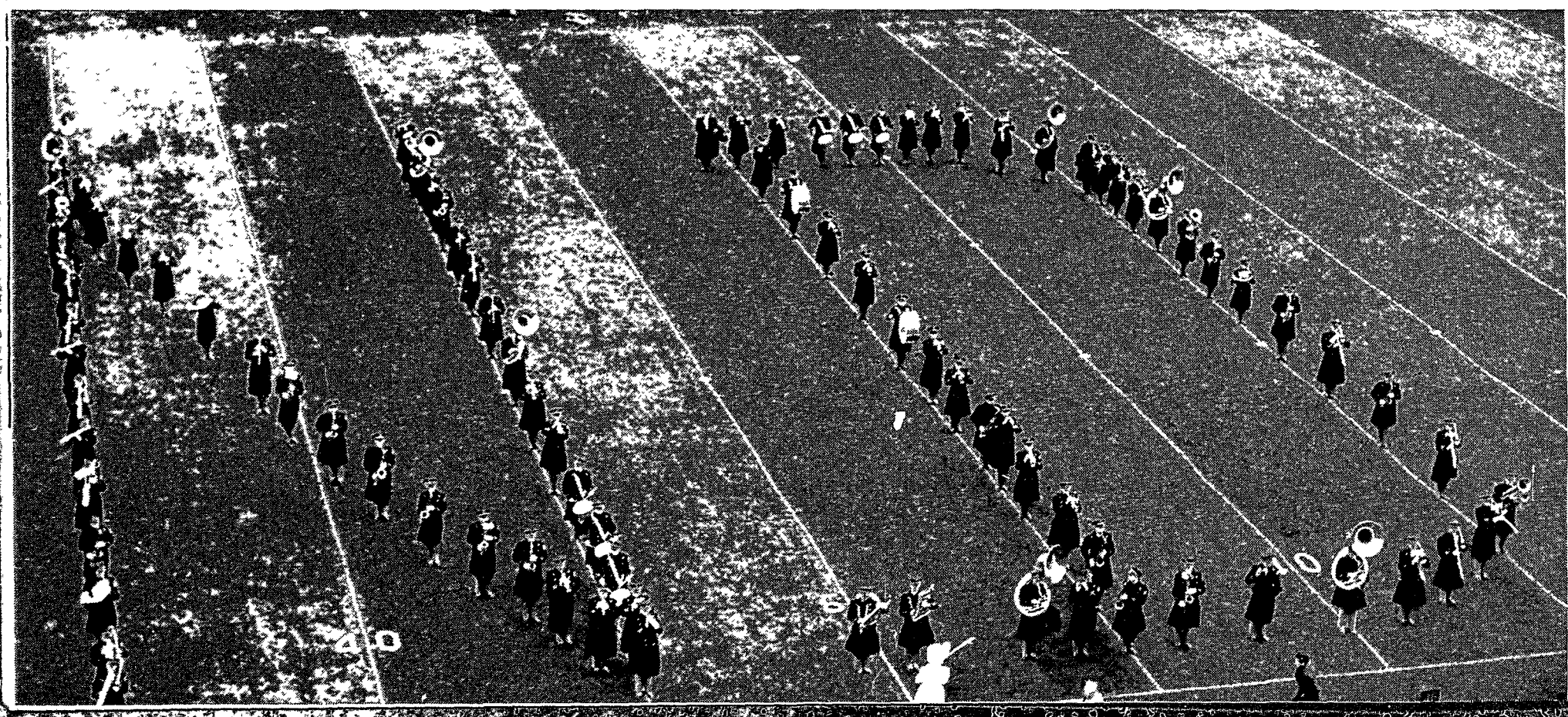
The author has been director of University bands for 9 years. He received a Bachelor of Music degree from James Millikin University in 1936 and a Master of Music degree from University of Michigan four years later.

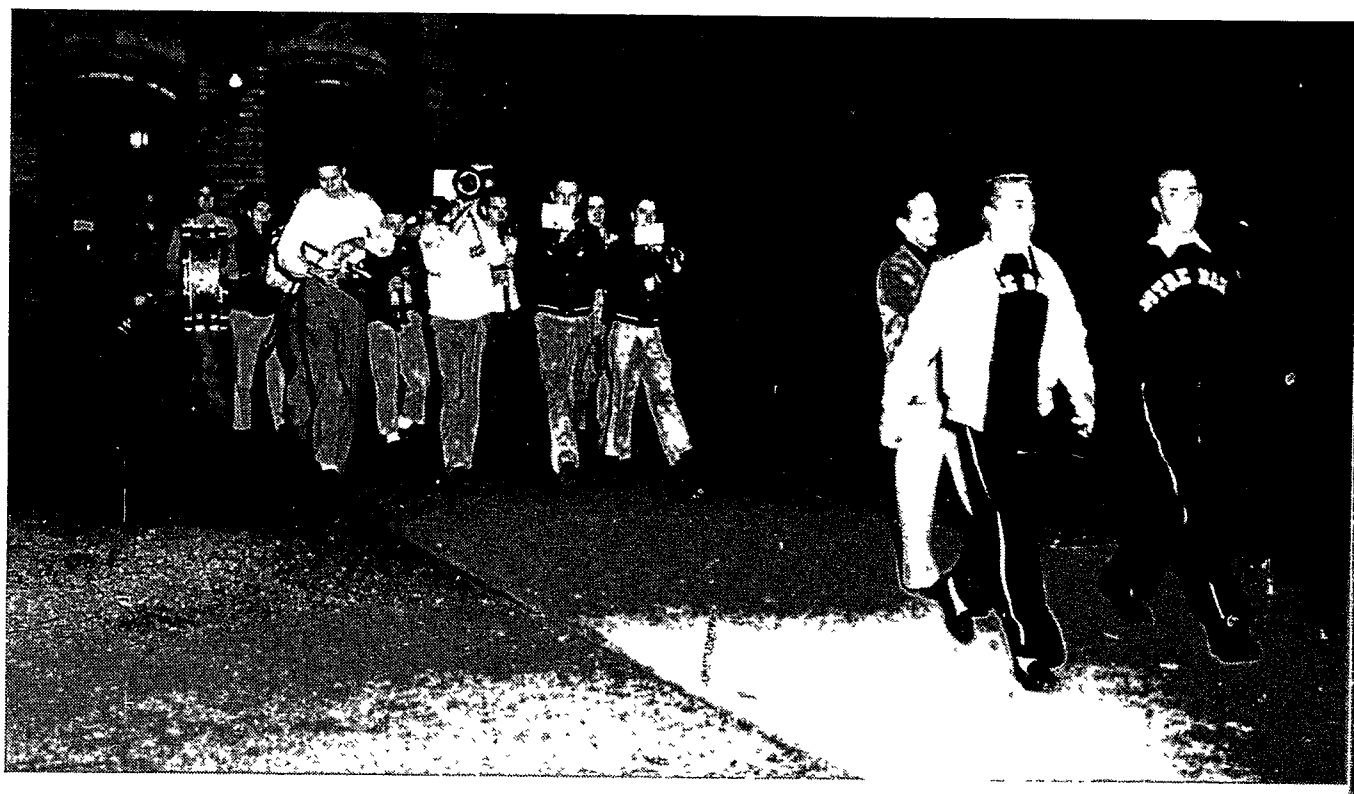
More than sixty annual appearances makes the band the most active organization on campus.



