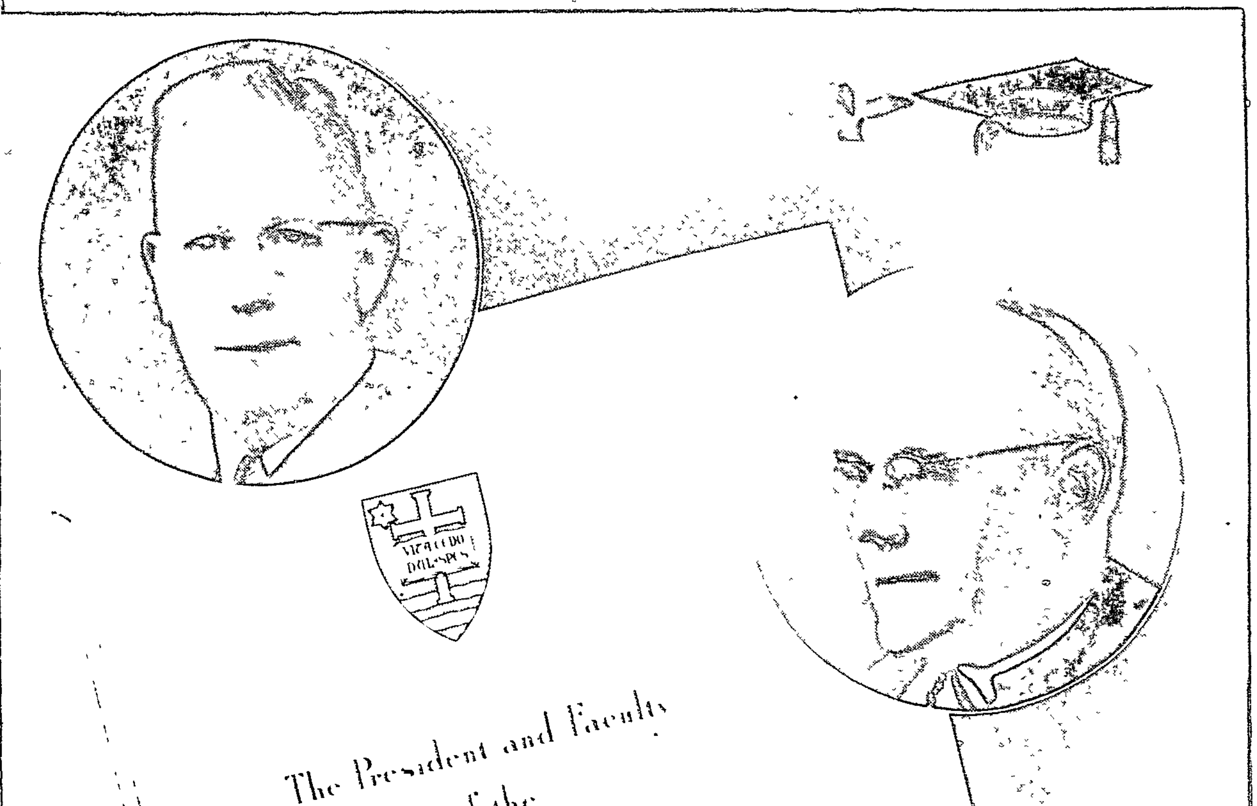
Notre Dame

A Magazine of the University of Notre Dame



An address by Chief Justice Warren, the baccalaureate sermon by Bishop Scully, and presentation of the Laetare Medal to Clare Boothe Luce highlighted Commencement exercises for the graduates of 1957.

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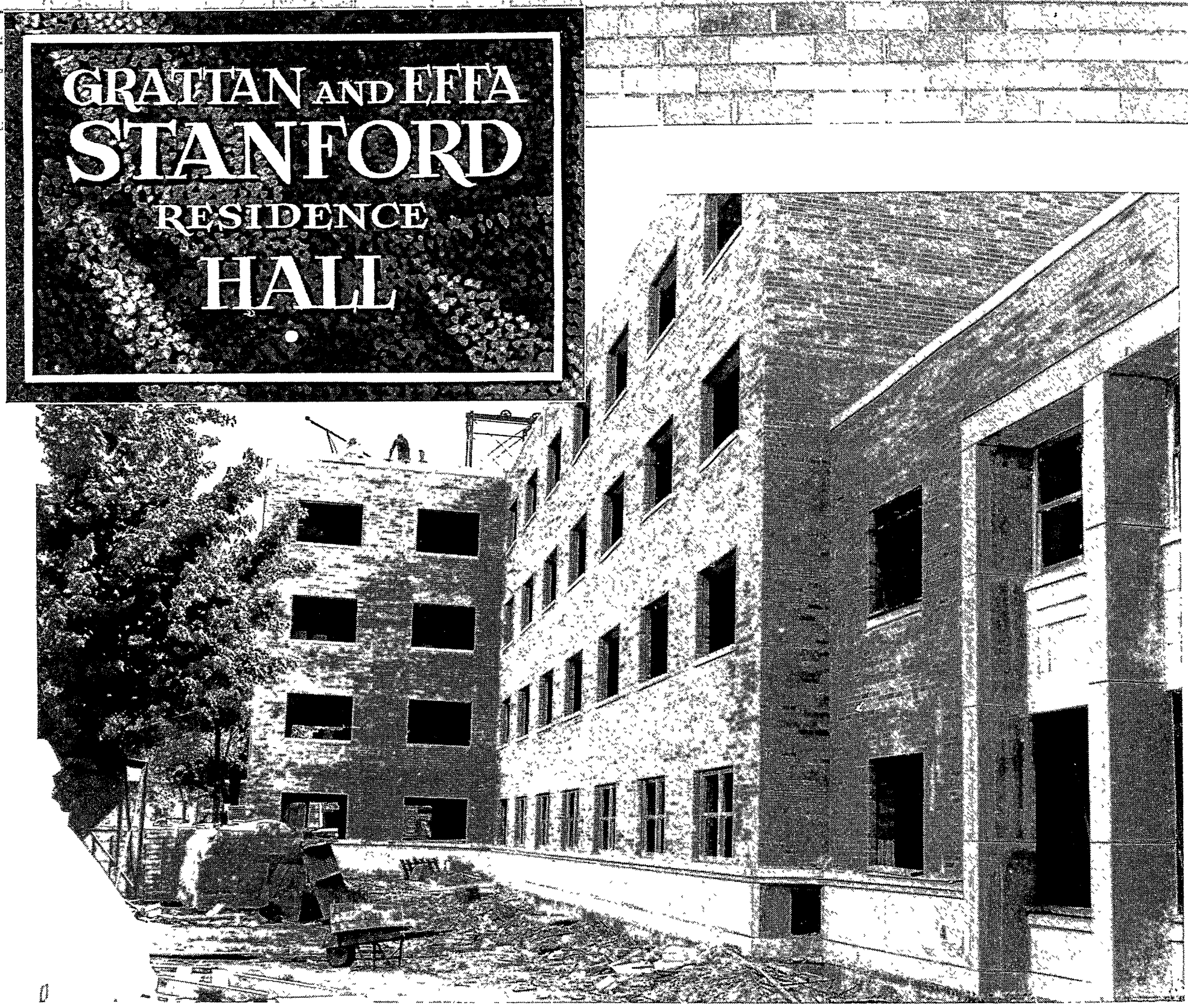
SUMMER • 1957

Three NEW Buildings in 1957



Three hundred students will reside in Stanford Hall.

Notre Dame's seventeenth student dorm will be named the Grattan and Effa Stanford Residence Hall in honor of the donor and her late husband. Mrs. Stanford now resides in New York City. It is part of a three-building project, totaling $4,000,000 in cost, now under construction on the campus. The other student residence has already been designated as Keenan Hall, in memory of James F. Keenan, Jr., who died in 1941. Funds for this building were provided by Mr. and Mrs. James F. Keenan, Sr., of Fort Wayne, Ind. The dining hall, with facilities for about 1600 persons, is as yet unnamed.

Three hundred students will be accommodated in Stanford Hall which is scheduled for occupancy at the beginning of the fall semester in September. The three structures were designed by Ellerbe and Company of St. Paul, Minnesota, and are located on the northeast section of the University's 1700 acre campus. Stanford Hall is being constructed of buff brick with limestone trim and is joined to Keenan Hall by a central lobby. Students living in the two buildings will share the same chapel.

In notifying University officials of her benefaction, Mrs. Stanford expressed the mutual interest she and her husband had "in the welfare of Notre Dame and in advancing the spiritual, intellectual and moral interest of its students." In extending the University's gratitude to Mrs. Stanford, Rev.

. . . Residence Dorms and Dining Hall Will Be Available For the Beginning of the Fall Semester in September

Theodore M. Hesburgh, C. S. C., president, said, "This magnificent gift will provide a campus home for generations of Notre Dame men. It will be a living memorial to Grattan and Effa Stanford and to their devotion to the cause of Catholic higher education."

Mr. Stanford was a native of Monticello, Indiana, and spent the early part of his life in Independence, Kansas. Three years after his graduation from Notre Dame in 1904, Mr. Stanford received a law degree at Harvard University. He engaged in the practice of law, until 1916, with his father in Independence. Mr. Stanford was a participant in the formation of the Sinclair companies and he became general counsel for the Sinclair Oil and Refining Company in 1916. He retained this post for thirty years until his death in 1946. He was a member of the University's Associate Board of Lay Trustees for nine years beginning in 1937.

Mrs. Stanford is a charter member of the Notre Dame Women's Advisory Council which meets twice each year to advise Notre Dame officials concerning many of the social and cultural activities of the students.

Work on the new dining hall, a one-story structure, has been progressing on the same schedule as the two residence halls. This building, which will be made possible through borrowed funds from the University's endowment according to Father Hesburgh, will be completely air conditioned and serve about one-third of the student body. There will be six dining rooms within the building and a large storage and deep freeze area in the basement.

Upon completion of Stanford and Keenan Residence Hall and the new dining hall Notre Dame will have erected thirteen structures since beginning the Foundation program nine years ago.

