

Notre Dame

A Magazine of the University of Notre Dame

WINTER • 1954



Mr. Thomas W. Pangborn (left) and Mr. John C. Pangborn, Hagerstown, Md., are donors of a new \$800,000 student residence hall through the Pangborn Foundation. The building, now under construction, is Notre Dame's 15th residence hall and it will be ready for occupancy in Sept. 1955. See story, page 2.

- 2 Pangborn Hall—
Notre Dame's Newest
- 5 President's Page
- 6 Father Edward F. Sorin, C.S.C.
Founder
Rev. Arthur J. Hope, C.S.C.
- 8 Eyewitness
- 10 A University IS Big Business
Rev. Edmund P. Joyce, C.S.C.
- 12 Million Dollar Maintenance
James Lund
- 16 Lobund's Cancer Research
Microscope
James E. Murphy
- 18 Who, Me?
Joseph B. Tierney
- 19 Partnership With Industry



VOL. 7 • NO. 4

Pangborn Hall...



HOLAS RD. E. FOOT & PURGE, AR.



Notre Dame's Newest

Residence For 200 Students Will Be Located Between Rockne Memorial and Fisher Hall

The generous benefaction of Thomas W. Pangborn and John C. Pangborn, through the Pangborn Foundation, Hagerstown, Md., has made possible the construction of Notre Dame's newest student residence building. Pangborn Hall, upon completion at a total cost of \$800,000, will be the fifteenth campus residence building and will offer accommodations for 200 students. It is scheduled for occupancy in September, 1955.

In expressing the University's gratitude to Mr. Thomas Pangborn and Mr. John Pangborn for their magnificent gift, the Rev. Theodore M. Hesburgh, C.S.C., president, further stated, "With the marked increase in enrollment during recent years, the University has found it impossible to provide campus residence facilities for all its students. Pangborn Hall will enable

many students who formerly lived off-campus to share more fully in the life and spirit of Notre Dame."

The new structure will be located on the quadrangle between the Rockne Memorial and Fisher Hall. It is being designed by the well-known architectural firm of Holabird, Root and Burgee, Chicago, Ill. There will be 100 double rooms, a chapel and recreation room in the buff brick hall.

The career of the Pangborn brothers is a story of faith, ingenuity, belief in their fellow men and infinite perseverance regardless of hardships. It is comparable in many respects to the rise of Notre Dame from a log chapel on the Indiana plains to one of America's best-known educational institutions.

The Pangborn Corporation like Notre Dame had a humble beginning. Thomas Pangborn early in his working



(above left) Architect's drawing of Pangborn Hall.

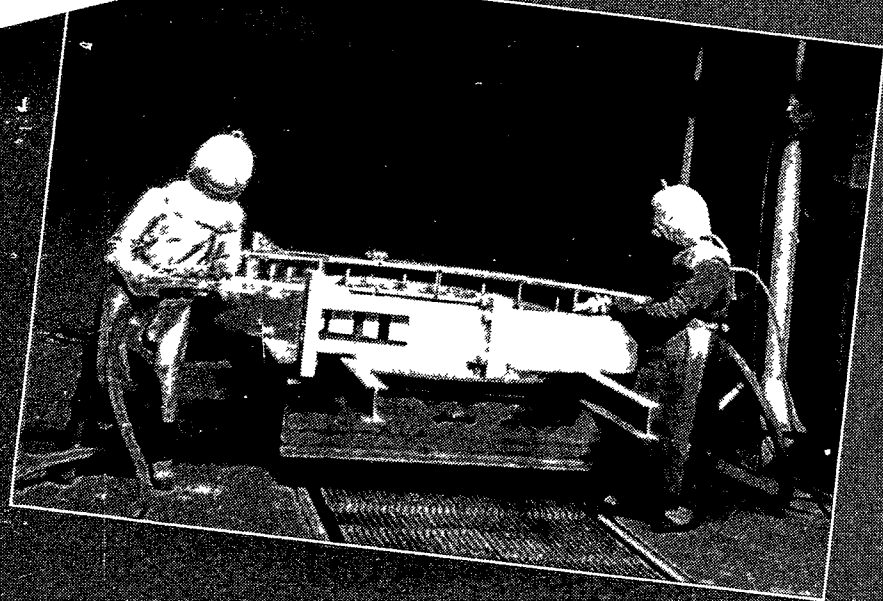
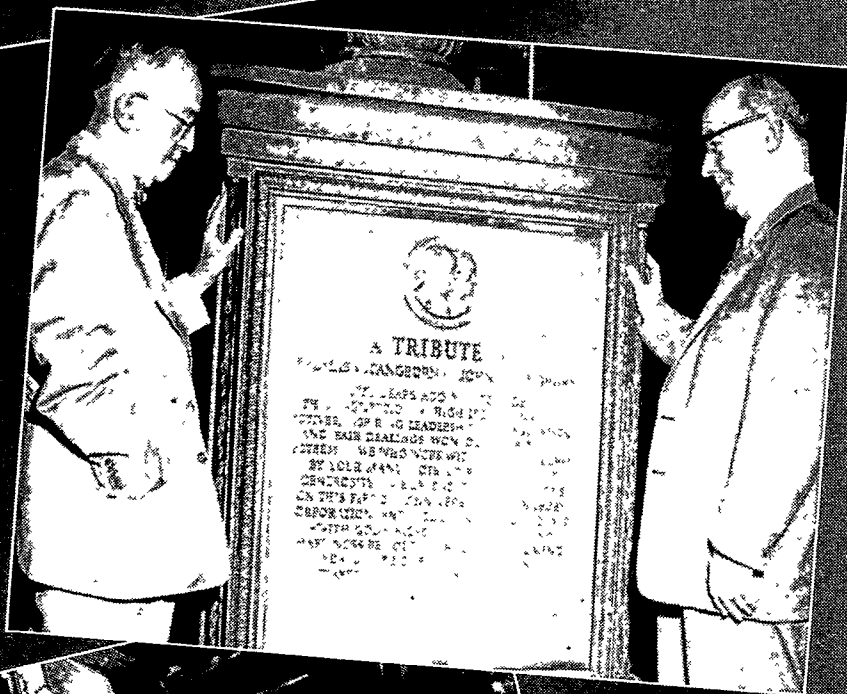
(above) Mr. Thomas W. Pangborn

(lower left) Father Hesburgh; Mrs. Thomas W. Pangborn; Mr. Thomas Pangborn; Bishop McEntegart, rector of Catholic U.; Mrs. John C. Pangborn; Rev. William F. Maloney, S.J., Provincial, Maryland Province; Mr. John Pangborn; Father John J. Cavanaugh.

(lower right) Father Hesburgh speaks to guests and employes during company's anniversary celebration.

Those attending 50th anniversary observance of the Pangborn Corp., included (L to R): Msgr. John L. Sheridan, president, Mt. St. Mary's College; Mrs. John C. Pangborn; Archbishop Patrick A. O'Boyle, Washington, D. C.; Bishop Bryan J. McEntegart; Mr. Thomas W. Pangborn; Mrs. Thomas Pangborn; Father Hesburgh; Bishop John M. McNamara, auxiliary Bishop of Washington, D. C.; Rev. Hugh J. Phillips, exec. sec'y., Mt. St. Mary's National Alumni Association; Mr. John C. Pangborn; and Father Cavanaugh.





career rented office space in a repair shop in downtown New York City—five decades ago. After being joined there by his brother John, they soon pooled their meager resources to merchandise Tom's first sandblast machine. Industrial stature came gradually and today the Pangborn Corporation makes equipment that helps make the things we in this modern world depend on. Pangborn machines are important to the mass production at low cost of the cars we drive, the trains and planes we travel in, the stoves and refrigerators and other important items closely associated with everyday living.

Pangborn is one of the world's largest manufacturers of blast cleaning and dust control equipment. On September 1st, this year, the corporation celebrated its golden anniversary.

Thomas W. Pangborn is president and founder of the Pangborn Corporation. His brother, John C. Pangborn, is first vice-president.

One of America's leading Catholic laymen, Thomas Pangborn has received highest papal honors from His Holiness Pope Pius XII. He is a Knight of Malta and a Knight of the Holy Sepulchre. He is a member of Notre Dame's Advisory Council for the Colleges of Science and Engineering; a trustee of Catholic University; a member of the Advisory Board, Mount St. Mary's College; a director, Equitable Trust Company, Baltimore, Md.; member of the Mercy Hospital Advisory Board, Baltimore; Chairman of the Board, Nicodemus National Bank, Hagerstown, Md.; served for six years as president of the National Founder's Association, one of the oldest trade organizations in the country; and as an associate member of the National Industrial Conference Board, a fifty-man non-partisan fact-finding organization, composed of representatives of industry and finance. In 1934 he was named

(Continued on Page 15)

NOTRE DAME

Published quarterly by the University of Notre Dame, Notre Dame, Indiana. Entered as second class matter May 10, 1948, at Post Office at Notre Dame, Indiana, under the Act of August 24, 1912.