The Concert Band has played in 30 states the past few years.

Massachusetts, to Wyoming and Colorado, and from Michigan to Florida. These tours are financed by guaranteed contracts signed with sponsors in the various cities. The sponsors generally have several reasons for bringing the Notre Dame Band into their city: first, the University and the Band are so well known that audiences are attracted, making the appearance a profitable venture for the local committees; second, many sponsors like to offer the group to the public as a public service to the community; third, and perhaps most important is the fact that presenting the Notre Dame Band in a community brings a great amount of prestige to the sponsor, raising the standing of the organization in the community.

The bookings for the tour are made almost a year in advance, however, there are a few open dates left in the Easter tour of 1951. The tour will go East through Ohio, Pennsylvania, New York, the New England states and tentatively to Toronto and Windsor, Ontario.



Pre-game football rallies are led by the freshman band.

The Four Horsemen team, back for their 25th reunion, are given a special salute by the ND Band.

Additional information about annual concert tours of the Notre Dame Band may be obtained by addressing: Mr. H. Lee Hope, Director, Notre Dame Band, Notre Dame, Indiana.

It All . . .

Comes Out In The Wash

ND Maintains Laundry and Dry-Cleaning Facilities for Students' Convenience

By Jack Ward

The author is a junior in the College of Arts and Letters. Until recently he resided in Baltimore, Md., but now claims New Orleans as home. Mr. Ward is a member of the NOTRE DAME SCHOLASTIC staff.

TO most students, St. Michael's Laundry is little more than the target of all "torn shirt" jokes, and is referred to more often as "the home of the holy sock." But for Gerald J. Hoar, the manager and his 85 employees, the laundry is a very serious business, and, as Mr. Hoar says, "Take the laundry away, and the student body will begin taking it seriously, too."

Mr. Hoar was graduated from the University of Notre Dame in 1921. In his student days he was personal secretary to Knute Rockne and a three year member of the track team. He has been connected with the American Institute of Laundry both as supervisor of the Joliet branch, and as field secretary of the National Institute. During the later period he had the opportunity of traveling extensively around the country and studying the industry from all its angles. In 1936 Mr. Hoar accepted the managership of the Notre Dame laundry.

The campus laundry handles an unbelievable turnover: more than 90,000 shirts, socks, handkerchiefs, undergarments, and other student items each week. But that is only part of it. Consider also the linen supplies from the 14 residence halls, the infirmary, Moreau Seminary, Dujarie Hall, and the various community houses. That adds up to about 4,400 beds. There is also work taken in from the dining hall and the athletic association; and in addition there are the cloths to be laundered used daily on the 136 campus altars. Try to figure out how a laundry employing 85 persons on a 44-hour week can pick up, clean, and return these hundreds of thousands of pieces every week, and then perhaps you may understand the problem that Mr. Hoar has been facing for the past 14 years.

"With 4,000 students sending laundry every week plus more from the other campus activities, we find it necessary to set up a tight schedule, and we can't afford to lose an hour. Yet, with holidays and all the other difficulties that come up it is physically impossible to hold our schedule. In other words, we are operating well over our capacity."

Mr. Hoar is well justified in making such a statement, for St. Michael's ranks in volume in the upper ten per cent of United States laundries, and with the exception of the comparative ease in collecting and delivering the laundry—since the bundles are collected at a specified time from each residence hall and returned to a central distributing point—there is no real difference between St. Michael's and any other laundry.

Yet Notre Dame has a unique setup in that every September there are some 1,000 new customers, and about 300 every February. Of course, that means that more than 300,000 pieces must be carefully marked for identification. It is especially important that care be taken with the marking, for once an article is marked improperly it is sure to cause difficulty to both student and laundry as long as it stays at Notre Dame.

According to Mr. Hoar, there is probably not a larger institutional laundry in the United States. Most of the others do flat work only; while at Notre Dame "convenience" is the byword. Many of the delicate sport shirts that require special care are done by hand with no extra charge to the student, while upwards of thirty cents for each shirt is charged at any commercial laundry. Even though the campus laundry does get progressively behind in its work, it is a "finished" laundry—one that returns the work completely done with no wet wash, etc.

Mr. Hoar explains that the present system has proven to be the best for both student and laundry. "We find that starting the laundry pickups on Wednesday, the middle of the week, eliminates the weekend rush which, in our case during the full season, is impossible to handle satisfactorily.

"Trucks bring the soiled laundry to the receiving room, hall by hall, and it is kept in that order through the complete processing and checking out.