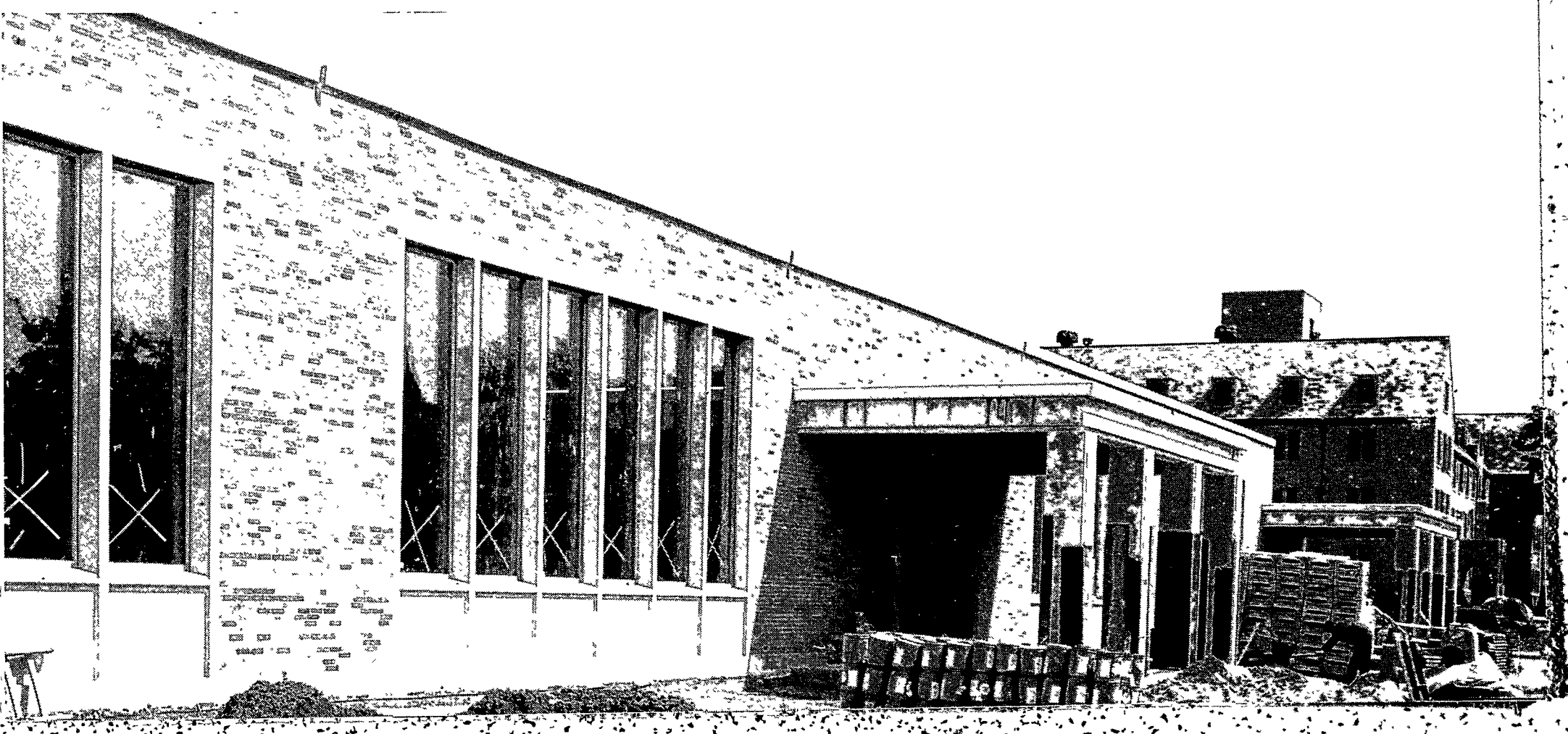
NOTRE DAME

Published quarterly by the University of Notre Dame, Notre Dame, Indiana. Entered as second class matter May 10, 1928, 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. 10, No. 2 Summer, 1957

The dining hall, with a seating capacity of 1,600, is as yet unnamed.



THE PRESIDENT'S PAGE

Rev. Theodore M. Hesburgh, C.S.C., is Notre Dame's sixteenth President.

In this age of jet propulsion, of the catastrophic hydrogen bomb and of countless objects perfected by skilled technicians for mankind's benefit, we must link man and science together in mutual concepts. There is no reasonable or respectable future for science unless it be viewed as being of man, and by man, and for man. Correspondingly, there is no hope for real progress for modern man unless he keeps his science in the context of the totality of his human life.

In a sense, science and scientists can do no wrong. They have fed and clothed and housed us as man has never been fed and clothed and housed before. Science has cured our diseases, lighted and warmed and cooled our homes, simplified our housekeeping. It has given us printed words by the millions, entertainment at the touch of a button from an easy chair, conversations across continents and oceans.

However, there are limits to the power of science and science is only one factor in the achievement of a good life—if man is more than matter and if there are human values higher than those of a material order. Science may in time destroy man and become his master, if science is not adequately understood for what it really is, not worshipped as a kind of false god, all out of perspective in regard to its true meaning and value in the total life of man.

The true meaning of science must somehow be related to man, his meaning and his destiny. Only man on earth is the scientist, and his science is not exercised in a vacuum but in the world of man. If science loses its place in that world, man will lose, and so will science. All power is meaningless without direction. Consider then, that the magnificent power of science is dangerous, even deadly, if not controlled by human intelligence and integrity and wisdom.

Our Western world today is no simple reality — but the amalgam of many forces that have deeply influenced it over many centuries of time. One finds as a base the great intellectual heritage that comes from the classic age of Greece. Here was the earliest root of the intellectual fibre of the West—the zest for understanding and philosophical inquiry, the joy of intellectual discovery, the deeper values of the things of the mind: truth, beauty and the good. The Romans added another dimension to the tapestry of the West, the ideal of law and order and a stable society of men with great civic institutions and efficient administration of justice. Then there was the divine element of the Gospels, a new and bright light on man's nature and destiny, a fresh glimpse of the grandeur of the human person, new ideals of human thought, human achievement, and high goals for human conduct. These three elements meshed to form the fibre of Western culture.

Notre Dame's educational program reflects our concern for preparing young people today for life tomorrow. The education that best reflects our effort to give to youth today the heritage of the past, as well as visions for the future, is liberal education. If we can establish the place in value of science and liberal education, then perhaps we may gain an insight into the place of science in the world of man.

All of the scientists working with the most startling scientific equipment —electronic microscopes, nuclear reactors, electronic calculators — cannot give us the clue to the most burning questions that have agonized mankind since man began to think: What is man? Can he know truth and what is it? Is there a God, can we know Him, and what is our relation to Him? What is freedom, and are we really free? What is justice and the function of law?

Science is tremendously important in our day, but man is even more important. Science will have its greatest, most fruitful, most meaningful growth when man, in the totality of his humanity, grows with it to a total perfection of which science is a part, but never a whole, a means to an end, a thrilling chapter, but certainly not the whole book.

Theodore Hesburgh, C.S.C.

Dr. Albert F. Zahm, pioneer of aeronautical science.

A LIVING MEMORIAL

Notre Dame Receives a Bequest of $225,000, From Dr. Zahm, With $100,000 Restricted for Doctoral Studies at Catholic University

The late Dr. Albert F. Zahm, one of the world's great aeronautical scientists, has bequeathed $225,000 to the University of Notre Dame. A former faculty member and recipient of the Laetare Medal, Dr. Zahm established residence on the Notre Dame campus in 1953 and died in the University Infirmary one year later at the age of 92.

He was recognized as the founder of modern aeronautical science and his interest in flying originated when he was a Notre Dame student in the early 1880's. Dr. Zahm graduated in the Class of 1883 and received a master's degree from Notre Dame two years later. He also was awarded a mechanical engineering degree from Cornell and a Ph.D. from Johns Hopkins University.

He stipulated that the net income from $100,000 of the total bequest should be used to finance study for doctoral degrees at Catholic University "by as large a number of Notre Dame pre-doctoral fellows as such income will permit."

This distinguished scientist built the first wind tunnel in 1882 more than 20 years before the famed Wright brothers were to make their historic flight at Kittyhawk, North Carolina. Still displaying the same enthusiasm for aviation as in his early years, Dr. Zahm retired in 1946 after 16 years as chief of the aeronautical division of the Library of Congress. From 1916 to 1929 he served as director of the United States Navy's aerodynamics laboratory.

One of his most memorable achievements was organizing and serving as the secretary of the International Conference on Aerial Navigation which was held in Chicago just before the turn of the century. This meeting still ranks as a highlight in America's aeronautical history.

Dr. Zahm's early experiments in flying gliders off the roof of Notre Dame's Science Building, now LaFortune Student Center, heralded later outstanding achievements in aeronautical science which we now commonly know as the jet propelled age.

For the guidance of those considering making a bequest to the University of Notre Dame, the following form is suggested:

I hereby give and bequeath to the University of Notre Dame du lac, an Indiana corporation, at Notre Dame, Indiana, the sum of ..... dollars.

All the rest, residue, and remainder of my estate, both real and personal, I give, devise, and bequeath to the University of Notre Dame du lac, a corporation, located at Notre Dame, Indiana.

Photo at top of page: Mr. Daley

College of Commerce Students Invest in Stocks and Bonds From $10,000 Fund Contributed by William R. Daley of Cleveland, Ohio

William R. Daley's practical Investment Plan for Notre Dame's College of Commerce students is an ingenious idea—designed to provide a working 'know-how' for these young men who will be investing other people's money as bank and insurance executives in the not too distant future. It is an experiment unique in business education.

Forty students in Assistant Dean Thomas T. Murphy's "Investment" class are "stockholders" in the $10,000 fund, donated by Mr. Daley, and are responsible for buying stocks and bonds, watching the tickertape and keeping tab on the market. Normally an investment made by the University of Notre Dame receives close scrutiny and personal direction from members of the Associate Board of Lay Trustees. But in this instance, the decision will be made by commerce students after each has prepared a written analysis of a particular industry and at least one company in it.