James E. Armstrong, '25, Editor.
John N. Cackley, '37,
Managing Editor
Vol. 7 No. 4 Winter, 1954

Top to Bottom: The Pangborn Corporation, Hagerstown Md.; Mr. John C. Pangborn (L) and Mr. Thomas W. Pangborn inspect bronze tablet tribute to them from employees on the corporation's 50th anniversary; workmen assembling new Pangborn Blastmaster Barrells in plant; workmen in airblast helmets and rubber protective clothing sandblasting castings in Pangborn Room.



Today we find ourselves astride the current controversy of liberal education versus vocational education. We are living in an age of science and technology. Many educators think that this should indicate a purely vocational purposefulness to education. A boy in college should mainly learn the techniques required to be a chemist, a metallurgist, a nuclear physicist, a business administrator or a lawyer. To this extreme, we answer that all of us should learn, first of all, how to be a man, with all that implies. An electronic computer can work more efficiently than a mathematician, but it isn't human. Only a basic liberal education can teach us how to be human.

Strong Base of Liberal Education

At the other extreme, there are those educators who shun vocational training as though there were something immoral about acquiring enough professional competence in some specific area of human endeavor to acquire a job and mature in it after four years of college education. In answer to this extreme, we do have within the University, Colleges of Commerce, Law, Engineering, and Science, as well as a College of Liberal and Fine Arts. Perhaps, it would be fair to say that we try to stand between the two extremes of this educational controversy, and to build a good measure of professional competence on a strong base of liberal education. We take this stand because we think that only a liberal education prepares a man to answer the really important questions in human life. You have all been confronted with these questions—what is the meaning of man and his life on

earth? Why do men live together in society? Is the state for man, or man for the state? Can we learn anything certain about these questions, about what is really important in life? Are there things of eternity more important than the temporal troubles of this life? Values of the spirit more important than the values of material things? What of liberty, and authority? What of truth and error, knowledge and opinion, beauty and ugliness, pleasure and pain? Are there basic truths and values really worth living for, fighting for, even worth dying for?

Without a clear understanding of these basic questions and answers, studied in the great classical writings of theology and philosophy, literature and art, history and social science, mathematics and the physical sciences, the best technician, who is only a technician, will be unprepared to use his techniques intelligently, purposefully, and with the integrity that the modern world needs. Hence, our insistence on a strong liberal base. If our students acquire the wisdom of our Western culture, we feel that they will be better engineers, scientists, teachers, lawyers, and businessmen, because they will know, first of all, what it is to be a man.

Million Dollars for Research

Having made this point of a strong liberal base for specialized technical training, we must add that we do not think that professional competence should be lessened because of this Christian cultural background. We are constantly trying to improve our professional training in the various colleges of the University. We are

currently doing over a million dollars worth of research every year to keep abreast of the frontiers of discovery. We want our students to share the thrill of this discovery, and to keep alive the great traditions of Notre Dame, where the first wireless message was sent in America, where the basic formula for synthetic rubber was discovered, where the first law course was taught in an American Catholic school, where the first wind tunnel was erected for aeronautical research, where the first germ-free animals were produced.

The Spirit of Notre Dame

Today, these traditions are being kept alive in an atmosphere that wants no mediocrity that would lessen the professional competence of the Notre Dame men of tomorrow, be they in business, engineering, science, or law. True, the spirit of Notre Dame wants to produce intelligent and good men, but we will never view brilliance or piety as a substitute for competence. We want our men to know, love, and serve God. And how is God better glorified than by intelligent and devoted service to our fellow men, in the line of our chosen life's work. Neither God nor man is well served by mediocrity.

President

University of Notre Dame

Father Edward J. Sorin founder

Rev. Edward F. Sorin, C.S.C., founded the University of Notre Dame in 1842. The Founder's Day sermon this year was given by Rev. Arthur J. Hope, C.S.C., in Sacred Heart Church on the Notre Dame campus. Father Hope is the author of the book, "Notre Dame—One Hundred Years" and is associate editor of the Ave Maria magazine. He has been a member of the faculty at Notre Dame and the University of Portland.

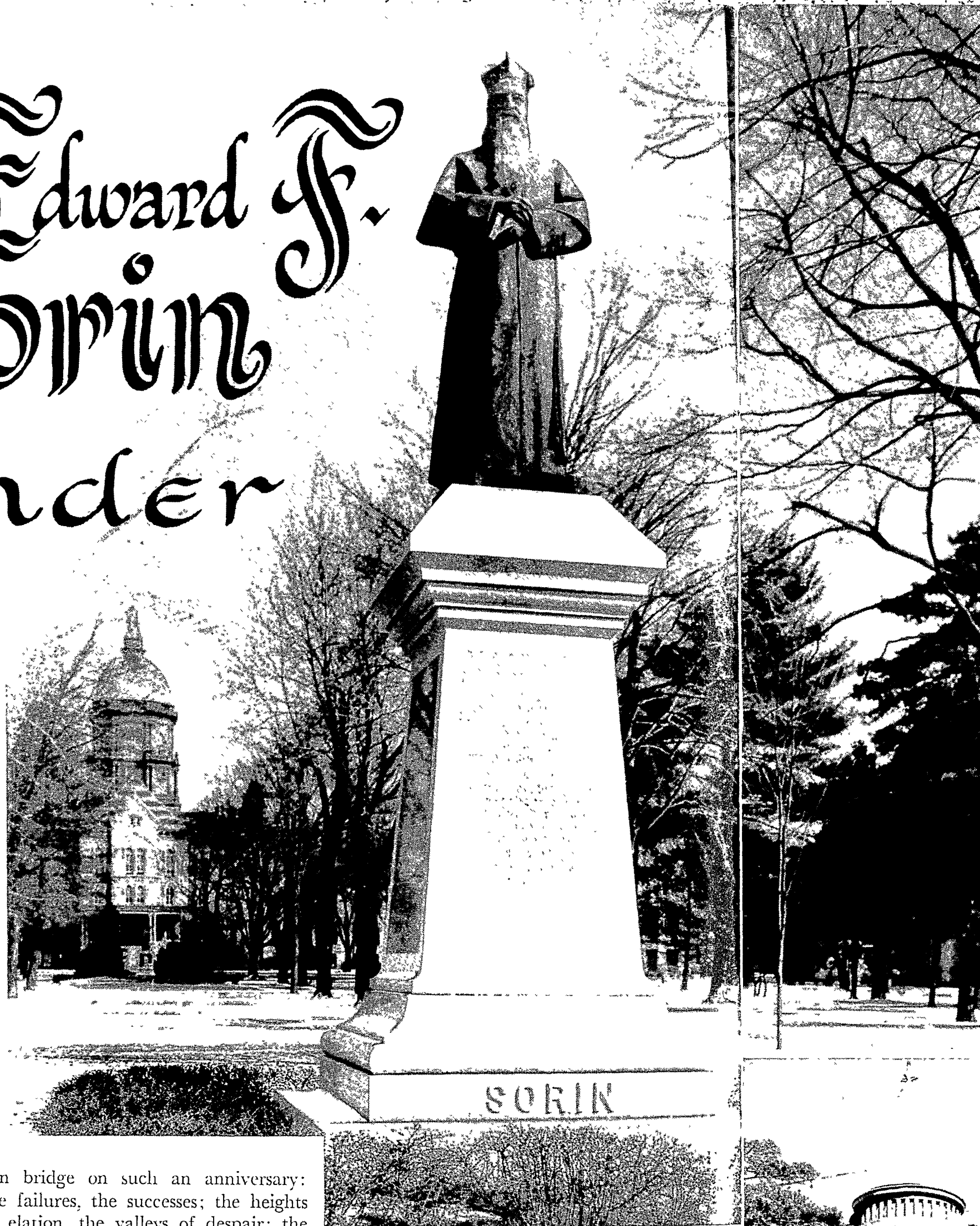
Through the Sacristy Door, Aug. 15, 1888 More than 66 years ago, a procession formed in that sacristy door. It was the morning of August 15, 1888. A grave, crimson-robed altar boy, carrying a golden censor, was followed by a group of very small, well-scrubbed laddies, also in red; and on their heels cassocked and surpliced novices and seminarians; and priests of Holy Cross and men from other orders and dioceses. Then there was the purple of many bishops; and the small devout figure of His Eminence of Baltimore, James Cardinal Gibbons. And at the end, between his deacon and sub-deacon, the tall-white-bearded figure, in his Mass vestments, came through that door, with firm and dignified step, the Founder of this University. Father Sorin was about to celebrate fifty years of priesthood.