(Continued on Page 22)

The Notre Dame laundry is one of the largest institutional laundries in the nation.

Embroiderer

(Continued from Page 9)

him stop sewing, he rests in his chair and looks about the room. All his mementos remind him of the past.

One faded picture shows a young college student standing in a frozen pose with arms akimbo. The caption reads: *San Vincent College, 1898*. Pastor was attending St. Vincent in the Philippines when the Spanish-American war broke out. It wasn't long after the Americans arrived that he had become close friends with many of the soldiers and with an Army chaplain, in particular.

When the war ended the chaplain, Father Vattman, wanted to bring Pastor back to the States with him. The young Filipino wanted to go so much that he gave up his studies at San Vincent to concentrate on improving his English. Within a few months Father Vattman was able to make arrangements for the crossing.

That was December, 1902. Pastor was recognized as the first Filipino to become a naturalized American citizen and was caught up in a round of celebrations. He was taken to the White House to meet President Theodore Roosevelt.

"The minute President see me, he smile. I guess he like me very much; he invite me back to White House several time. Once when I get ready to leave he say, 'My friend Pastor, this is for you—a gift from me.'" It was a profile of Lincoln made from macerated federal bank notes. Pastor points to it proudly on his wall and says: "That is worth $5,000. Look, look here on back." A note is attached, verifying the value.

He also knew William H. Taft and Woodrow Wilson. He met Franklin D. Roosevelt, but says diffidently: "I never with him much, so didn't have a chance to become good friend." He has mingled with what he terms "princes, presidents and popes."

Pastor chooses to stay on the Notre Dame campus today, but his travelling habits weren't always like this. He has been twice around the world and has travelled extensively in North America, in Europe, and in Asia.

He has studied in Spain, Italy, France and Japan. He paints in oils; he has also studied singing, weaving, the piano, violin, and the guitar. Now, however, he hasn't much energy for any of these. "I just embroider a little, garden a little, and read a little. The days, they are so short."

Only once has he ever returned to the Philippines. That was around 1920. Pastor stayed for a few years and came back to the United States in 1926 for the Eucharistic Congress in Chicago. He hurried back to his real love, Notre Dame, after that and has stayed there ever since only because he wants to.

Pastor owns a rice and sugar plantation in the Islands but he prefers his semi-monastic life at the University. "I often think I return to my home in San Jose some day, but now life is not good in Philippines, anymore. Why should I go home, I say to myself, when I live here so close to the Blesesd Mother. Here I am happiest. Here all I do is work and live for Her."

As you sit by his tiny window looking at the path leading down to the Grotto you can see students pasing by. Pastor smiles and waves to them and says: "I know they think I am poor man. They feel sorry for me."

He gazes out the window. You don't know whether or not he's looking up at the statue on the golden dome. But when Our Lady's embroiderer turns around he is smiling. "Maybe some day they be as rich as me,'" he says.

Placement Bureau

(Continued from Page 8)

the Placement Bureau in the Administration Building, we arrange to have each visitor meet, frequently at lunch, the faculty members who know best the students being considered. Frequently the interviewers, especially those concerned with Science and Engineering students, wish to confer further with faculty members or to inspect laboratories. Arrangements are made accordingly.

Interviewing on the campus is by common agreement the most effective means of meeting prospective employes among college students. But when this procedure is inconvenient or impossible, the Placement Bureau is happy to have interested and qualified students or alumni communicate by mail with prospective employers.

The service of the Placement Bureau is available not only to Notre Dame students, both graduate and undergraduate, but also to Notre Dame alumni. Any alumnus, young, old or in-between, is invited and welcome to register with the Bureau. When and if there is an appropriate opening on file, we tell him about it. And, in addition to giving our best advice, we frequently refer him to an alumnus or alumni or an alumni club that can give him some additional help.

A recently prepared folder, explaining the service of the Placement Bureau and outlining the departments, both graduate and undergraduate, of the University, is available to all interested firms and persons and will be gladly sent on request.

ND Football Captains

Jerry Groom

Regardless of the "record," Notre Dame's 1950 gridiron squad was led by a student who epitomizes the moral, responsible leadership of which Notre Dame is justly proud. Captain Jerry Groom, All-American center from Des Moines, Iowa, was outstanding *off* as well as on the field.

Jim Mutscheller, sensational end, of Beaver Falls, Pa., will captain the 1951 team.

Jim Mutscheller

Father Cavanaugh on Visitors' Board

The Rev. John J. Cavanaugh, C.S.C., President of the University of Notre Dame, has accepted membership on the Board of Visitors of the Air University at Maxwell Air Force Base, Montgomery, Ala.

Father Cavanaugh accepted an invitation tendered by General Hoyt S. Vandenberg, Chief of Staff of the United States Air Force, to serve on the Board of Visitors of the Air University. The Air University was created in 1945 by the United States Air Force, according to General Vandenberg, "to provide postgraduate education for Air Force officers in order to improve their professional capabilities and knowledge, to widen their vision and to insure forward thinking and adequate leadership for the Air Force, both in peace and war."

The Board of Visitors of the Air University, comprised of senior educators and university administrators, was created in 1946 to guide the development of the university. The Board of Visitors convenes annually to confer with the senior staff and commandants of the Air University on matters of policy and to assist in the over-all direction of the university.

Father Cavanaugh also is a member of the Board of Visitors of the United States Naval Academy.

British Professor Gives Reilly Chemistry Lecture

Professor M. G. Evans, of the University of Manchester, England, delivered the first of ten addresses scheduled for the current Peter C. Reilly Chemistry Lectures.

The Reilly Lectures in Chemistry were established at Notre Dame through a gift from Peter C. Reilly, President of the Reilly Tar and Chemical Company, Indianapolis, Ind. Mr. Reilly is a member of the Associate Board of Lay Trustees and of the Advisory Council for Science and Engineering at Notre Dame.