The benefactor, Mr. Daley, is a man with ideas and a person who has been extremely successful in the business and industrial field. A native of Ohio, he graduated from Western Reserve University in 1915 and two years later was the recipient of a law degree from the same institution. Admitted to the Ohio Bar in 1917, Mr. Daley took a leave of absence from his law firm to serve in the United States Army during World War I. He later was associated with the legal firm of Bulkley, Hauxhurst, Inglis and Saeger. He joined Otis and Company, an investment organization, in 1928 and is president and treasurer of the company. Mr. Daley is also vice-president and treasurer of the Portsmouth Steel Corporation, as well as board chairman of the Ohio Water Service Co., and the Cleveland Indians Baseball Company. He is a trustee of Catholic Charities Corporation and a member (formerly chairman) of Notre Dame's Advisory Council for the College of Commerce. He holds directorships in the following firms: Nickel Plate Railroad, Cleveland Cliffs Iron Co., Detroit Steel Corp., and Murray Ohio Manufacturing Co. Mr. Daley is chairman of the President's Council of Notre Dame Women's College, Cleveland and is a Master Knight of the Knights of Malta.

He explains that, "It's one thing to evaluate a theoretical investment, but it becomes an entirely different matter when you're spending real money. If the students make the wrong decisions, the school will lose." However, Mr. Daley adds that the fund is not established to earn great amounts of revenue —experience is its real purpose.

The initial purchase of the fund involved two unidentified stocks valued at $1,300. Only after the entire class has analyzed the financial "worth" of various firms is the final decision made to invest in these companies.

Stocks are bought through Albert McGann Securities, Inc., a South Bend agency, by a three-man student committee. Serving as faculty directors of the Investment Fund are Dean James W. Culliton, Assistant Dean Murphy and Professor LeClair Eells.

Mr. Daley states, "I'm anxious to see if maybe the students don't do better than the professionals."

More investments will be made later. Income from securities sales will go back into the fund, as will dividends and interest for five years. After that, the latter will be used for scholarships, guest lecturers and other purposes.

Richard Cleary, '50, vice-president of the McGann Securities Inc., South Bend, Ind., explains intricacies of the stock market to Prof. Thomas Murphy (right) and members of his 'investment' class.

"Que Soy Era Immaculada Councepsiou*..."

Confraternity at Notre Dame Is Affiliated With Our Lady of Lourdes Shrine in France

by Donald P. Zeifang

The author is a junior in Notre Dame's College of Arts and Letters. His home is in Niagara Falls, N. Y.

Ninety-nine years ago, Bernadette Soubirous became a very special figure in the history of the world's devotion to Mary, the Mother of God. At a grotto in the Massabielle cliff at Lourdes, Mary appeared to this humble 15-year-old peasant girl and told her, "I am the Immaculate Conception."

Built into the side of a hill facing St. Mary's Lake, the Grotto of Our Lady of Lourdes at Notre Dame presents a striking resemblance to the actual setting in southern France. A statue of Our Lady, clad in blue and white and holding a rosary, stands majestically in a niche cut out of the gray stones. Above the icon are the words: "I am the Immaculate Conception," emblazoned on a halolike blue curve of metal. A statue of the kneeling Bernadette graces the candlelit enclosure below the image of Mary.

A daily visit to this lovely shrine has been included in the routine of the Notre Dame student for 61 years. As a vital feature of this university's dynamic religious tradition, it plays a significant part in the inspiring story of the development on the campus of devotion to the Immaculate Conception.

Back in 1845, just one year after the university received its charter, the Archconfraternity of the Blessed Mother was established by the now legendary Father Sorin. This was the first major step in the development of student devotion to Christ's Mother. After the Lourdes apparitions, devotion to the Immaculate Conception gained new fervor. Eventually, it became apparent that affiliation should be established with the Archconfraternity of the Immaculate Conception at Lourdes. So the Confraternity was canonically erected at Notre Dame in 1874 by Bishop Dwenger of Fort Wayne.

With this new organization providing a basis for fraternal unity among the students, its activities were strongly supported. As alumni carried the fame of the confraternity throughout the country and around the globe, people began to be attracted by this American "branch office" of the Lourdes movement. The Notre Dame Confraternity served as a distribution center for the miraculous waters, answering requests from all over the North American continent. As the Mission Post at Notre Dame grew into a great University the work of the Confraternity including the enrolling of members and the distribution of Lourdes Water was extended to the Novitiate and later in Moreau Seminary. Last year the Superiors of Holy Cross decided that the headquarters of the Confraternity should be more centrally located, directly behind the Grotto of Our Lady.

A center of activity for the Confraternity—the Grotto—was to come at the end of the nineteenth century. The Notre Dame *Scholastic* of September 17, 1898, reporting the death of the Rev. John Carroll of Oil City, Pa., provides this background:

> Only three years ago the hill back of the Community house was nothing but a bare, brown mound with an old willow and one or two poplar trees. Yet on this spot Father Carroll saw a place on which to add to his long list of good works — an opportunity to enhance the beauty of Notre Dame.

Father Carroll provided the original contribution for this replica of Lourdes, which was dedicated in 1896 on the feast of Our Lady of the Snows. The statue of the kneeling Bernadette was added in 1910.

The ties between Lourdes and Notre Dame have been strengthened by several Notre Dame men who have visited the Massabielle phenomenon. After the

*Bernadette spoke the patois of the countryside around Lourdes. What she actually heard from Our Lady was in local patois. The people to whom she told her story translated the words into proper French, "I am the Immaculate Conception."

1939 pilgrimage of polio-stricken Fred Snite, Jr., he became resigned to his condition and set out to discover how he could make the most of his confinement within an iron lung. What a wonderful life he led! Snite attended social activities and sporting events (including Notre Dame football games, annually), played bridge and chess, read extensively, and even produced a magazine which sparkled with his own good humor. His life as a self-styled "boiler kid" from 1936 until his death in 1954 was a source of inspiration to people of all faiths.

Van Wallace had attended Notre Dame for just one academic year before he fractured his neck in a swimming accident in 1924. Paralyzed from the neck down, he nonetheless has travelled thousands of miles, carried on correspondence with friends and associates by means of a writing device which he himself invented, and even ventured into business as an insurance agent. The outbreak of World War II forced the postponement of Van's trip to Lourdes, but he eventually realized his dream in 1947. He is still a cherished and familiar sight at Notre Dame's football games and campus retreats.

Neither Snite nor Wallace showed any physical improvement which could be directly attributed to Lourdes, but it cannot be said that Lourdes had no effect upon them. It was obvious that both men had found the shrine an astonishingly bountiful source of that intangible reality called spiritual strength—the 'peace of soul' necessary to carry on.

The ties with Lourdes will be strengthened this summer when a 1931 graduate, James D. McQuaid of Vincennes, Indiana, will visit Lourdes. Alumni are playing a major role in this latest Lourdes episode, for a great deal of the financial burden of McQuaid's trip was alleviated by generous contributions made at the Notre Dame summer retreat last year.

These trips, of course, are but highlights of Notre Dame's continual devotion to the Immaculate Conception, and it is the Confraternity which serves as the strong backbone for this devotion. Now under the direction of Rev. Philip H. Schaerf, C.S.C. (who is making an unexpected and inspiring recovery from a near-fatal illness), the Confraternity is stepping up its activity as it nears the centennial of Lourdes in 1958. Recently, the Bishop of Lourdes and Tarbes sent a letter to the local Confraternity encouraging "new life" to "attract thousands to share in its spiritual advantages." Many Notre Dame men are already enjoying these advantages, which include a Papal indulgence, the obtaining of Lourdes water, votive candles at the Grotto, and Mass intentions. But Father Schaerf's fervent wish is to extend the Lourdes drama to countless others who can share in Mary's blessings, perhaps even in her miracles. Membership is established simply by sending one's name and address to Lourdes, Notre Dame, Indiana. By this simple act of enrollment, alumni can open the door to a strengthening of their spiritual ties with their alma mater. And to alumni and non-alumni alike, the words "I am the Immaculate Conception," can have a new and wonderfully profound significance.

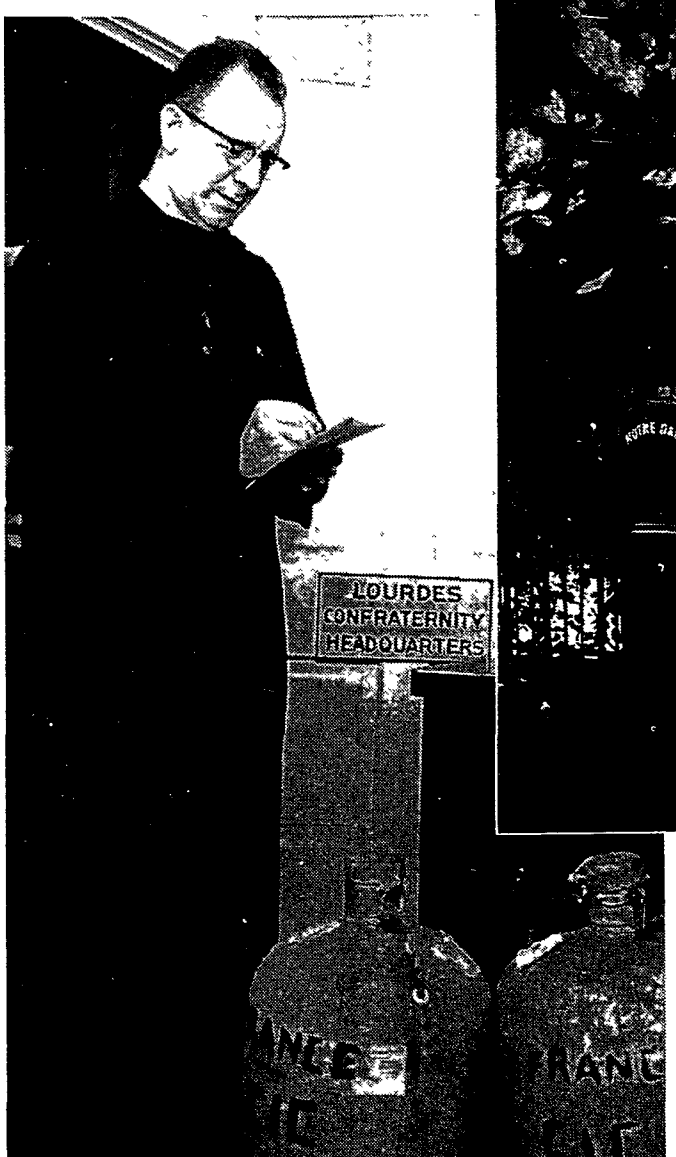
LOURDES WATER

Water may be obtained from Our Lady of Lourdes Shrine, France, by writing to:

LOURDES,
Notre Dame 5, Ind.