What He Saw Fifty years is a long time in the priesthood. And no one knows, so well as a priest, how many things a priestly memory

can bridge on such an anniversary: the failures, the successes; the heights of elation, the valleys of despair; the friends won, the enemies made; but over all, for a good priest, the memory of God's goodness to him and a contrite recollection of his own defective stewardship. And I have no doubt that as Father Sorin lined up in that sacristy just prior to his golden jubilee Mass, his memory was active about many things. What did he remember?

Was it that day when, as a newly ordained priest, not in church, but in his own house, surrounded by his mother and father, his brothers and

sisters, his relatives and the servants, he preached his first sermon. For subject: the Blessed Virgin. It was a theme to which he would return year after year, for fifty of them, in which the power, and the love, and the tender mercy of Our Lady would be held up for men's veneration. Indeed, it was a sermon which still echoes through these grounds and beyond. For in spite of all his faults and shortcomings, there never was a more shining knight



of Our Lady's honor. It was something which he has given to all of us.

His Optimism He must have remembered, too, while that procession was forming, his almost outrageous optimism that first day he came to Notre Dame. It was cold. There was a bitter wind off the lake. Deep snow covered the ground. He and his little band of Brothers appallingly poor. Was he downcast, with this prospect of nothing to work with, without credit, without money, without resources? He was only 28 years old. He was too young to have what we sometimes call the prudence of experience. He had placed his hand in that of Our Blessed Lady, and that was more than riches. He took the six Brothers into the dilapidated remains of the log chapel, and kneeling on the dirt floor, spread his great, black cape over the shoulders of his companions, and vowed that he, and they, and all who should come after him, religious and students, until the end of days, would find in Our Lady's help, an optimism not justified by an earthly queen.

A Tower of Strength There must have been, too, a quick recollection of that day, only nine years previous, when, in a few short hours of an April morning, this whole university, this church alone excepted, became a mass of smoldering ruins. Sorin himself was in Montreal. But when he came back the next day, he surveyed the burning pile. The priests and Brothers were fearful of what that sight would do to him: the ruination of all his years of toil and sweat and triumph. But the priests and Brothers had underestimated the man. He called them all here into the church, and here, in this very spot, he showed the kind of man he was. "If it were all gone," he said, "I would not give up. This I began in her name; in her name, I will rebuild it." That was the way he was for those who were weak and afraid: he was always a tower of strength.

His Americanism After that jubilee procession had come into the sanctuary, and when it came time for the sermon, the Archbishop of St. Paul, John Ireland, preached. A great part of what he had to say concerned Father Sorin's patriotism to the land of his adoption. He remarked

how Father Sorin, before anyone else in the country, had sent six of his priests, from the small and necessary band he had, to care for the Catholic soldiers fighting in the Civil War. And that was before chaplains had either commissions or salary.

Father Sorin's Americanism was apparent, too, in his frequent urgings both to his Superior General and his French confreres—to leave France, where they were hobbled with anti-religious laws, and teaching restrictions—let them come to America, which blessed country respected and protected religion without interfering with it.

Even in small ways he had made himself an American. He remarks in one of his Circular Letters that he is happy to think that he was not given a French name, like Rene or Francois, but an anglo-saxon name like Edward, so easily made democratic by shortening it to Eddy or Ed. I am quite sure that no Notre Dame student, mindful of the Founder's dignity, ever called him Eddy. He was probably called others things, but not Eddy.

The Last Farewell Five years after this event, Sorin lay dying in this house behind the Church. He had been a sick man for over a year, suffering from Bright's disease. But on his feast day, sixty-one years ago, almost at this very hour, the dying priest heard a commotion on the walk outside his door. He asked the good Sisters: "What is it?" They told him that the student body and the faculty were assembled outside to wish him a happy feast. And with a supreme effort, he called for his cassock, and his cord, his crucifix and his biretta, and tottered to the front door. All that he could do was wave his hand at his greeters. But there was one last message, spoken so low that only those nearest heard it. "I bless you in her name!" and pointed to the Lady on the dome.

We like to believe that his blessing, sixty one years ago, was meant for us, too. The changes in our world, even the changes in our campus, could not make him unmindful of us, his sons. So with his dying breath, Edward Frederick Sorin placed each one of us in the hands of her who was his life, and our life: his sweetness and our sweetness: his hope, and ours.



Courtroom Techniques And Procedures Demonstrated to Law School Students

This article was prepared with the special assistance of Professor Edward F. Barrett of the Notre Dame Law School faculty.



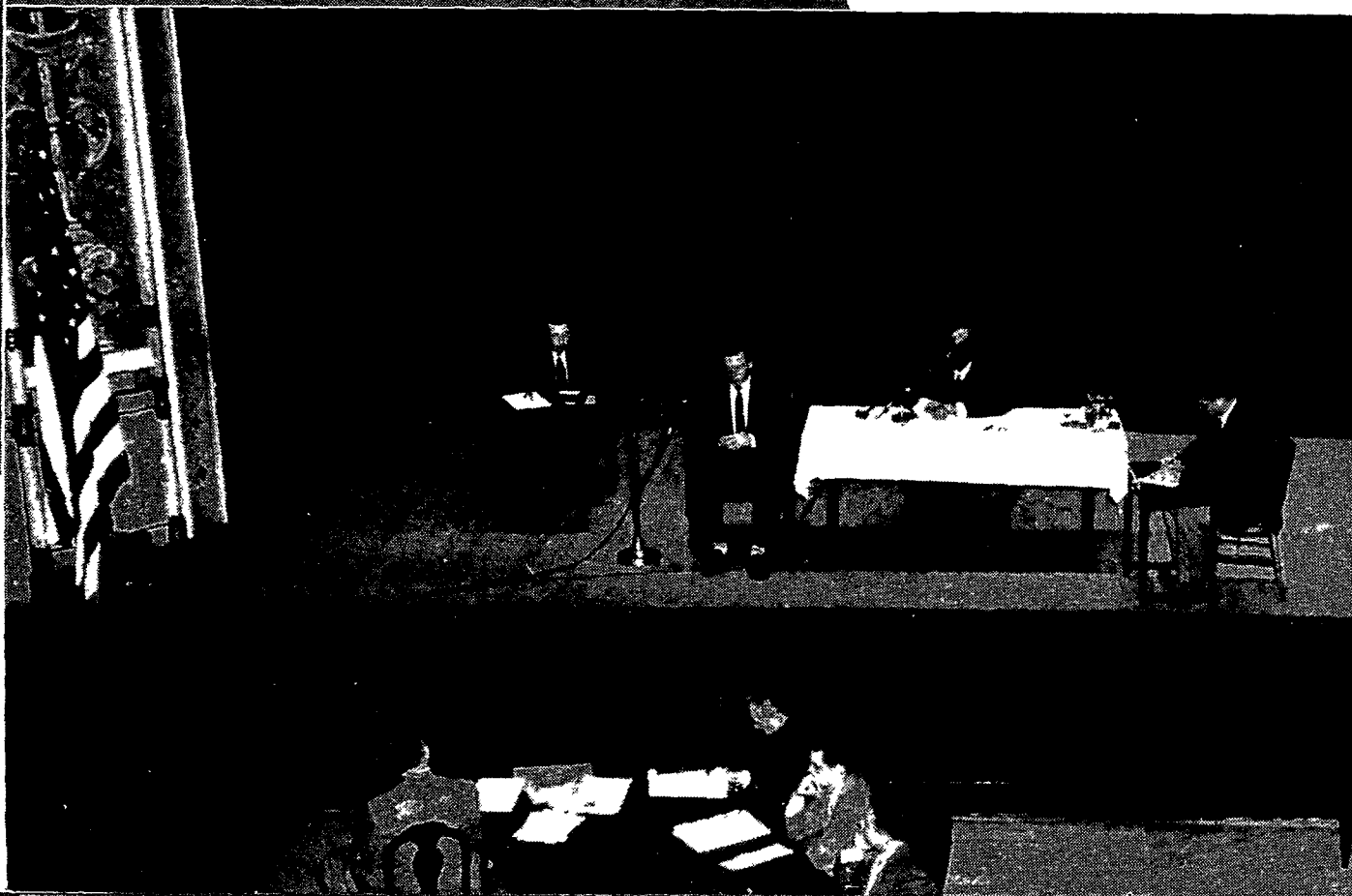
(above) Edward W. Krause, Director of Athletics at Notre Dame, testifies for the plaintiff during simulated trial of injured football player. Judge Wendell E. Green, of the circuit court of Cook County, Chicago, presided on the 'bench.'