New Chairman Elected For Advisory Council

Leland V. Stanford, of New York City, Vice-President of the Sinclair Refining Company, was elected Chairman of the Advisory Council for Science and Engineering at the University of Notre Dame at a recent meeting of the Council.

Mr. Stanford succeeds Bradley Dewey, President of the Dewey and Almy Chemical Company, Cambridge, Mass., as Chairman of the Council.

Dr. William Calcott, Assistant Chemical Director of the Organic Chemicals Department of the E. I. du Pont de Nemours & Company, Wilmington, Del., was elected Vice-Chairman of the Notre Dame Advisory Council. Dr. Calcott succeeds Britton I. Budd, Chicago, Ill., President of the Public Service Company of Northern Illinois, as Vice-Chairman of the Advisory Council.

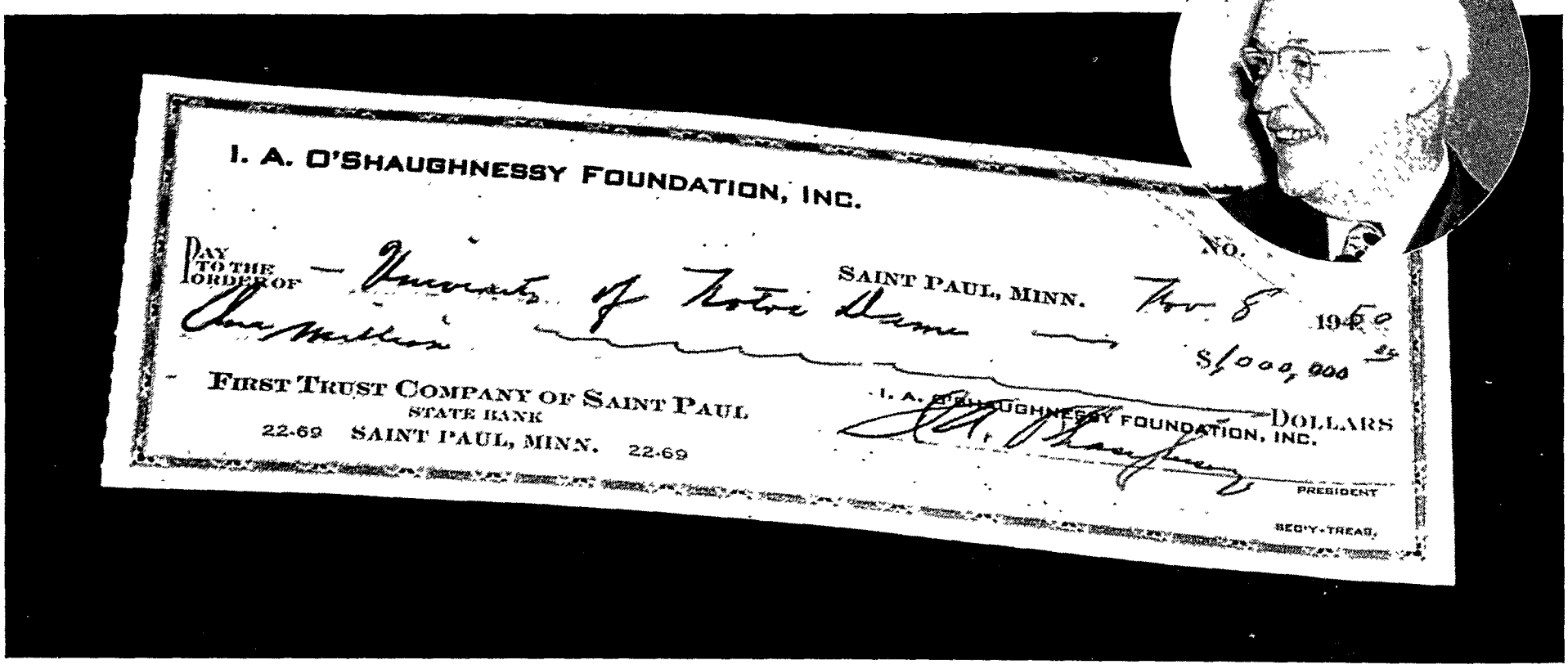
Lobund Director Named To National Science Board