This is a photograph of "Our Lady of the Miraculous Medal," copyrighted by the Central Association of the Miraculous Medal. It is used by the Confraternity of the Immaculate Conception of Our Lady of Lourdes in compliance with Bernadette's description of the appearance of the Lady of the Grotto.

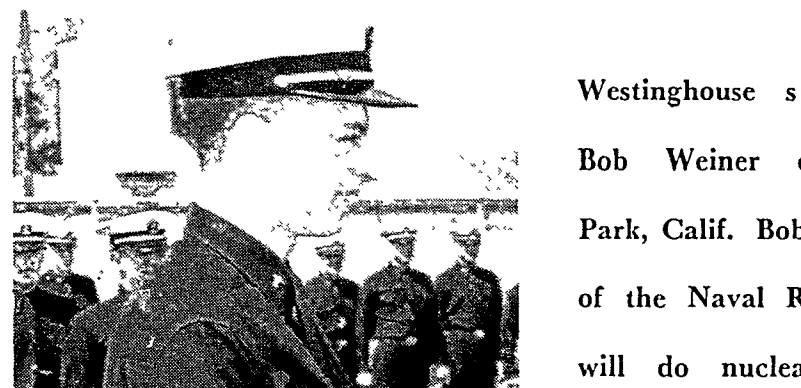
(Right) The Grotto at Notre Dame.



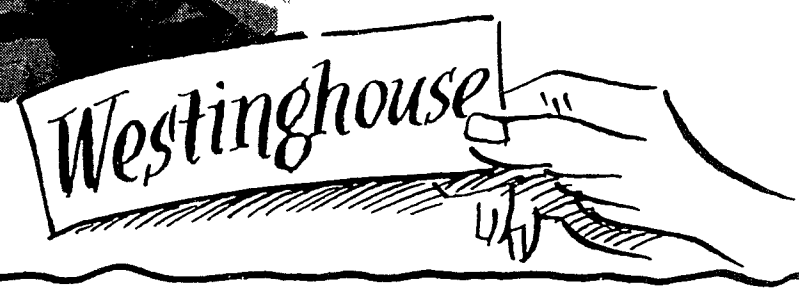
(Left) Father Philip H. Schaerf, C.S.C., directs Our Lady of Lourdes Confraternity on campus.

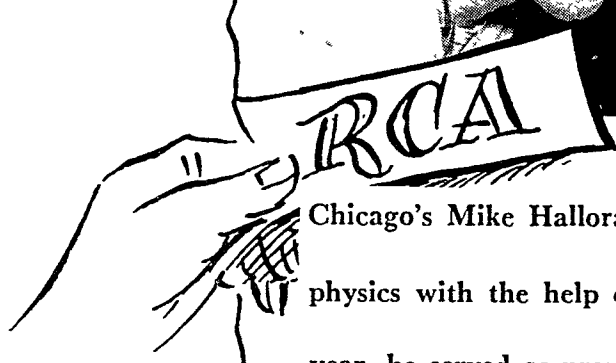
INDUSTRY AIDS UNDERGRADUATES AT NOTRE DAME

Mike Farrug, '57 graduate from Detroit, Mich., was one of twenty students this year attending Notre Dame on a Ford scholarship. He is in the general program of liberal education and served as a part-time instructor in the South Bend school system.



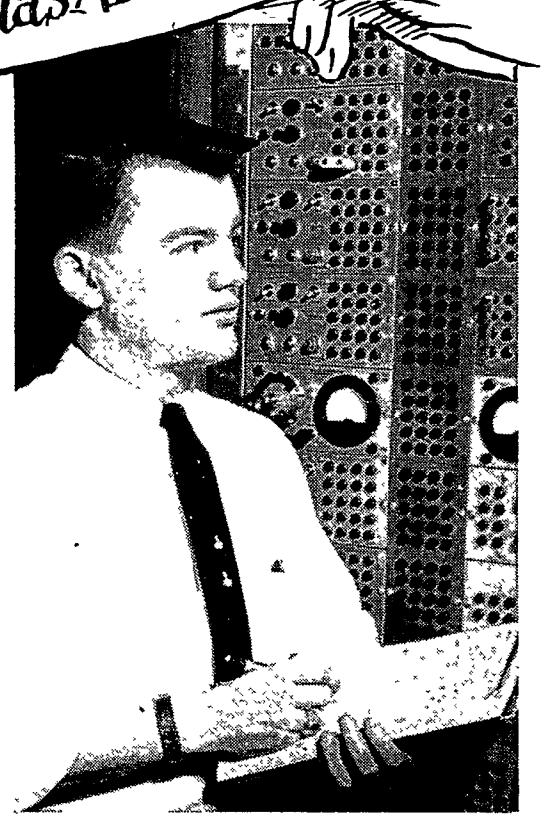
Westinghouse subsidized Bob Weiner of Canoga Park, Calif. Bob, a member of the Naval ROTC unit, will do nuclear research for the Navy during the next four years.





Chicago's Mike Halloran has completed undergraduate courses in physics with the help of an RCA scholarship. During the school year, he served as president of the Physics Club and group leader for the YCS.

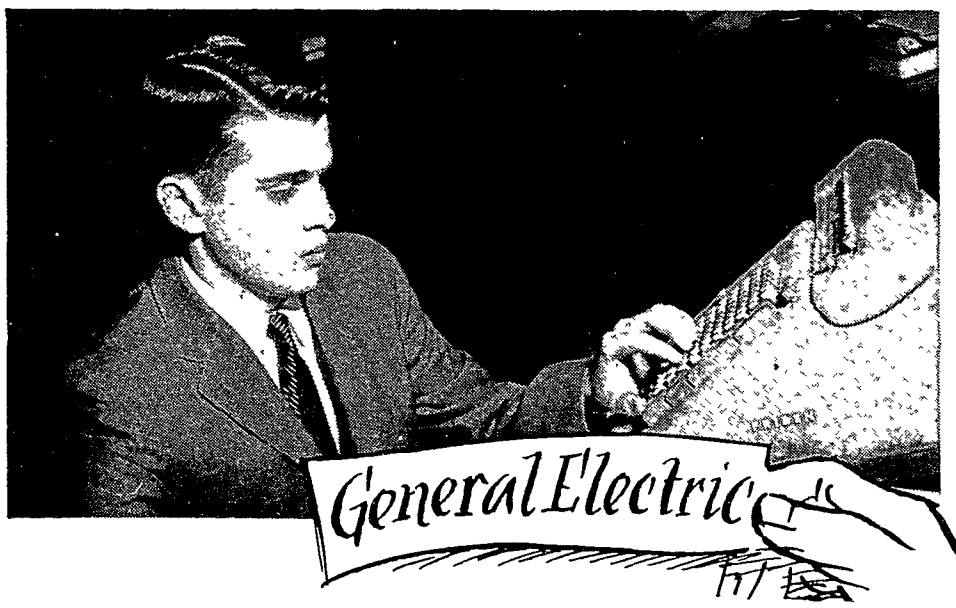
Douglas Aircraft



Tom Martin is a South Bend resident who received his engineering degree in June. Douglas Aircraft awarded him financial aid. He was chairman of the Joint Engineering Council and the student chapter of a professional engineering society.

Proctor & Gamble

Procter and Gamble defrays the cost of tuition and text books for Paul Hundt, Kew Gardens, N. Y. He is a freshman in Arts and Letters, a contributor to the student literary quarterly and a member of his residence hall council.



General Electric

Dan Kelly, an accounting major from South Bend, graduated this month. A General Electric scholarship winner, Dan was the "accountants' accountant" during the past year in his position as treasurer of the Accounting Club.

Western Electric

Dick Cunningham, senior from North Creek, N. Y., receives scholarship aid from Western Electric. He is shown describing for his senior prom date one of the many decorative bridges which he designed and constructed for the Ball.

Corporations Sponsor Scholarship Programs

Corporate aid-to-education at Notre Dame is evidenced by several manifestations. One of the most encouraging has been industrial and business support of the Faculty Development Program. In 1956, for example, 363 corporations and foundations contributed more than two million dollars to Notre Dame.

Another tangible expression of corporate support and interest is the subsidization of scholarships. In this article *Notre Dame* highlights, pictorially, some of the students who are benefiting from corporation scholarships. Frequently, the company contributes an additional unrestricted amount, over and above the usual expenses, which normally are assumed by the University. It has long been a recognized fact that the student at Notre Dame, as well as at other institutions, actually defrays only about 70 percent of his educational costs. The remaining 30 percent is provided through gifts from alumni, non-alumni, corporations and foundations, endowment income and revenue from auxiliary enterprises. During the past academic year, there were 20 Ford scholarship winners at Notre Dame—the largest contingent in any school out of the total 265 Ford scholarship students enrolled in 63 private colleges and universities.