(below) Plaintiff Mike Regan, ND law student, reveals to the court that his 'player days' were ended as result of auto accident involving N.D. Publicity Director James E. Murphy, the defendant.

A simulated trial that had all the earmarks of an actual courtroom case was held on the campus recently under the sponsorship of the Notre Dame Law School.

Numerous witnesses testified, including Edward W. "Moose" Krause, Director of Athletics for the Fighting Irish, and two South Bend physicians. The setting gave the effect of reality with Judge Wendell E. Green of the Circuit Court of Cook County, Chicago, presiding. The jury, composed of beginning law students, was "sworn in" and they gave all indications of seeing that justice was properly rendered.

Two Chicago attorneys, one an alumnus of Notre Dame, represented the plaintiff and defendant. Peter Fitzpatrick argued the plaintiff's case while Chester A. Wynne, '22, former Notre Dame football star and now attorney for the Chicago Surface Lines, pleaded for the defendant. They have often opposed each other in accident and



WITNESSES

negligence cases in the courts of Chicago and Cook County.

"The purpose of this demonstration trial," according to Dean Joseph O'Meara, Jr., of the Law School, "was to galvanize the interest of the students at the threshold of the school year, and to enable them to bring to their studies the greater insight afforded by seeing for themselves, at first hand, how the judicial process works."

The case tried involved a star football player of "State" University who alleged that as he was carefully crossing a street near the campus the defendant carelessly and negligently ran him down inflicting serious, painful and permanent injuries, and that as a result his days as a player were ended. Both sides called eye-witnesses to the accident. To make the case realistic the Law School secured from the University of Michigan a film purporting to show "what happened." The film was in four separate sequences. Each of four sets of witnesses saw the accident from four different points of view. Prior to the trial volunteers from the Notre Dame campus and from the South Bend community saw the film in the Audio-Visual center. Each set of witnesses saw only one of the four sequences. Their testimony at the trial was thus based entirely on what they had seen in the film sequence shown them. Neither of the attorneys conducting the case was permitted to see the film so that their respective preparations for trial were wholly based on what their witnesses and clients reported during the interviews which took place on the day before trial. The result was that the students attending the demonstration were brought close to the features of surprise testimony and contradictory testimony which they are bound to meet in the future practice as trial lawyers.

In addition to the testimony of observers of the accident, medical

testimony was introduced as to the extent of the plaintiff's injuries. Here again the testimony was in conflict. X-rays were admitted in evidence. These purported to be actual X-rays of the plaintiff's alleged leg fractures. Medical experts called by plaintiff and defendant differed in their interpretation of the X-rays introduced. In fact, the X-rays brought in to illustrate to the law student their use at trial of negligence cases were actually X-rays of leg fractures similar to those claimed by the plaintiff.

During the course of the trial there were scores of points arising which graphically illustrated the problems the trial lawyer must be prepared to meet. Messrs. Wynne and Fitzpatrick, keeping in mind the purpose of the demonstration planned their procedures and techniques in such a way that the maximum of benefit would accrue to the students observing the case. There were objections to testimony followed by the court's rulings thereon, requests for instructions to the jury followed by a colloquy between the court and the attorneys as to the propriety of the instructions asked, vigorous cross-examinations of the witnesses, careful summations or arguments to the jury designed to illustrate the difference between a plaintiff's and a defendant's summation.

Members of the freshman class of the Law School were summoned to act as jurymen. Counsel conducted a careful preliminary examination of the prospective jurymen and the atmosphere of reality was early created when several of the prospective talesmen were peremptorily challenged. The jury's final verdict in favor of the defendant demonstrated that the evidence had been carefully attended to and the instructions given by the court closely followed. Since the mem-

bers of the jury were freshmen in their first week of law school study they had thus at the outset an invaluable experience. They had seen the complete trial of a negligence action not as outside observers but as an integral part of the trial process itself. Junior and Senior students who attended received practical training in preparation for the trials of their own cases which will be assigned them in the Practice Court courses (Procedure IV) now required of all students in the Law School before graduation.

The net results of the demonstration were such that it is hoped to repeat a similar trial at the opening of the Law School next year.

Dr. L. M. Bodnar, South Bend physician, interpreted X-rays of leg fractures similar to those claimed by the plaintiff.



UNIVERSITY



FATHER JOYCE

By Rev. Edmund P. Joyce, C.S.C.
Executive Vice-President,
University of Notre Dame

To the ordinary layman, a university conjures up thoughts of Gothic buildings and ivied walls, shaded walks and a peaceful detachment from the rapid tempo of the modern world.

Such a person would scarcely equate a university and big business.

And yet, a university is big business, with many of the same thorny problems that big business confronts today. True enough, there are differences. For one thing, there is a difference in emphasis. A large mercantile or manufacturing corporation has one main objective—to make enough money so that the stockholders receive a reasonable return on their investment. A university has no stockholders, fortunately for the peace of mind of both. Dividends are apt to be few and far between.

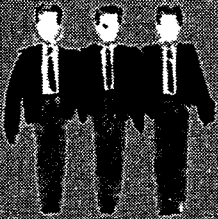

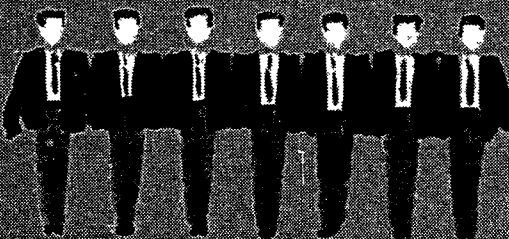
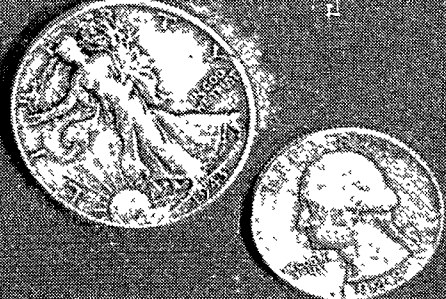
Although a university is in no way dedicated to the pursuit of year end profits, it cannot be indifferent to the financial factors that are the concern of every corporation. It cannot ignore the financial facts of life and expect to live.

This is particularly true of the private university. It is true of the University of Notre Dame. In fact, it is more than ever incumbent upon the

private university to develop its business organization to a high degree of efficiency, to trim overlapping costs, to safeguard its sources of revenue, to spend wisely and cautiously. Every dollar allocated to the educational effort must pay dividends in academic accomplishments.

There may have been a day in the history of private education in this country when university administrators lost little sleep over finances, but we doubt it. True enough, when Father Sorin first got his fledgling university underway the financial ledger was relatively haphazard and uncomplicated. The earliest students paid for their tuition with a sack of potatoes or a couple of shoats.

Today, 113 years later, the University of Notre Dame has grown from a small provincial college to a university of national and international prominence, enrolling 5,400 students from 48 states and 30 foreign countries. Much of this growth has occurred in the past thirty years and we need only

	STUDENTS	OPERATING BUDGET
1923	 2,000	 \$ 551,000
1954	 5,400	 \$ 12,000,000

BIG BUSINESS

compare some of the figures for the present year with those of 1923 to get a graphic picture of the University's development.

For one thing, endowment funds have increased in this 30-year period from \$308,000 to \$12,105,000. The physical plant has grown from a depreciated value of \$4,222,000 to \$19,793,000, with a replacement value possibly three times this much.

Even more interesting are the following figures. Although Notre Dame had over 2,000 students by 1923 as against 5,400 today, the total cost of operating the University in 1923 amounted to \$551,000 as compared with a budget of \$12,000,000 for the current year. Whereas the student body has not quite tripled in the last 30 years, the total expenditures are 22 times what they were. This is partially due to a growth in auxiliary enterprises, such as the cafeteria and the Morris Inn, but it is largely due to the rapid increase in educational costs. Expensive equipment is required for up-

to-date scientific and engineering laboratories. Teaching loads have been reduced in order to give professors more time for advanced research; secretarial services are more widespread. Salaries have increased and, in Notre Dame's case, the ratio of priest professors (serving without pay) has decreased over the years. In 1923 salaries paid to lay professors amounted to \$160,000. Today they amount to \$2,365,000. The sum total of Wages and Salaries paid in 1923 came to \$284,000; today it is approximately \$6,000,000. If anyone should wonder why professional salaries are only 40% of the total salary picture, it should be pointed out that the lay instructional staff numbers somewhat less than 25% of the 1,600 university employees.