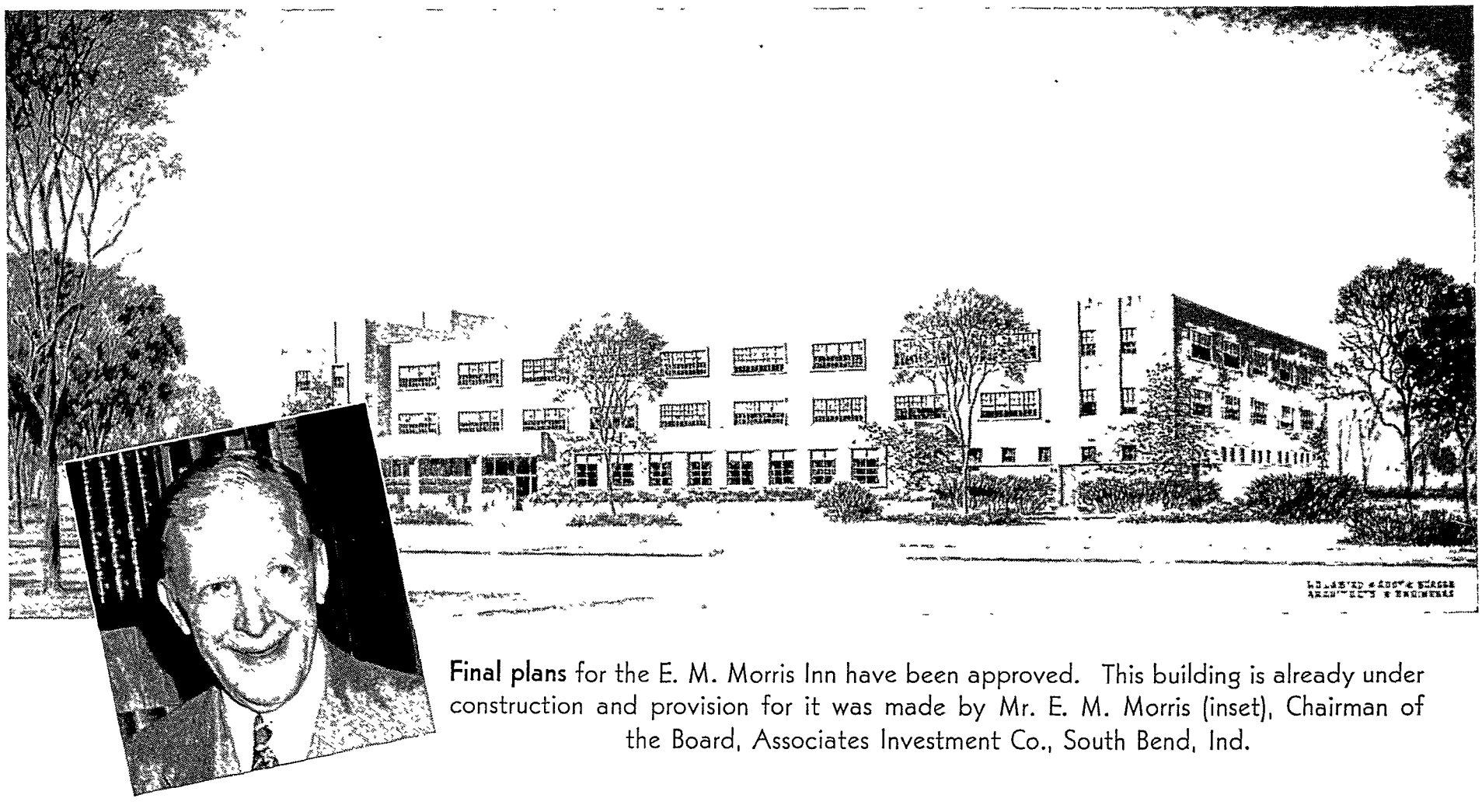
Professor James A. Reyniers, Director of LOBUND Institute at the University of Notre Dame, has been appointed by President Harry S. Truman to serve a six-year term on the newly-established National Science Board.

The Board, which is composed of 24 prominent educators, industrialists and scientists, has been designated by President Truman "to develop and encourage the formation of a national policy for the promotion of basic research and education in the sciences." Among the Board's specific duties will be the review of all government research grants from the National Science Foundation for work in medicine, biology, mathematics, physics and engineering.

In requesting Professor Reyniers' membership on the National Science Board, President Truman stressed in a letter to the Notre Dame scientist the great responsibility which rests with the group because of the influence it will have on industrial development, national defense and the general welfare.

A check of $1,000,000 from Mr. I. A. O'Shaughnessy, completes his gift of $1,500,000 for the O'Shaughnessy Liberal and Fine Arts Building. Mr. O'Shaughnessy (inset) is president of the Globe Oil and Refining Co., St. Paul, Minn.





Final plans for the E. M. Morris Inn have been approved. This building is already under construction and provision for it was made by Mr. E. M. Morris (inset), Chairman of the Board, Associates Investment Co., South Bend, Ind.

Atomic Research Stressed At University Seminar

Two scientists who have made invaluable contributions to the progress of atomic research in the United States were guest speakers at an Inter-University Seminar held recently in the Department of Physics at the University of Notre Dame.

Professor Enrico Fermi, who helped make the atomic bomb possible by developing the first sustained chain-reaction, discussed "Statistical Theory of Meson Production." Dr. Arthur H. Snell, Chief Physicist at the Oak Ridge National Laboratory, Oak Ridge, Tenn., described "Recent Work on the Decay of the Neutron." Scientists from a dozen universities attended.

Cartier Portraits Given To University Library

Charles E. Cartier, brother of the donor of Cartier Field and presently cashier of the Notre Dame Foundation, has presented the University with two life-sized Gregori portraits in oil of his parents, A. E. and Eliza Ayers Cartier.

The Italian artist Luigi Gregori painted the Columbus murals in the halls of the Main Building of the University during his residence in the United States from 1882 to 1889.

Famous Aviation Expert Talks to Engineer Group

Dr. Hugh L. Dryden, supervisor of one of the world's foremost aviation research centers, delivered the 1950 Martin McCue Memorial Lecture recently in the College of Engineering at the University of Notre Dame.

Dr. Dryden, who since 1947 has been director of Aeronautical Research on the National Advisory Committee for Aeronautics, Washington, D. C., spoke on "The Pathway from Vision to Accomplishment in Aeronautics." His discussion was founded on more than 30 years of pioneer experimentation and research in the field, during which time he held important posts in aerodynamics and mechanics with the United Bureau of Standards.

A personal friend of Wilbur and Orville Wright, Dr. Dryden has been honored frequently by his colleagues in science for vital contributions to aviation studies. Besides the Reed Award of the Institute for Aeronautical Sciences, he has been awarded the Presidential Certificate of Merit and the Medal of Freedom. He is currently a fellow in the Royal Aeronautical Society and editor of the *Journal for Aeronautical Sciences.*

The Martin McCue Lectures in Engineering are sponsored annually at Notre Dame in honor of Professor Martin J. McCue, for 45 years a member of the University faculty and first dean of the College of Engineering at Notre Dame. The lecture program was originated in 1943 through the generosity of C. A. Breitung, of Dallas, Texas.

Professor Gilson Here For Special Lectures

Professor Etienne Gilson, renowned French philospher and a member of the French Academy, delivered four lectures recently at the University of Notre Dame.

One address concerned the "Historical Research and the Future of Scholasticism." The other three discussed "The Fundamental Positions of Duns Scotus in the Light of Historical Research."

In addition to his lectures and research projects, Professor Gilson has produced a number of books on the history of philosphy. Among these are *The Philosophy of the Middle Ages, Being and Some Philosphers,* and *The Unity of Philosophical Experience.* In virtue of his work he holds honorary degrees from Oxford, Cambridge, Yale, and Princeton.