Notre Dame must continue to receive corporate assistance if current and future needs are met. On a *quid pro quo* basis, industry ultimately will benefit from financial aid given to education. Notre Dame will utilize corporate contributions to improve its faculty, and a highly competent teaching staff can do a better job of educating

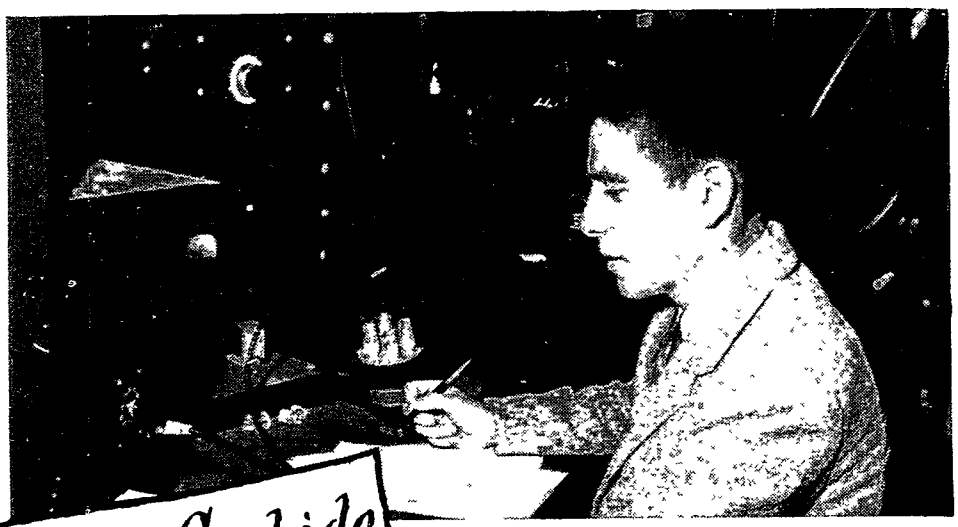
Continued next page...

Texaco

Joe McBride is a freshman in engineering on a Texaco scholarship. An Army ROTC student, he is a member of the unit's marching band. Joe plans to specialize in mechanical engineering and his home is in St. Louis, Mich.

General Motors

Tom Banchoff, an Arts and Letters freshman from Trenton, N. J., is a General Motors scholar. One of the promising debaters on campus, he is being highly considered for future forensic competition.



Union Carbide

Union Carbide has granted a tuition-books scholarship to John Kierein, sophomore physics major from Granger, Ind. He worked for this company last summer and has the same agreement with Union Carbide in 1957.

Inland Steel

Jim Irving, East Hanover, N. J., a 1957 chemical engineering graduate, studied at Notre Dame under the sponsorship of Inland Steel. He was a member of the A.I.Ch.E., the Young Christian Students and the Confraternity of Christian Doctrine.

young men for the industrial field—management as well as technical.

The "Living Chairs" plan, established as a vital adjunct of the Faculty Development Program, has already proven to be an attractive method for increasing corporation support. Many firms have contributed one-third of the amount of the faculty member's 'mean salary' within the various professorial ranks. Explicitly, it is outlined as follows: $2,400 is required for naming a professorship; $2,000 for an associate professorship; $1,650 for an assistant professorship; and $1,350 for an instructorship. These figures are based on the knowledge that the student pays about two-thirds of the cost necessary to educate him.

Industry and education have responsibilities to each other and Notre Dame is hopeful of continued, generous financial aid for the great task ahead of educating the leaders of tomorrow.

Lubrizol

Ed Day, New Albany, Ind., a junior in the College of Science, receives aid from the Lubrizol Corporation. He devotes much of his spare time to the Notre Dame Band.

James Byrne (left), retiring president of the Detroit Notre Dame Alumni Club, presents first installment check of $2,500 to Rev. Edmund P. Joyce, C.S.C., executive vice-president, for the Moreau Seminary fund, while Edward Gage, president-elect signifies approval.

$10,000 FROM ALUMNI OF DETROIT

Gift for New Seminary To Be Paid Over Three Year Period

The Notre Dame Alumni Club of Detroit has pledged a $10,000 gift for the new Moreau Seminary and has already paid the first $2,500 installment. Other payments, in equal amounts, will be made over the next three-year period. A plaque, appropriately inscribed with the name of the Detroit alumni organization, will be erected in the building. This is the largest gift thus far received from a Notre Dame alumni group for the Seminary Fund.

One of the pioneers in Notre Dame's global network of 166 alumni clubs, Detroit's annual program got underway in 1916. Under capable leadership of officers and boards of directors, the original program has been implemented from time to time with varied events. During the past year the activities schedule has included: a stupendous Universal Notre Dame Night dinner, featuring the presence of Detroit's most prominent leaders in business and industry; weekend retreat; Christmas Dance; Universal Communion Breakfast; two trips to home football games at Notre Dame; summer festival; golf outing; television football party; and the fall 'Friendly Foes' kickoff football party which also honors Notre Dame students in the area.

The Detroit club has been a generous contributor to many University projects including the Nieuwland Science Building; the Scholarship Fund; the Faculty Development Program; and the most recent pledge to the Moreau Seminary campaign.

Officers for 1957-58 are Edward Gage, president; Joseph Carey, 1st vice-president; Dan F. Bradley, 2nd vice-president; J. Lou Conroy, secretary; and Ernest Gargaro, treasurer.

Members of the Board of Directors include, in addition to the officers: William F. Anhut, Warren J. Ashley, James J. Byrne, August B. Cifelli, James P. Cleary, J. Timothy Cruice, Edward J. Hickey, Peter J. Kernan, Jr., Malcolm F. Knaus, John R. Panelli, Edward C. Roney, Jr., Thomas J. Verbiest and Robert L. Wink.

PAPAL HONOR AWARDED TO NEW YORK CATHOLICS, ADVISORS TO NOTRE DAME

The title of Private Chamberlain has been bestowed by Pope Pius XII on four prominent Roman Catholics in New York City, all of whom are active on Notre Dame's Lay Trustees and Advisory Councils.

Those honored include John A. Coleman, of the College of Commerce Advisory Council; Frank M. Folsom, of the Advisory Council for Science and Engineering; Harry C. Haggerty, a member of the Board of Lay Trustees and also the Advisory Council for the College of Arts and Letters; and Victor D. Ziminsky, a member of the Advisory Council for Commerce.

This is the first time since 1937 that Roman Catholic laymen in the Archdiocese of New York have received the honor, which dates from 1555. Private Chamberlains are selected from outstanding laity of all nations for their special service to the Catholic Church.

FATHER HESBURGH NAMES ADDITIONAL MEMBERS TO TRUSTEES AND COUNCILS

Rev. Theodore M. Hesburgh, C.S.C., president, recently announced that the following have accepted membership on the Associate Board of Lay Trustees and the Advisory Councils: James F. Keenan, '13, Ft. Wayne, Indiana, the Board of Lay Trustees; William H. Coleman, '40, Cleveland, O., Robert H. Gore, Jr., '31, Ft. Lauderdale, Florida, and James M. Morrison, Hammond, Indiana, the Advisory Council for the College of Commerce; Frank Freimann, Ft. Wayne, Indiana, Charles L. Huisking, New York City, Leo J. Vogel, '17, Pittsburgh, Pa., and Dr. Matthew W. Weis, '22, St. Louis, Mo., the Advisory Council for Science and Engineering.

SCENE THROUGH METAL

Department of Metallurgy Is Studying Strength and Durability of Metals, Using The X-ray Diffractometer

by Dr. Bernard D. Cullity

The author is associate professor of Metallurgy at Notre Dame. He received a bachelor's degree at McGill University, a master's at the University of Minnesota, and the Massachusetts Institute of Technology awarded a Science doctorate to him in 1947. During 1948-49, Dr. Cullity served as Scientific Liaison Officer in the Office of Naval Research, London, England. He has studied at the Ecole des Mines, Paris, France, and worked as a group leader on the Manhattan Project during World War II. Prior to accepting a teaching position at Notre Dame, he was on the faculties of the University of Minnesota and the Montana School of Mines. Dr. Cullity has written a book titled "Elements of X-Ray Diffraction" and is the author of numerous technical papers.

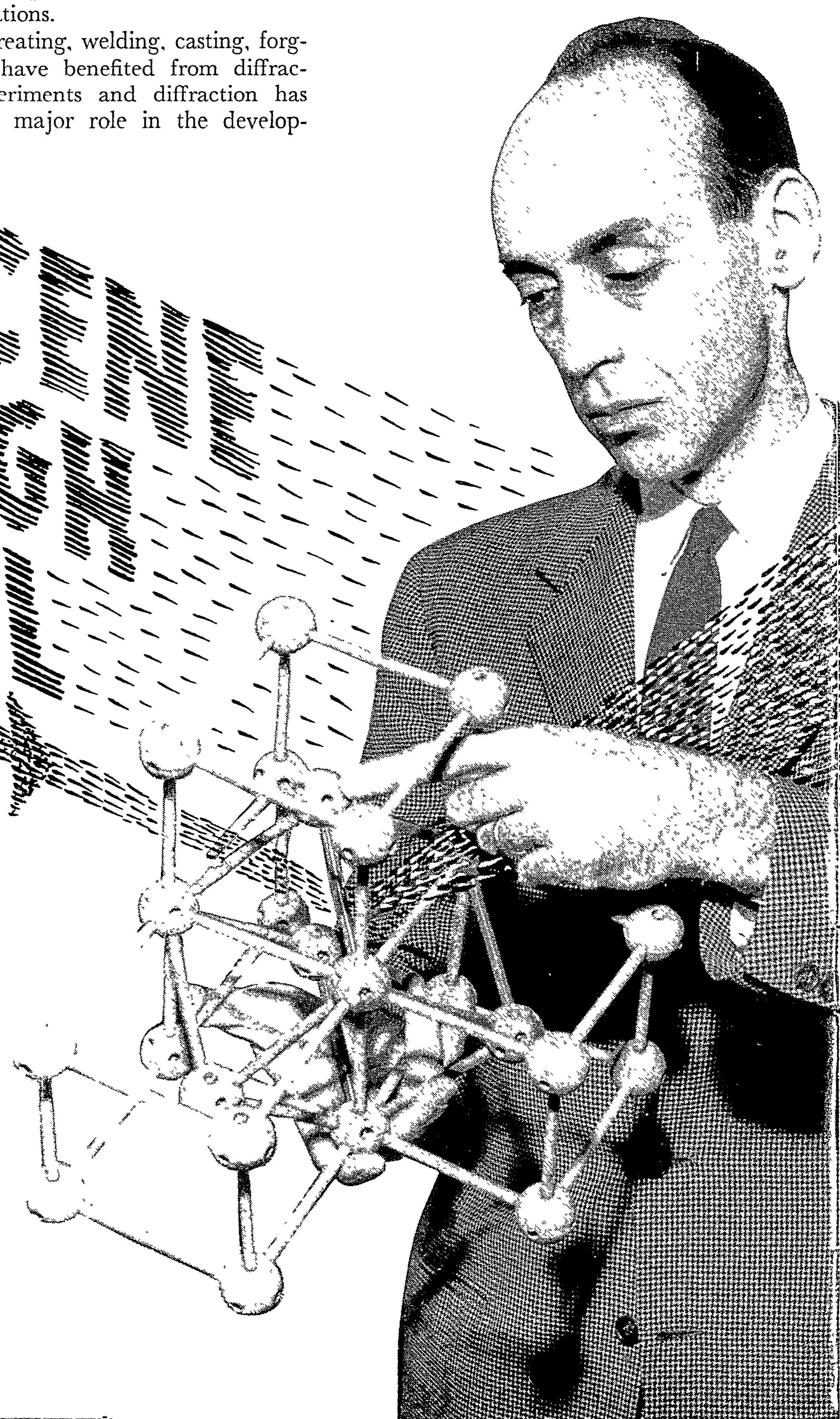
Notre Dame's Department of Metallurgy is experimenting with a unique and complex machine which may determine answers to many industrial problems concerning the use of alloys and metals. Known as the X-ray diffractometer the instrument measures the methods by which metal crystals reflect X-rays and it discloses valuable information about the composition of metal.