All this will help explain why the financial problems of the private institution are annually becoming more acute and the operation of a university more complex. Placed at a serious competitive disadvantage with the tax supported state schools, it is little won-

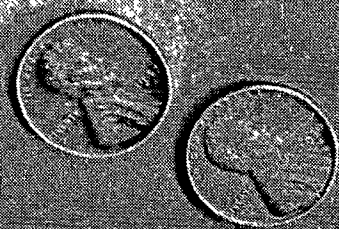
der that the presidents of private universities are utilizing all of the most advanced methods of big business to insure an efficient and economical operation.

Here is how the problem has been approached at Notre Dame. There is a two-pronged objective. One is to increase revenue, largely through the Notre Dame Foundation. The second is to realize the maximum value from all expenditures. We shall discuss the latter first.

An important move made by Father John Cavanaugh during his tenure as president was the administrative reorganization which divided the University into four major areas with a vice president in charge of each. These four vice presidents, subject to the president's authority, have full jurisdiction over Academic Affairs, Student Affairs, Business Affairs and Public Affairs. There is also an Executive Vice President who coordinates the work of the four officials and acts in the presi-

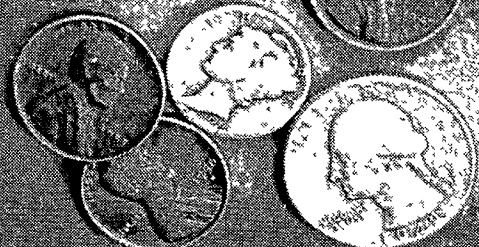
(Continued on page 15)

TOTAL WAGES & SALARIES

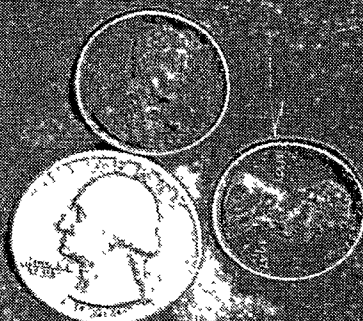


\$ 284,000

\$ 6,000,000

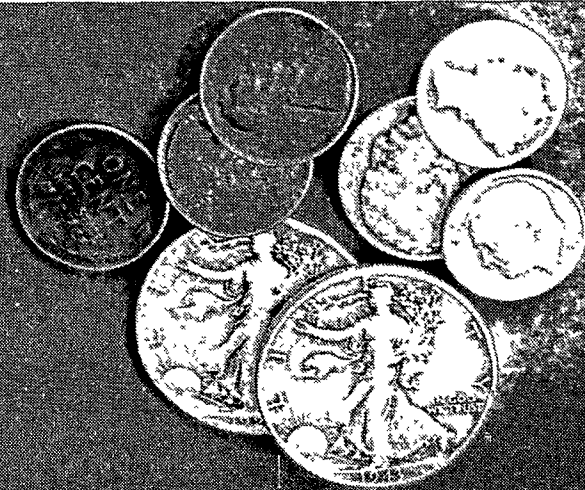


PLANT DEPRECIATION VALUE



\$ 4,222,000

\$ 19,793,000



LAY PROFESSORS' SALARIES



\$ 160,000

\$ 2,365,000



MILLION DOLLAR MAINTENANCE

Campus Repair Jobs Involve Shop Operations Of Eighty Workmen

By JAMES LUND

The author graduated from Notre Dame in 1952 and lives in Biloxi, Miss.

This fall when you were sitting in your favorite football stadium watching your alma mater battle a visiting team, you probably found yourself taking many glances at the scoreboard clock—especially during the final moments of the game. You watched it slowly, jerkily tell the last seconds of playing time.

Ever wonder what would happen if that clock suddenly stopped? What would the 22 players on the field do if they didn't know how much playing time remained?

If your favorite football field happens to be the Notre Dame Stadium, you will probably never have to worry about such a problem—thanks to the University's Maintenance Department. There are a half-dozen of the department's electricians behind the scenes keeping close watch on all the electrical connections in the stadium and standing by ready to make any repairs that may be necessary.

This is only one minute part of the Maintenance Department's enormous job.

There are some 50 buildings sprawled out on the 1,700-acre campus of the University of Notre Dame. There are 20 miles of water and sewer piping and miles of electrical wiring; there are over 10,000 drains that can become clogged; there are thousands of desks and chairs that can become

broken; and there are acres of growing grass, flowers and hedges—and all of this falls under the jurisdiction of Notre Dame's Maintenance Department.

Mr. Vincent Fraatz has charge of the exterior maintenance of all buildings. This also includes the shop operations involving approximately 80 men who do every conceivable type of repair job whether it be plumbing, carpentry, etc. Brother Roger Jami-

son, C.S.C., is Mr. Fraatz's capable assistant.

The key to the success of this department lies in its business-like organization. There is a shop for every type of job on campus—tinsmith, upholstery, electrical, plumbing, carpentry and painting. And then, too, there are the grounds crew, the labor section and the plastering crew.

Work orders are processed with the approval of the comptroller's office so



that all jobs fall within the current budget. Complaints may range from regulating the sensitive air conditioning equipment in Lobund's laboratories to a stopped-up basin in a student's room.

The interior maintenance department is headed by the Rev. George L. Holderith, C.S.C., who for many years has served as head coach of Notre Dame's golf team. Walter Jaworski, Notre Dame alumnus of the 1945 Class, is chief assistant to Father Holderith. At the present time, there are 120 maids, 60 janitors, 4 handymen, 4 student helpers, 1 window washer and 1 security man employed to keep the campus buildings clean and orderly. The maids work six hours each weekday and three hours on Saturdays in order to take care of the hundreds of rooms in 14 student residence halls.

The Maintenance Department reaches a peak in activity during five periods each year which include the beginning of each semester and Christmas and Easter vacations. At this time, every building is given a thorough going over; each room is cleaned, scrubbed and waxed; each piece of furniture in student rooms is washed; and each chair, bed, etc., is checked for any possible repair job. Every building is put into tip-top shape for the students when they return to school whether it be at the beginning of the fall semester or after the Easter holidays.

The "Lady in White" plays a very vital part in the building maintenance organization. Students refer to her by that name because of her white uniform. She makes the circuit of all residence halls inspecting rooms for cleanliness and reporting minor disorders to the janitor or handyman who in turn will do the job without calling in a workman from the shop.

One of the economical phases of maintenance at Notre Dame is a modern soap manufacturing machine which provides the University with 6,000 gallons of soap annually. The chemicals are mixed in a steam-heated vat and the finished product is stored in large drums. The soap is used for cleaning floors of all University buildings and it costs about 60 cents a gallon to make. Since there are hundreds of window shades as well as chairs and sofas which need constant repair, the University maintains a shop for this special purpose. They are rebuilt from