His lectures at Notre Dame were sponsored by the University's Mediaeval Institute through the aid of the Michael P. Grace, II, Trust.

The Road to Rome

By Al LaPorte

THROUGH the centuries for more than two thousand years Italy has held in the palm of her hand a most precious jewel for all the world to behold. She has jealously guarded this, her crowning glory, protecting it through persecutions, invasions and war, gazing fondly if proudly as its brilliance outshone all others.

And the Italians have been most generous with their possession. Anyone may come to view, to wonder as he sees the heart of the old Roman Empire and the seat of Christendom. The Italians boasted once that "All roads lead to Rome." Their claim still stands unchallenged.

By decree of His Holiness Pope Pius XII the time between Christmas Eve, 1949, and Christmas Eve, 1950, was set aside as a period of penance and prayer for all the faithful, designated by the term "Holy Year." In response to the Papal Bull, Christians the world over have made the pilgrimage to the Eternal City.

Twenty-five Notre Dame students, 5 alumni, 4 seminarians and 4 priests joined the traveling ranks as they made a month-long tour of Europe, stopping at religious and historic landmarks along the way, following the road to Rome. This is a very brief narration of their journey, a journey which took one month to complete, but which could fill a lifetime.

* * *

An hour before midnight the two DC-4's took off from Newark and Idlewild for Gander, Newfoundland, first stop on the long transocean hop. In less than six hours both aircraft had put down at Gander after an uneventful 1163 mile flight.

The author is feature editor for the Notre Dame "Scholastic" and is from New Rochelle, N. Y. Mr. LaPorte will graduate with the June, 1951 Class having majored in Political Science.

Like commuters grabbing a bite to eat on the run, the passengers ate breakfast at the Terminal, downing the last cup of coffee in the gray light of dawn. At 6:45 a.m. New York time they were airborne again, headed over the sea to Shannon, Ireland.

The planes came in at Shannon in darkness, landing at 9:30 p.m. After another hit-and-run meal the whole troop climbed aboard for the flight to London, arriving just before 3 a.m.

Following Mass at St. Aloysius's, everybody took off on sight-seeing trips. Name any of the famous sights in this famous city and at least one of the travelers saw it. Buckingham Palace, Westminister Abbey, 10 Downing Stréet, the Tower of London, St. Paul's Cathedral, Picadilly Circus, Leicester Square —the list takes pages.

"Air France" flew the group across the Channel to Paris, landing at 1 p.m. After a Customs check at LeBourget Airport, the 60-person party split up and headed by bus for their hotels. Once again the majority sacked out early, too tired to try Paris on the first night.

Notre Dame welcomed Notre Dame as Mass was celebrated the next day in the famous Cathedral. Nothing the English had could compare with the beautiful old church, her architecture and three rose windows. Tradition has it that the cardinals' hats which hang above the main altar will fall when their owners reach heaven. The hats are then burned and the ashes sprinkled in the River Seine. Cardinal Richelieu's hat has been hanging placidly for 300 years.

The magic of Paris lured the tourists in the afternoon as they traversed the length and breadth of the city, visiting the Louvre where the "Mona Lisa" hangs, the Arc de Triomphe de L'Etoile and the Eiffel Tower.

The guided tour went to Lisieux and the shrine of St. Theresa. There the group saw the saint's crypt where lies the Little Flower, just as she died. A visit to the Basilica ended the day.

Again the early risers routed the rest of the crew out at 5:30 for the train trip to Lucerne, Switzerland. A change in schedule cut the allotted time down to only a night stopover here, right in the middle of the Swiss Alps amidst the rolling fields then in harvest. Though snow was on the mountain peaks, three hardy souls went swimming in the picturesque lake.

Carved into the white face of a nearby cliff is the famous "Lion of Lucerne," a monument to the 780 Swiss guards who died defending the palace of Marie Antionette and Louis XVI against the mobs of the French Reign of Terror. Lucerne is one of the two cantons (Zurich, the other) to supply the first Papal guards, the result of a treaty made with the Vatican in 1505. And on to Venice!

Down the canals in a procession of

Gondoling on one of Venice's main thoroughfares.

Tower of London is guarded by artillery.

gondolas sailed the amazed travelers to the Ducal Palace, St. Mark's and the heart of the glass blowing industry. Later in the day a big celebration in honor of the Blessed Virgin commenced on many of the canals and through the city's streets—streets often wide enough for only three people to walk abreast. That night the gang "went to sea" again, winding up the procession with a roaring "Victory March" to mandolin accompaniment.

We arrived in Rome at 7 in the evening. The unfinished railroad station is a masterpiece, made of white marble and glass. The lodgings were in a former military school built by Mussolini for his youth movement with all the grandeur and space to be found anywhere. A brief tour of the city ended with welcome sleep.

First item on the order next day was the required visit to the four main churches—St. Peter's, St. Mary Major, St. Paul's on the Ostian Way and St. John Lateran — where the necessary prayers were said for the Holy Year indulgence. If St. Peter's seemed impressive in the morning at the first visit, it was magnificent this night, for it was then that the group witnessed the canonization of Maria Goretti.

To ensure a place from which the ceremonies could be seen, the pilgrims arrived two hours early. The estimated crowd was between 350 and 400 thousand in the Square, the first time a canonization has been held outdoors. The procession lasted 25 minutes with nearly 80,000 participants. The whole show lasted 2½ hours, colorful, inspiring as only Rome can be.

The canonization Mass on Sunday was a big event. St. Peter's was jammed. The capacity for this occasion was 80,000, though the church will hold an even 100,000. A roar began from the rear and swelled to a thunderous crescendo as every voice blended into one shouting the electrifying "Viva Il Papa!" when His Holiness was carried in on the shoulders of eight guards, riding serenely in his Sedia Gestatoria. He turned from side to side, smiling, beaming as he blessed the throng. This wild cheering and waving of handkerchiefs, so out of place in an American cathedral, seemed so natural in St. Peter's that everyone, foreigners alike, joined the salute.