Strength and hardness, as well as the other properties which combine to make a metal useful, are revealed through X-ray diffraction. This is an important tool not only in basic research on metals but in the control and improvement of manufacturing operations.

Heat treating, welding, casting, forging—all have benefited from diffraction experiments and diffraction has played a major role in the development of all new alloys, including those used in today's jet engines.

Metallurgists have been using X-ray diffraction for 40 years to peer into the interior structure of metals. However, it was only recently that the powerful and convenient diffractometer has become of valued assistance. In measuring the reflection angles, the diffractometer detects X-rays with a sensitive geiger counter. The counter in turn transmits an electrical signal to a pen moving on a chart.

In X-ray diffraction a narrow beam of X-rays strikes a piece of metal and disintegrates into a number of other smaller beams. Since atoms in a piece



of metal are in parallel planes, these atom planes reflect X-rays in much the same way as a mirror reflects ordinary light. A sort of "X-ray microscope" is provided through diffraction, inasmuch as atoms are invisible under the microscope and their position in a metal crystal is calculated from the angles at which X-rays are reflected.

The modern science of metals would have been impossible without the fundamental knowledge of metal structure provided by diffraction. One problem being investigated at Notre Dame concerns "grain-oriented" metal. The Notre Dame investigators have developed a new method for determining grain orientation in metal wires. This method is being used to study the changes which occur during the forming and heat treating of wire. The purpose of this work is to discover how a particular property of the wire (i.e. its strength) is affected by the way the grains are oriented. Obviously the ultimate result is to find a way to line up these grains in the proper way so as to produce maximum strength in the metal.

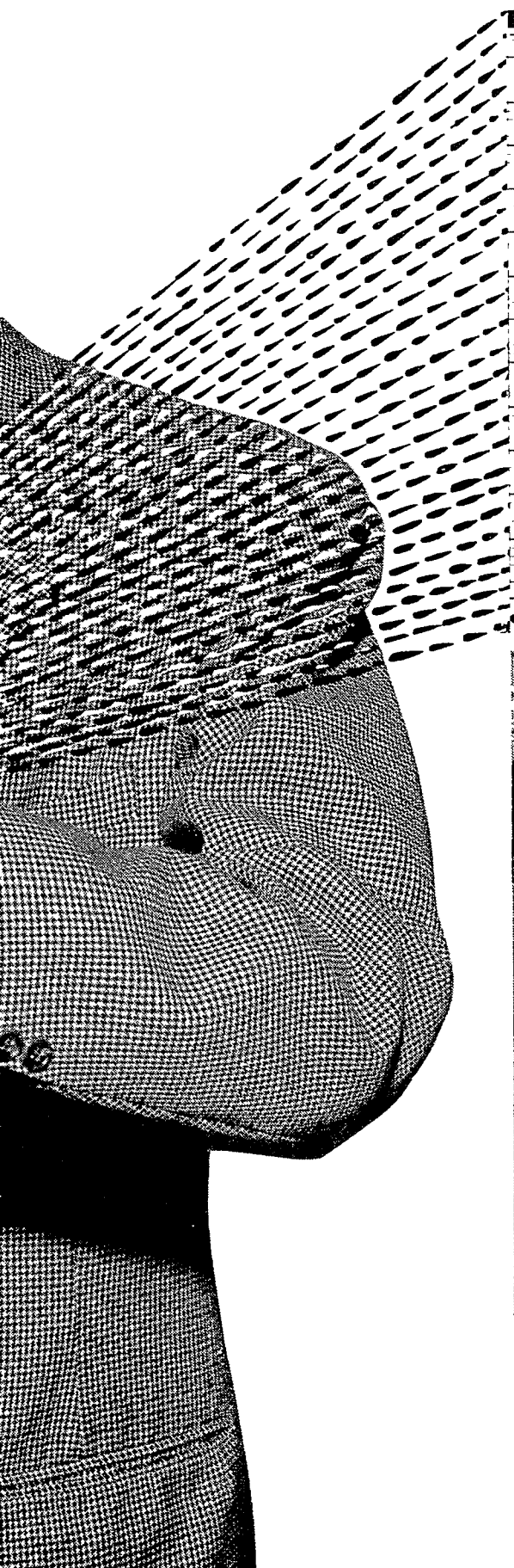
Another project at Notre Dame involves the study of alloys with the diffractometer. Alloys are mixtures of metals, and the alloy currently receiving the most attention is one of copper and gold. Experiments are often conducted at high temperatures—above 1000 degrees fahrenheit—as well as at room temperature. There is much scientific interest in this alloy, and experiments on it may even point the way to better alloys for gas turbine engines.

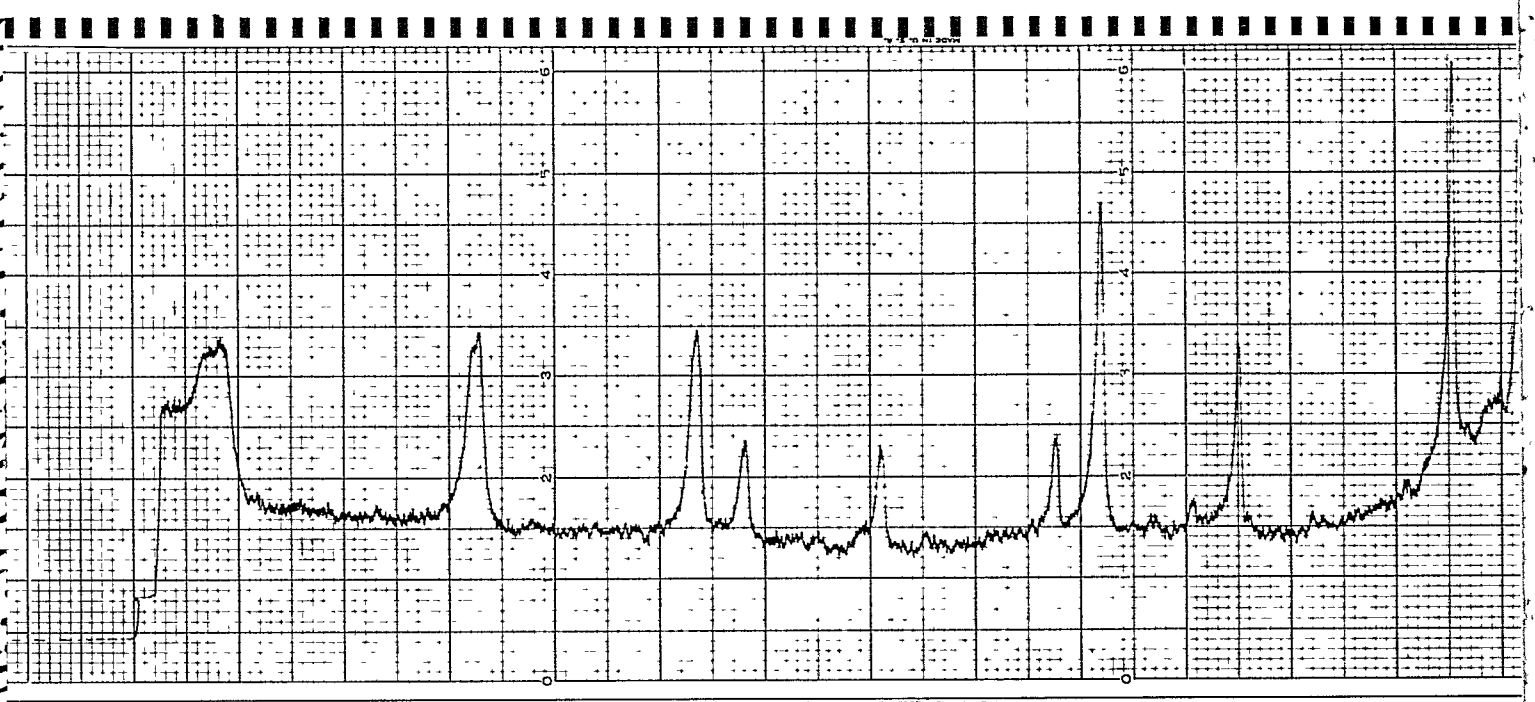
The diffractometer consists of an X-ray tube, an electrical detector mounted on a rotating circular platform, and an electronic feed back system from the detector to a graphical recorder.