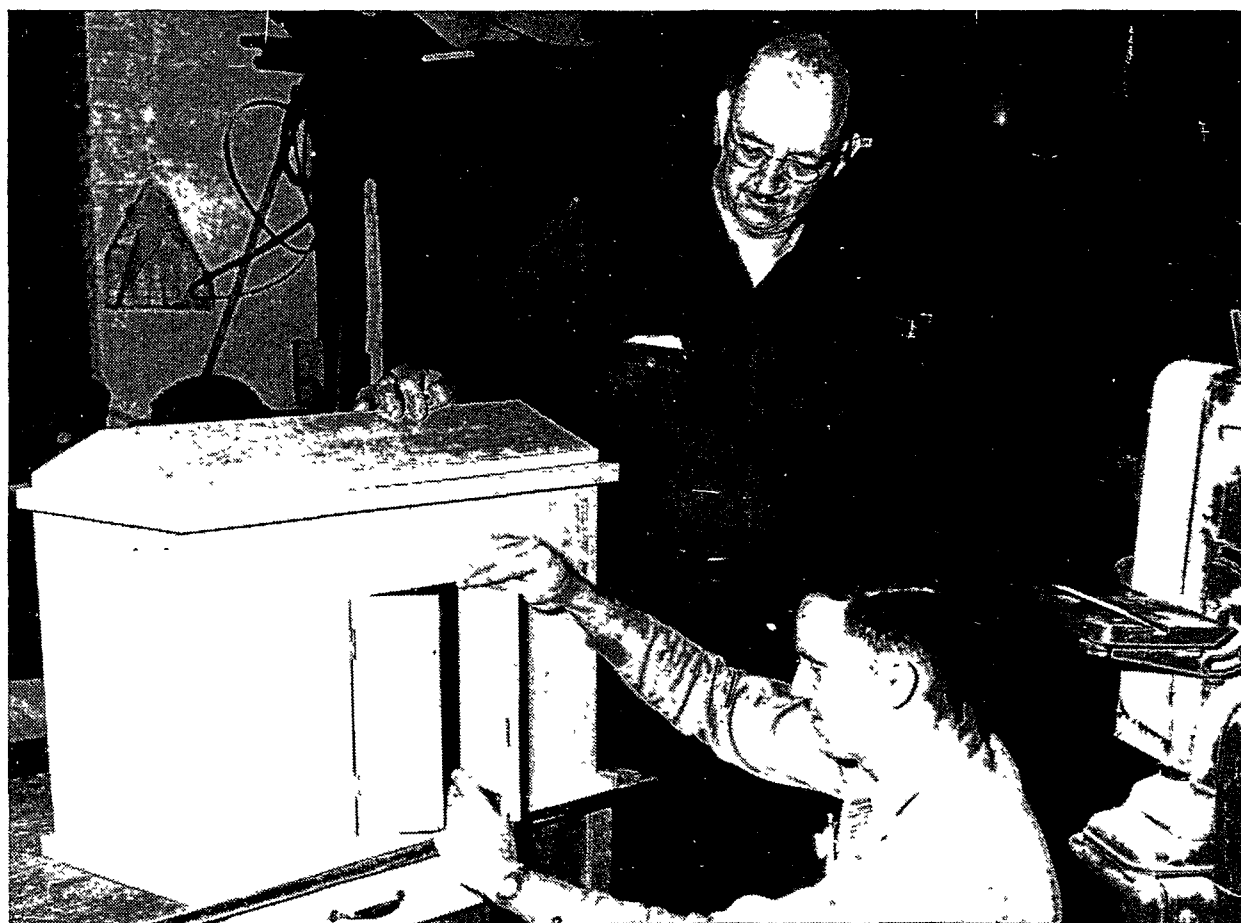


Left to right: Walter Jaworski, of the Maintenance staff; Father George L. Holderith, C.S.C., head of interior maintenance dept.; and Vincent Fraatz, head of exterior maintenance dept.



Snow plow in action on campus.

Carpenter Foreman Wiendels (standing) inspects construction of tabernacle for hall chapel.



MILLION DOLLAR MAINTENANCE

(Continued from page 13)

the frame and utilized in recreational rooms in various residence halls. All shades in campus rooms are checked periodically for possible replacement or repair and one individual is in complete charge of both upholstery and shade and soap shops.

During the summer period, about nine of the University's dormitories are normally utilized by summer school students. The rest of the halls at various times are occupied by persons attending the various conventions which take place on campus. In between these busy periods, the maintenance crews are out in full force getting the building ready again for occupancy. During this past summer, some 20 different groups totaling more than 7,000 men and women occupied student rooms during conventions and meetings which were held at Notre Dame. The largest contingent totaled 3,500 boys and girls, priests, Brothers and nuns who were here for the Student Mission Crusade.

In addition to the everyday job of maintaining a smooth running operation, the department is often called upon for "extra curricular" work. For instance, at the pep rally held outdoors prior to the Purdue-Notre Dame game this fall, the electric shop was responsible for rigging a public address system and for setting up a battery of floodlights covering the area. The carpentry shop handles a wide variety of jobs ranging from repairing broken desks and chairs to building altars for the hall chapels.

It is not unusual for the tin shop to receive an order for cages which will be used for research work in Lobund. These cages contain germ-free animals such as white mice. And the electric shop always has a man on duty in Washington Hall for the Saturday night movies and plays that are staged by the University Theatre.

The tinsmiths also are frequently working on new gutters and rain spouts for the many campus build-



The "Lady in White" inspects student room.

ings. A few weeks ago they finished calking windows at the base of the Golden Dome some 180 feet from the ground.

The University's 5 cars, 8 jeeps, 21 trucks, and 19 tractors are kept in smooth running order by the Maintenance Department's mechanic. He also removes the "bugs" from snow plows and power mowers.

At the present time, Notre Dame's Maintenance Department is housed in a picturesque little sector back of the Main Building commonly known on campus as the "French Quarter." It is still necessary to operate more or less under the same conditions as many years ago because space is at a premium. On the long-range building program, a new Maintenance Center is scheduled. And the men who are responsible for keeping Notre Dame's buildings and grounds in tip-top condition are hopeful that in the near future there will be a new and spacious building for them to work in. Until this takes place, however, they are going about their everyday duties with the same efficiency that has always characterized the Maintenance Department.

Modern machine manufactures 6,000 gallons of soap annually.



A University . . .

(Continued from page 11)

dent's place in the latter's absence.

The Vice Presidents are also the keystone to the system of financial control at the University. This control is exercised through the important Budget Committee which meets daily for six weeks in the spring carefully scrutinizing the request for funds from each of the University's 124 departments for the succeeding fiscal year. The Executive Vice President acts as Chairman of this group which also includes, in addition to the other vice presidents, the Comptroller, the Dean of the Graduate School and the Director of Maintenance.

When the Budget Committee convenes, the first order of business is to draw up the estimated income for the approaching fiscal year. Since the largest percentage of our educational income is derived from student fees, it is relatively easy to arrive at an accurate figure. Fortunately, Notre Dame has been assured in recent years of a full enrollment.

To the income from student fees we add the estimated revenue from football, from auxiliary enterprises such as the bookstore, the cafeteria, the laundry and dry cleaning plant, the vending machines, etc. Then the grants from government and industry on research contracts as well as the financial income from certain endowed funds are added. We thus arrive at a total estimated income of, let us say, approximately \$11,000,000.

Now begins the Procrustean technique of fitting the expenditures to the revenue. It is the age-old problem of the average householder: the problem of living within one's income.

Concomitant with the meetings of the Budget Committee another committee is in session: the Committee on Faculty Rank and Salaries. The recommendation of this committee on salary changes, after approval by the president, are incorporated in the over-all budget.

The crucial moment has arrived when we compare the estimated income with the adjusted, approved expenditures. If they are approximately equal on a cash basis (i.e., exclusive of depreciation) we breathe a sigh of relief. If there is a relatively small cash deficit, we feel that it is safe to proceed.

And lastly there is a need for capital improvements to consider.

Notre Dame, like most universities, has never been in such a favorable financial position that she could fund the depreciation reserves. It is true that in years past, operating surpluses, including those engendered by football revenue, have provided funds for the construction of new academic buildings. With sky-rocketing educational costs and the increasing difficulty of balancing operational budgets, these days seem to be fast disappearing.

In recent years, Notre Dame has been more and more dependent on the generous gifts of its alumni and other friends for the construction of new buildings and the replacement of old. Thanks to such generous benefactors as Mr. and Mrs. Ernest M. Morris, Mr. and Mrs. I. A. O'Shaughnessy, Mrs. Sally Fisher, Mr. Thomas W. Pangborn, Mr. and Mrs. Frank J. Lewis, Mr. and Mrs. Romy Hammes and Mr. and Mrs. Joseph LaFortune we have been able to erect a beautiful inn, a magnificent Liberal and Fine Arts building, two new dormitories, a bookstore, a bus shelter and a student social center.

Thanks also to thousands of smaller contributions and to the city-wide response of South Bend-Mishawaka residents we were able to put up a Science Building second to none in the country.

All of this points to the vital role being played by the Notre Dame Foundation. Its function has been to bring the dramatic story of Notre Dame, its needs and its educational objectives to its alumni and friends, to corporations and foundations, to all, in brief, who recognize the importance of private education in the American system of free enterprise and who are interested in the training of young men intellectually and morally for responsible positions in a democratic community.

Although the Foundation's efforts in its early years were directed to fund raising for needed new buildings, the day is fast approaching when annual support from alumni and other friends may be necessary to balance the operating budget. In fact, the present campaign of the Foundation, the Distinguished Professors Program, is a step in that direction.

To conclude, a university today is big business and its ivory towers must be well equipped with comptometers and adding machines. But even more important, it must be imbued with a burning zeal to use these tools effectively for the achievement of its prin-

cipal objective, the education of the young men entrusted to its care. If the University is doing significant work in the academic field, financial support will be forthcoming. This has been our experience at Notre Dame in the past and, under the patronage of Our Lady, we have every reason to be optimistic about the future.

PANGBORN HALL

(Continued from page 4)

one of the outstanding leaders in American industry, an honor that was repeated in 1950 when he was selected as one of the South's foremost leaders. During World War II he served as chairman of the Selective Service Appeal Board for Western Maryland. Pangborn Hall located on the grounds of Washington County Hospital, Hagerstown, Maryland, providing modern classrooms and every facility for instruction in nursing, together with recreational and residence quarters for the nurses is another example of their interest in every worthy cause. He holds honorary doctor of laws degrees from Notre Dame and Mount St. Mary's.