Then a Vatican tour of the Museum, Sistine Chapel, Library and then Rome itself. The Forum, Pantheon and other historical sites were all visited in a quick but interesting search through the old and new parts of the city.

After Mass, the party went out to the old Roman catacombs of San Sebastiano, the only ones accessible to the pilgrims. Down narrow passages lit only by the light of the guide's taper went the small group past niches where sometimes appeared the name of the interred and sometimes the word "in pace." A few of the earlier inscriptions are in Greek, the later, in Latin. Could the catacombs be placed in a continuous line, they would stretch roughly 545 miles, but they are built on tiers, the deepest 50 feet down, the newest only 22 feet below the ground's surface.

John See, ND student, Father Edmund Murray, C.S.C., and friends pose on steps of Cathedral, Chartres, France.

The crowning highlight of the tour was the audience with the Pope. Again the mad cheering, clapping and waving as His Holiness arrived, announced by the silver trumpets. After he had circled the church, the Holy Father sat down to talk to the pilgrims in their own tongues. He spoke in Italian, French, Spanish, German and English. His diction was perfect. After the formal audience, he visited with the various hierarchy, then went about shaking hands and talking until 7:30 when he left the church on his chair, blessing all as he went.

Off for Nice, France, by 8 o'clock in the morning. At 7 this night the group arrived at the famous town along the French Riviera. Nice's hotels were the most luxurious imaginable. When some of the party sat down on the seaside benches, they were assessed the usual tax for using the benches, a custom prevalent in this country.

Two days were spent thoroughly viewing the Grotto, Basilica and surrounding religious shrines of Lourdes. Approximately 200 miracles occur here every year at the shrine. The water where so many of the miracles take place is not changed after each bath, no matter what disease it may touch, but not one case of contagion has ever been recorded in this spring water.

Our arrival in Madrid was in the midst of the hot season and the women made continual use of their fans wherever they went. One party went to the bull ring to see what attracts the eyes of all Spain but they did not have time to stay for the fights that weekend.

Twelve hours and 250 miles later the train pulled into Lisbon. Immediately the side trip to Fatima began. Eleven more hours. But the trip was worth it, though the stop at Fatima was only one hour. The basilica is not as beautiful as many of the others on the trip, but its simplicity was compelling. Back to the hotel and final preparations for the "long voyage home."

The morning was spent in readying everything for the flight west. Enroute we stopped at the Azores. Final touchdown at Idlewild was midnight, one month from the day of departure.

The 1950 Holy Year pilgrimage was over, though many had recorded it on movie and candid film, filling scrapbooks with pictures, cards, stubs and menus from every conceivable place on the trip. Tired but happy, they left the airport. The road to Rome had been traveled.

Laundry

(Continued from Page 16)

"After listing, the bundle with the bag is passed on to the markers where each piece is stamped permanently with the student's laundry number.

"From the time a bundle is broken, counted, listed, marked, separated, classified or sorted, loaded, washed, pulled, extracted, dried, ironed, folded, assorted, checked, and wrapped ready for delivery

Laundry Manager Gerald Hoar.

to our central distributing office at Badin Hall, approximately five hours' time is consumed."

The present laundry, inadequate because of a lack of space is, nevertheless, continually adding the most modern and scientific processes. There are five 42' x 36' stainless metal washers, and one pony washer for silks and woolens. There is one 28-inch and three 48-inch extractors, two small and one large tumblers, two handkerchief ironers, one complete American-System shirt finishing unit (which handles 8,000 shirts per week), six sets of garment presses, two complete sets of sock forms, one collar press for starched collars, four sock darning machines, and one compressor for operating all air controlled presses.

The dry cleaning department of the laundry is entirely for the convenience of the students. While the best dry cleaning equipment available is used, the prices are lower than those of most establishments, and the University is not making a profit from the concession. From 1936 to 1949 there were no increases in prices, and the recent changes were deemed necessary only because of the great increase in operating expenses.

The laundry is essentially a convenience for the student body and is operated on a family basis rather than for commercial profit. It is another one of the many unusual and modern facilities offered to the students by the University.

Armour Gives $2,500 Grant

A $2,500 grant has been given to the University of Notre Dame by Armour and Company of Chicago for the study of the biology and control of the sheep stomach worm.

Dr. John D. Mizelle, Professor of Biology and editor of the *American Midland Naturalist* at Notre Dame, announced that Joseph Berberian, a graduate student in the Department of Biology at the University, has been given a Fellowship under the terms of the Armour grant to work on a method to rid farmers of this menace to sheep.

This parasite is responsible for the loss every year of hundreds of tons of mutton. A blood-sucker by nature, the adult worm lives in the fourth stomach of the sheep and consumes the nutritive agents that should go to the development of edible flesh.

Notre Dame Receives Unique Gift Volume

An elaborate volume of reproductions from a 14th-century Hungarian Bible has been presented to the Mediaeval Institute of the University of Notre Dame by Congressman Christopher G. McGrath, of New York.

The gift was announced by the Rev. Gerald B. Phelan, Director of the Institute, who described the Bible as the Nekcesei-Lipocz edition — a rare manuscript preserved in the Library of Congress. The volume presented to Notre Dame includes one full-size color reproduction of a page from the highly-illuminated manuscript, along with numerous black-and-white plates. It was edited by Meta Harrsen, Librarian of the Pierpont-Morgan Library of New York.

The Mediaeval Institute was established at Notre Dame in 1946 to encourage research and advanced study in the language, philosphy, theology, and general culture of the Middle Ages.

Credits—

Photos: John See; Bruce Harlan, University Staff Photographer; James McLaughlin; Hal Munger; Richard Gorman; John Kinville.