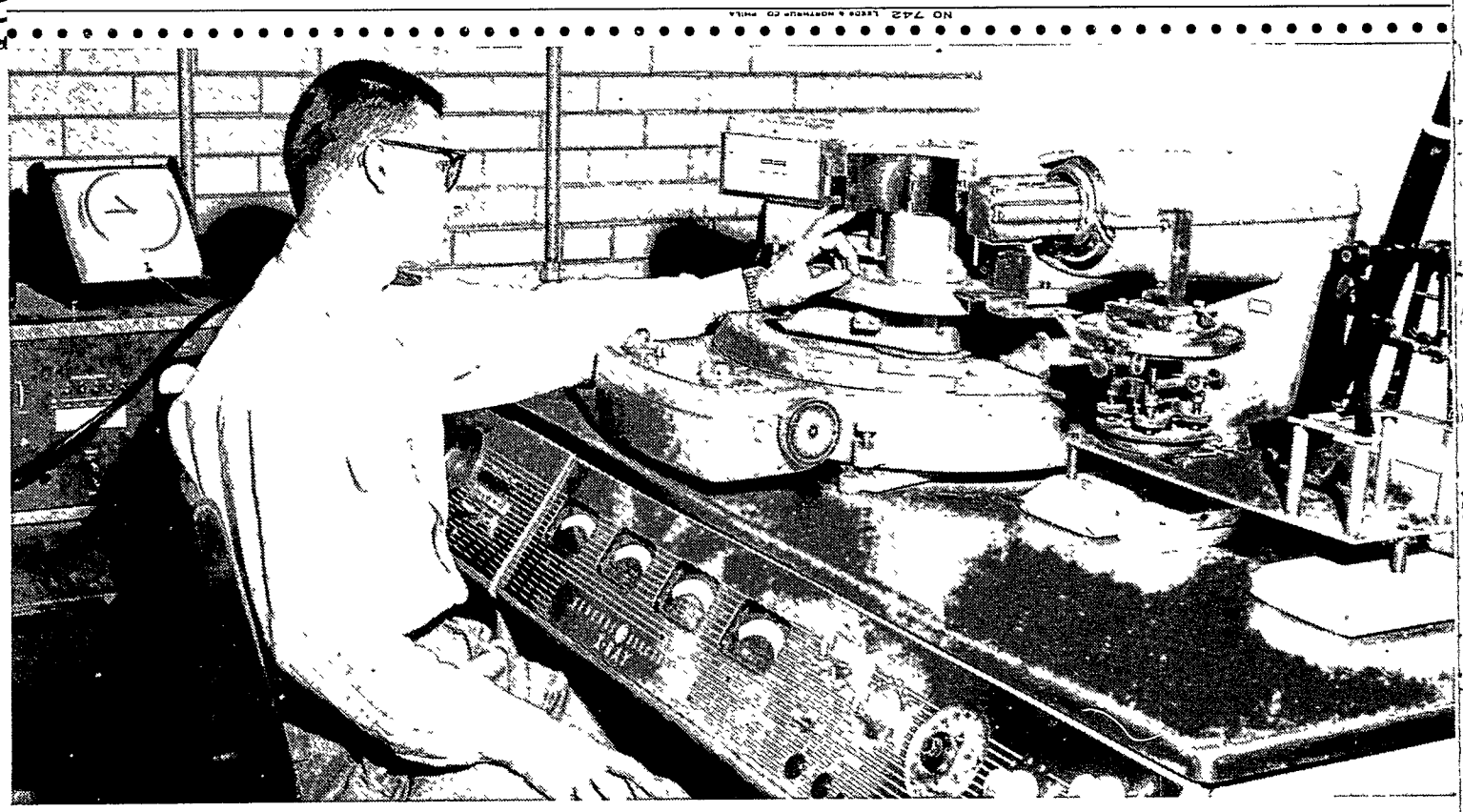
Although it has not made many innovations in X-ray diffraction, the diffractometer has combined previous methods into one compact and convenient instrument. The time saved by this device has made way for the progress of more metallurgical development.

Today, the diffractometer is a common instrument in any industry involving the use of metals. Many universities have acquired it for use in their laboratories.

The experience gained by the students studying metallurgy at Notre Dame in operating this instrument has proved invaluable to them when they have taken their place among metallurgical engineers in industry.







Dr. Cullity (left) checks crystal model of an iron structure.

(Above) Student operates the X-ray diffractometer.

Supreme Court Justice John M. Harlan (second from left) assisted in judging Moot Court competition at Notre Dame. Others, from left to right, are: Judge Charles E. Whittaker, Kansas City, Mo., Judge Charles J. McNamee, Cleveland, O., and law students Patrick Berrigan and Wayne Kent.

Moot Court LAWYERS

by Michael Matthews

The author is a junior, majoring in Journalism, and is from Kansas City, Mo.

In seven years, the Notre Dame Moot Court system developed from an idea into a recognized, successful experiment in legal education.

As of 1956, Moot Court contestants from Notre Dame have won the regional arguments in Chicago twice, and have been runners-up once. They appeared in the National Moot Court Finals, New York City, in 1950 and 1951, and will go again this year.

The Moot Court was originated in the fall semester of 1949, through the joint efforts of Professors Robert E. Sullivan and Edward F. Barrett, of the Law Faculty, and Henry M. Shine, Jr., of Los Angeles, California. Shine, a student here at the time, contacted various law schools throughout the country where the Moot Court system was already in use, and obtained many suggestions on the subject. The three men adopted some of these ideas, added their own thoughts, and organized Notre Dame's Moot Court.

The outstanding advantage of the Court is that it provides practical experience for law students who are doing legal research. Further, it provides them the opportunity to become familiar with the atmosphere and procedure of an appellate court.

The Moot Court deals exclusively with appellate cases, that is, cases which have been appealed. One team, composed of two men, defends the decision of a lower court on a case, while another team argues to have that decision reversed in favor of the person appealing the case. For instance, this year's case, a fairly typical one, concerned the use of the plea of insanity as a defense against the prosecution of a man who was convicted of murdering a federal agent. The actual argument in court concerned the accuracy of the tests which the courts used to determine insanity. The case had been appealed through the lower courts, and in this final hearing was supposed to be brought before the Supreme Court of the United States.

The Notre Dame Moot Court is in some ways different from that of other law schools. Here, law freshmen are required to argue at least one case in the second semester. Also, work, in the junior year, is optional. Professor Barrett, appointed faculty advisor to the Moot Court, by Dean Joseph O'Meara, Jr., estimates that about 70-75% of

the students continue to participate even though it is voluntary.

Preliminary arguments start in the fall, and continue until the end of the school year. At this time, four juniors, called "survivors," remain. Until 1954, these survivors competed in final arguments held in June. However, three years ago the time of the final hearings was changed to the fall, so that the law students could be present to witness the proceedings. This change also gave contestants time to prepare briefs on the national question, sent out by the Association of the Bar of the City of New York.

The region in which Notre Dame competes includes Indiana, Illinois and Wisconsin. Regional winners argue in the National Moot Court Finals held in New York City.

The argument of a case in the Moot Court involves preparation of a written brief, using the record from the lower court, presentation of an oral argument, and answering any questions the judges might propose. Cases in the earlier competitions are usually in conjunction with the work the student has done in class.

Each team is allowed a total of 35 minutes speaking time in court, which is divided equally so as to include opportunity for a supporting argument and some time for a rebuttal of the opposing counsel's argument.

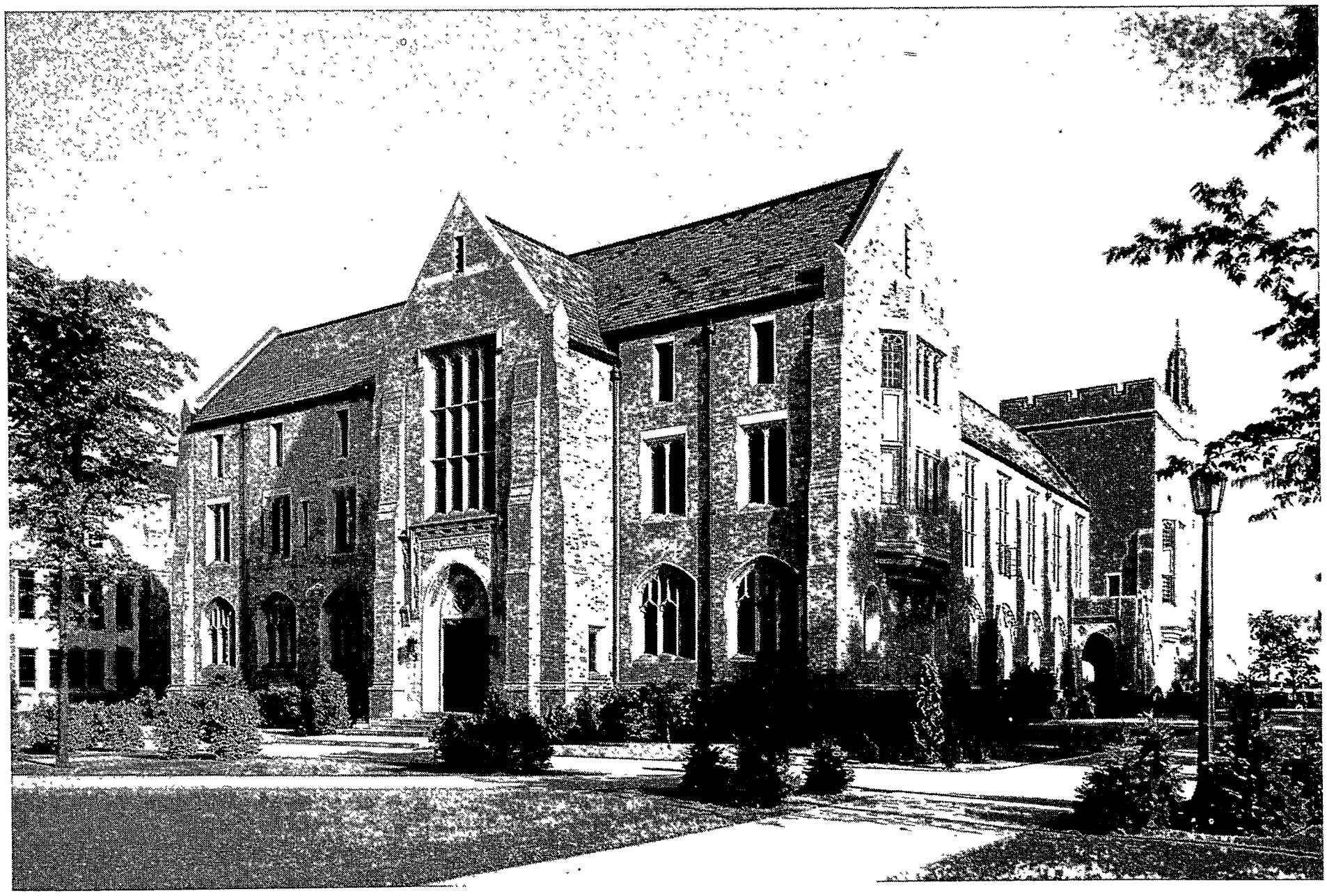
In selecting a winning team to represent Notre Dame in the Chicago regionals, contestants need not be on the same team to win. The two best men, rather than the best team, are chosen in every round. This eliminates the possibility of a strong teammate pulling his weaker partner into the finals and provides for keener competition.