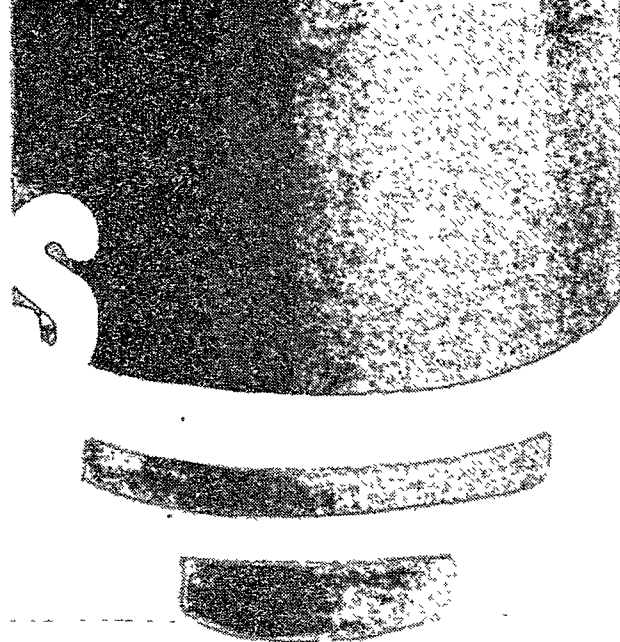
Mr. John Pangborn is vice-chairman of the Pangborn Foundation, a member of St. Vincent College Advisory Board and has an honorary doctor of laws degree from Mount St. Mary's. Among numerous activities, he has been prominent in church work, in the youth movement and other religious and charitable organizations.

At the corporation's observance of its 50th anniversary, Father Hesburgh, one of the speakers, said, "In no other country on earth could this happen—where two young men of meager resources can bring forth in fifty years the things we see here."

Through the Pangborn Foundation the brothers have given numerous grants for charitable, religious, scientific and educational purposes, and have assisted many worthy youngsters to obtain advanced education, numerous medical research projects, and aided persons of all ages in need of medical and surgical attention.

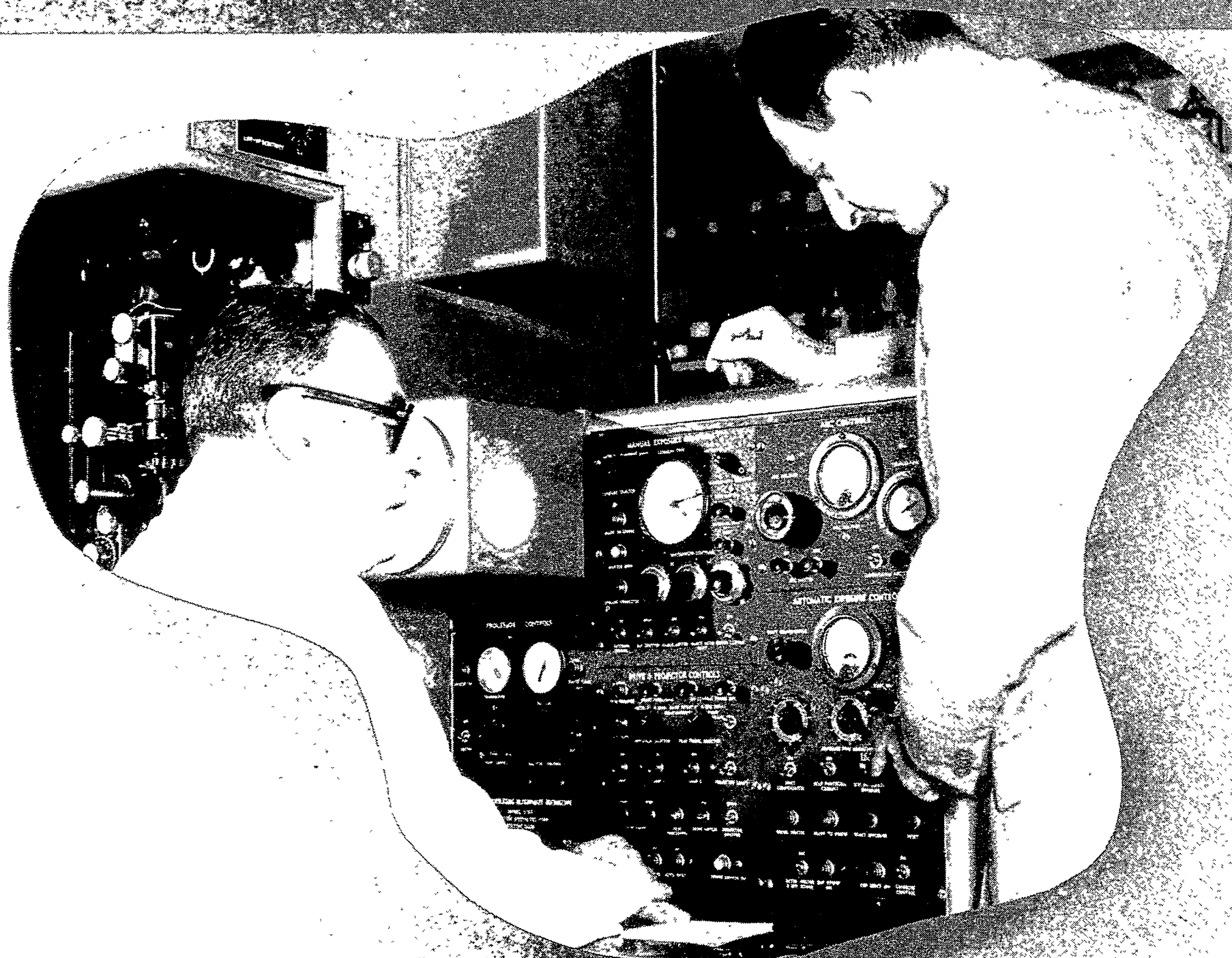
The story of the Pangborn brothers' business growth, progress and success is phenomenal—91 of the 100 largest manufacturers in the United States use Pangborn equipment.

And next fall at the beginning of the University's 114th academic year, Pangborn Hall will stand as another tribute to Notre Dame from two more of her devoted and esteemed friends.



CANCER

RESEARCH MICROSCOPE -



INSTRUMENT MAY PROVE INVALUABLE IN SURGERY AND PATHOLOGY

By JAMES E. MURPHY

Cancer research at Notre Dame's LOBUND Institute will be spurred with the installation of a color-translating ultraviolet microscope, the University recently announced. The \$40,000 instrument, provided by the Damon Runyon Memorial Fund, is the first of its kind to be made available commercially to any college, university or research center.

Manufactured by the Scientific Specialties Corporation of Brighton, Massachusetts, the instrument adds a new dimension to microscopic analysis and enables scientists to make many important microchemical analysis not possible previously. It has many advantages over the conventional or electron microscopes including the fact that living tissue can be studied and the specimen need not be stained, dyed or treated in any way, or touched by any outside agent.

"We are grateful to the Damon Runyon Fund for making available to us this remarkable research tool which will be extremely useful in our cancer research program as we seek the cause of this disease," Professor James A. Reyniers, founder and director of the LOBUND Institute declared. "Moreover, this microscope will permit us to explore even more deeply into the nature of germ-free life. In our basic research we are constantly seeking to describe the germ-free animal as thoroughly as possible and compare it with conventionally contaminated life."

Reyniers explained that the new ultraviolet microscope may enable Notre Dame scientists to determine what chemical differences, if any, exist between germ-free life and normal animals, between cancer cells and normal cells. Although the LOBUND Institute is the first research center to employ the microscope, Reyniers emphasized that the instrument will open new horizons in every field of biology.

According to physicist Harry Kouyoumjian, who installed the microscope for the manufacturer, the in-

strument within thirty or forty seconds:

1. Takes three pictures of the specimen successively using three different wave lengths of ultraviolet light;
2. Processes or develops the film automatically;
3. Projects and superimposes the three photos on a screen in a full color picture of the specimen which may have had no visible color in it.

Operating on a principle known to scientists as ultraviolet absorption, the microscope analyzes the chemical constituents of biological material, Kouyoumjian explained. Scientists have learned that certain chemical components of cells absorb different wave lengths of light. It is known, too, that almost any pathological condition, such as cancer, has its own light absorption pattern. By photographing these cells and projecting these photos through color filters it is possible to obtain a full color picture on the screen of this microscope. In this way, it is believed, scientists eventually will be able to determine the chemical constituents of normal and diseased cells.

Until now, the color-translating ultraviolet microscope has been principally in developmental and testing stages. It will now be up to scientists at Notre Dame's LOBUND Institute and a few other selected research centers to determine how it can contribute to our biological and medical knowledge. Ultimately, it may prove invaluable in surgery and pathology. Scientists speculate that with this microscope a pathologist, or even a trained technician, could learn in a matter of seconds, and while a patient is on an operating table, whether tissue is cancerous or otherwise diseased.