Articles: The Road to Rome and It All Comes Out in the Wash, from the *Notre Dame Scholastic.*

Dean Manion Appointed A.B.A. Special Committee

Dean Clarence E. Manion of the College of Law at the University of Notre Dame has been appointed to membership on the American Bar Association's Special Committee to Study Communist Tactics and Objectives.

The committee, appointed by the president of the American Bar Association, is designed to study Communist tactics, strategy and objectives, particularly as they relate to the obstruction of proper court procedure and law enforcement.

ND Professor Attends French Education Meet

Dr. William O. Shanahan, professor of history at the University is in Nice, France, this month representing Notre Dame at the International Conference of Universities.

The conference is sponsored by the United Nations and its aim is to set up an international organization of "Universities and institutions of higher learning." Over 90 schools from 30 countries were invited to send delegates and Notre Dame is one of three Catholic universities in this country invited.

Harry G. Hogan, Arch Ward Get ND Honorary Degrees

At the University of Notre Dame Commencement exercises to be held on January 28, two outstanding Notre Dame Foundation personalities will be honored by their alma mater. Mr. Harry G. Hogan, Fort Wayne, Indiana, businessman, who pioneered the Foundation program at Notre Dame and was the first National Chairman, and Mr. Arch Ward, City Chairman in Chicago and Sports Editor of the *Chicago Tribune* will receive honorary doctorates.

Others receiving honorary degrees include the Rev. John Courtney Murray, S.J., noted Catholic editor and the Very Rev. Vincent J. Flynn, president of St. Thomas College, St. Paul, Minn.

ALL HANDS POINT TO....

NOTRE DAME'S URGENT NEEDS FOR '51

And you, the Friends of Notre Dame, can help us continue the training of moral, responsible leaders by:

1- A Direct Gift from you to Notre Dame (any amount you can afford).

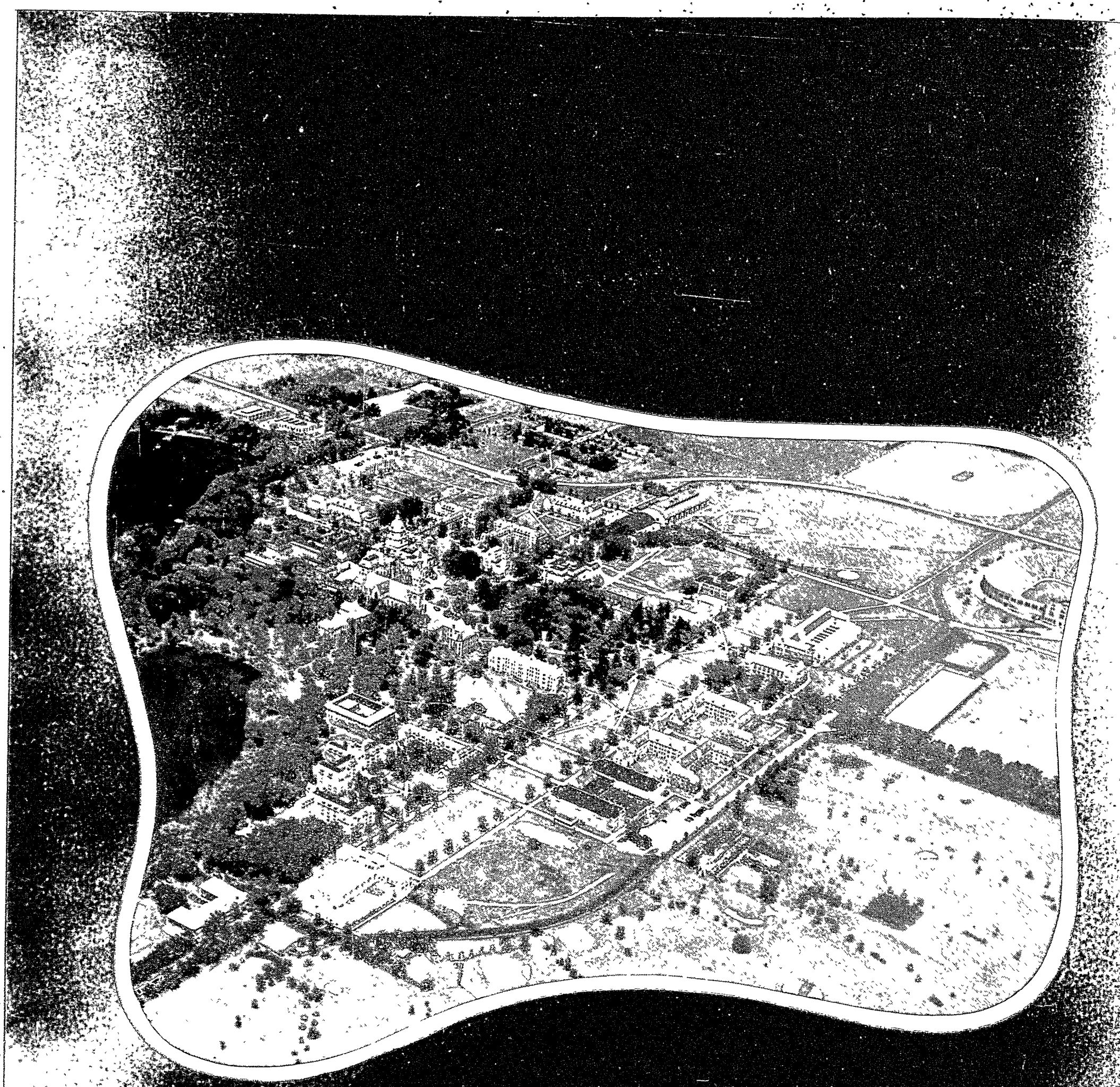
2- Remembering Notre Dame in your Will (or advise a friend to do the same).

3- Including Notre Dame in your insurance program.

4- A corporation gift -- private education must be maintained.

5- Soliciting a gift from one, or more, of your friends.

ALL GIFTS ARE TAX DEDUCTIBLE UNDER EXISTING LAWS



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