The manufacture of the microscope was supported by the Office of Naval Research, the American Cancer Society, the Damon Runyon Memorial Fund and the Argonne National Laboratory. The ONR and the Damon Runyon Fund have underwritten research at the LOBUND Institute for several years.

Prof. James A. Reyniers, Director of Lobund, (L) and Harry Kouyoumjian inspect the new cancer microscope.



CANCER



Notre Dame Students With Same Names Will Use Serial Numbers for Official Records

By JOSEPH B. TIERNEY

The author is a teaching fellow in the Department of English at Notre Dame and is studying for a Ph.D. degree. Mr. Tierney formerly lived in Philadelphia, Pa., is married and has two children.

THERE are forty-three Notre Dame students who possess 21 different names—which may seem like it's more than par for the course, and it is. Recently they met with the Rev. Robert J. Lochner, C.S.C., assistant to the vice-president in charge of academic affairs, who explained the problem faced by the University in keeping academic records of this group straight and to propose a workable solution to the matter.

The boys not only shared last names, or even first names, but the full "handles," of each one down to the middle initial, were shared by some other student. Twenty of the names were held in common by two students. Thus when Father Lochner called for Michael J. Regan, two strapping young men arose. There were also a

pair of John J. Smiths and of Richard J. Browns. When he called for John J. Sullivan, three students answered.

Father Lochner stated that many times students discover only when nearing the end of their senior year that their records have been confused with another student of the same name. This sometimes results in a loss of credit for courses which the student has taken, the priest said, and it is not uncommon that a student fails simply because his namesake is a poorer student.

The Germans, I am told have a legend about a special ghost which they call the "Doeppeganger." Each person has his private "spook" which looks exactly like him, they claim, and these spirits materialize periodically to perform mischief which is blamed on the person they resemble.

Many of the Notre Dame men met their Doeppegangers for the first time and accusations and apologies came thick and fast. "So you're the guy who's been reading my mail," cracked one of the "twins" when he met his namemate.

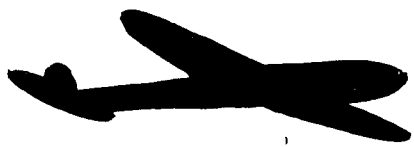
If the students had not met their counterparts before the special meeting,

most of them knew of their presence on the campus, through the thousand and one mistakes which have cropped up through a confusion of names.

Father Lochner and his office staff finally came up with a solution, which is no doubt likely to succeed. Every student at the university is assigned a code number when he matriculates and the number remains with his record throughout his enrollment.

Most students never learn their number, Father Lochner said, since the use of two full names and a middle initial is enough to distinguish their records from every other student's. The name-sharers, however, will use the code as kind of a serial number whenever a question concerning the accuracy of their academic record arises. "This seems to be the simplest and most fool-proof system possible," Father Lochner stated.

While the system will prevent clerical mistakes, Father Lochner pointed out, it won't prevent the cases of mistaken identity which make the boys wish their parents had tagged them with a more unusual name. One of the John J. Sullivans, either Sullivan 59730 or Sullivan 59720, offered what appeared to be the best solution yet. "If I ever have a son," he said, "I'm going to name him Sylvester Thaddeus. I'll bet he won't have any trouble at all."



KENNATRACK
ELKHART,



CORPORATION
INDIANA

Rev. Theodore M. Hesburgh, C. S. C.
Distinguished Professors Program
University of Notre Dame
Notre Dame, Indiana

Dear Father Hesburgh:

Some of your Notre Dame boys made it possible for us to make a profit, therefore, we are passing on a portion to the Distinguished Professors Program.

May you have much success with your program.

Yours very truly,

KENNATRACK Corp.

E. C. Cortas
President

*Partnership
with
Industry*

NORTHERN INDIANA PUBLIC SERVICE COMPANY

DEAN H. MITCHELL
PRESIDENT

5265 HOEMAN AVENUE
HAMMOND, INDIANA

Corporate Gifts Aid
Notre Dame's
Distinguished Professors Program

The Rev. Theodore Hesburgh, C. S. C.
President of University of Notre Dame
Notre Dame, Indiana

Dear Father Hesburgh:

Enclosed is Northern Indiana Public Service Company's check in the amount of \$500.00 for the Distinguished Professors' Fund at Notre Dame.

We wish you every success in your efforts to achieve the scholastic goal you have set forth in your new Distinguished Professors' Program.

Sincerely yours,

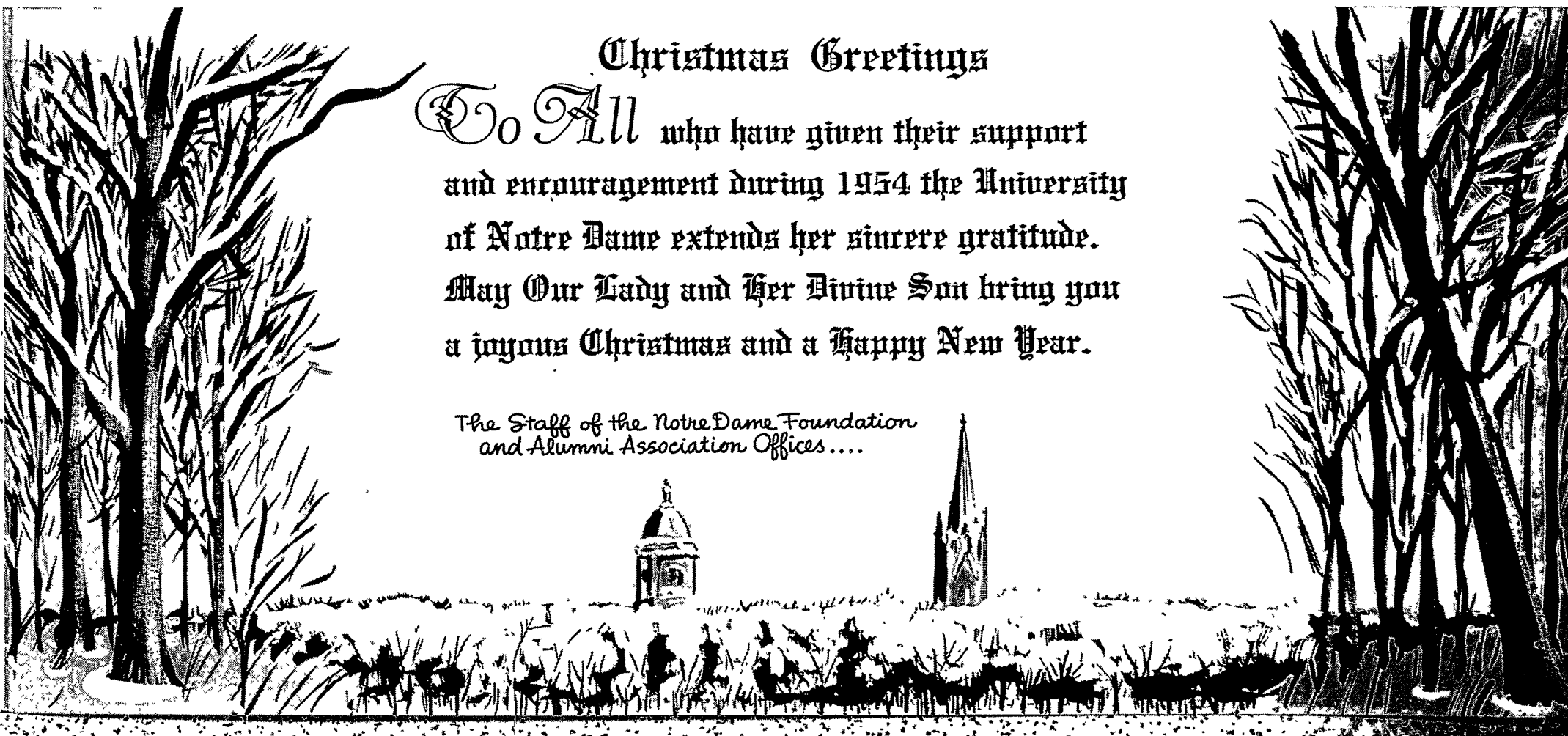
Dean H. Mitchell
President



Christmas Greetings

To All who have given their support and encouragement during 1954 the University of Notre Dame extends her sincere gratitude. May Our Lady and Her Divine Son bring you a joyous Christmas and a Happy New Year.

The Staff of the Notre Dame Foundation
and Alumni Association Offices....



Mr. Edward J. J. Tracey, Jr.,
200 Bradley Avenue,
State College, Pa.