Two faculty members and one senior law student judge the earlier preliminary competitions. Then in the later rounds, two attorneys and one faculty member sit on the bench. The judges of the Appellate Court of the State of Indiana render decisions on the semi-final hearings.

Many prominent national and state jurists have visited Notre Dame to hear the final arguments. This year, the Honorable John M. Harlan, Associate Justice of the United States Supreme Court, the Honorable Charles E. Whittaker, Judge of the United States Court of Appeals for the Eighth Circuit, and the Honorable Charles J. McNamee, Judge of the United States District Court for the Northern District of Ohio, judged the final competition. In past years, Associate Justice Tom Clark of the United States Supreme Court and the Chief Justices of the State Supreme Courts of Pennsylvania, Ohio, Michigan, Illinois, and Indiana have been on campus for this event.

The winners of the Notre Dame Moot Court hearings receive the Dean's Award, established by Clarence E. Manion, former Dean of the Law School. Also, each of the two winning finalists will be given a $50.00 cash award, and the other two finalists each receive $25.00. These prizes are donated by the Notre Dame Law Association.

But whether the Notre Dame student achieves a trophy in National Moot Court competition is mostly of relative importance—the principal point in favor of its competitive and practical aspects is that it is an extremely beneficial courtroom exercise in preparing students for the practice of law.



The oldest Catholic law school in the United States is on the Notre Dame campus. The present structure (above) was built in 1930.

Participants in the ground-breaking ceremony are, from left to right: Father Hesburgh; Bishop Pursley; Father Theodore Mehling, C.S.C.; Provincial; and Jerome Crowley, '31, Committee Co-chairman.

"Personalized" Gifts

MEMORIAL OPPORTUNITIES

Memorial subscriptions are not fixed by actual cost but are determined in consideration of your privilege of designation and to absorb the cost of construction which cannot be readily memorialized.

Main Chapel — Sacred Heart Chapel		$350,000.00
Chapel Doors (2 sets)	(each)	5,000.00
Outdoor Cross		75,000.00
Main Altar		100,000.00
Sanctuary		25,000.00
Tabernacle		15,000.00
Tester		5,000.00
Monstrance		10,000.00
Benediction Candelabra (2)	(each)	750.00
Prie Dieu		1,000.00
Sedilia		3,000.00
Tabernacle Veils (5)	(each)	600.00
Solemn Vestments		5,000.00
Ordinary Vestments (35 sets)	(each)	700.00
Festive Vestments (35 sets)	(each)	800.00
Stations of Cross — Main Chapel (14)	(each)	800.00
Pews — Main Chapel — Large	(each)	1,000.00
Pews — Main Chapel — Small	(each)	800.00
Chapel Corridor		10,000.00
Stations of the Cross — Chapel Corridor (14)	(each)	1,500.00
Credence Table		500.00
Missal and Stand (2)	(each)	500.00
Chapel Altar		7,500.00
Chapel Crucifix		2,500.00
The Holy Cross Chapel (Fr. Moreau Memorial Chapel) Complete Unit		50,000.00
Mission Chapel Statue — Alone		2,000.00
Classrooms (4)	(each)	5,000.00
Classroom Crucifix (4)	(each)	1,000.00
Classroom Statue (4)	(each)	1,500.00
Student Desks (200)	(each)	500.00
Professors Desk and Chair (4)	(each)	500.00
Seminarians Rooms Complete Unit (200)	(each)	3,000.00
Furnishings — Seminarians Room — Alone (200)	(each)	750.00

The ground-breaking ceremony for the new Moreau Seminary was held on May 13. Very Rev. Theodore J. Mehling, C.S.C., provincial of the Indiana province, turned the first spade of dirt for the $3,000,000 structure. Present plans indicate that the building will be completed by the fall of 1958, providing living quarters, classrooms and a gymnasium for 200 seminarians. It is to be located on the northeast section of the Notre Dame campus, overlooking St. Joseph Lake.

Salina Alumni Give $1,000

Many Notre Dame men have already contributed to the new Seminary through the 15th Annual Alumni Fund. Numerous non-alumni friends of the University and various N. D. Alumni Clubs have also made substantial donations to the project. The Notre Dame Club of Detroit has pledged $10,000 and paid the first installment of $2,500; and the Notre Dame Club of Salina, Kansas, contributed $1,000 in honor of Rev. Cletus S. Bachofer, C.S.C., associate professor of Biology.

Many contributions have been received from alumni and non-alumni for living and deceased Holy Cross priests including Rev. Thomas Steiner, C.S.C., retired Provincial of the Indiana Province and former Dean of Engineering; Rev. Leo R. Ward, C.S.C., professor of Philosophy since 1928; a $5,000 room in appreciation of Rev. Harold Riley, C.S.C., Superior of Holy Cross Seminary; and the late Rev. Bernard Furstoss, C.S.C., former rector of Badin Hall.

Recognition for Contributors

Donors have an opportunity of personalizing their gift to the Seminary Fund in three ways: a Memorial, requiring a minimum $500 gift and the usual plaque recognition; as a Benefactor, stipulating a contribution of $300 minimum and featuring the donor's name on a wall plaque in the main foyer; and, as a Builder, which includes a gift of $90 minimum and the donor's name inscribed in a leather-bound book on display in the main foyer.

There are various sections and parts of the new building which cannot be readily 'memorialized' such as boiler rooms, wash basins and others. Consequently, 'memorial opportunities' listed on this page are not fixed by actual cost but are determined on the basis of overall construction.

Estate Planning

The Notre Dame Foundation has announced a new "estate plan" which, if adopted by persons of affluent means, could result in tremendous benefits to donors as well as the University.

Essentially it would pertain to individuals whose principal estates, at the time of death, consist of family-owned corporations. The plan calls for bequeathing a major portion of the stock in trust to Notre Dame with the income to be applied for any specific use deemed desirable by the University. Further, the plan incorporates a provision which permits the decedent's heirs and business associates, or corporations concerned, to repurchase or redeem the stock bequeathed at its book value over a period specified by the donor.

Under the plan, many tax advantages are created:

1. Since the bequest would be considered a charitable contribution, there would be a savings on estate taxes, which in a good many cases would be substantial;
2. As the named trustees would be members of the deceased's family, or his business associates, management of the corporation would not be disrupted but would continue on a friendly basis;
3. It would be unnecessary to have a forced sale of a business or some of its valuable assets to raise funds for estate taxes as sometimes happens;
4. The heirs, or business associates, could reacquire complete ownership of the corporation at no out of pocket expense to themselves, or at worst by paying a bargain price.

In the following examples which illustrate the possible tax savings, the first is predicated upon a decedent having a surviving spouse which would result in full credit being taken for the marital deduction, while the other illustrates a decedent without surviving spouse whose estate would be unable to claim the marital deduction.

Example 1

Gross Estate	$2,500,000
Less Administration Expenses	20,000
Adjusted Gross Estate	$2,480,000
Less Marital Deduction Allowed	1,240,000
Less Exemption	60,000
Net Taxable Estate	$1,180,000
Federal Estate Tax	$ 395,900

This tax is computed on the current rates such that the first $1,000,000 is taxed $325,700 and the excess over $1,000,000 is taxed at 39% or a total of $70,200, making a total tax of $395,900. With an additional deduction for a contribution to Notre Dame based on the corporation stock's book value of $500,000, the Federal Estate Tax would be $208,700, or a net savings of $187,200.

Example 2

Gross Estate	$2,500,000
Less Administration Expenses	20,000
Adjusted Gross Estate	$2,480,000
Less Exemption	60,000
Net Taxable Estate	$2,420,000
Federal Estate Tax	$ 959,000

The above tax is again tabulated using current rates such that the tax on the first $2,000,000 is $753,200 and the excess over $2,000,000 is taxed at 49% or an additional $205,800, making a total of $959,000. As in Example 1, with an additional deduction for the $500,000 contribution to Notre Dame, the Federal Estate Tax is reduced to $717,200, or a savings of $241,800.

Both examples are based on the following assumed and hypothetical facts:

1. The decedent's estate is valued at $2,500,000 with $2,000,000 being considered the real or fair market value of the corporation stock;
2. The decedent has executed a will making a bequest to members of his family or business associates as trustees of one-half of this stock for the benefit of the University of Notre Dame;
3. The book value of the stock is one-half the real or fair market value, or $1,000,000;
4. Executor's fees, attorney's fees, and other expenses other than death taxes, are approximated at $20,000;
5. The decedent's heirs or business associates also are stockholders in the decedent's closed corporation or corporations.

In the above examples, the attorney for the plan's originator advises that for purposes of taxation the bequest would be valued at the corporation's book value since this is the figure which the trustees under the plan would be required to surrender the stock, either on a repurchase by the decedent's heirs or associates, or redemption by the corporations.

Under the terms of the plan, though the heirs and business associates of the decedent would have a right to repurchase, they would in all probability choose to have the corporation redeem the stock if sufficient surplus were available. If this were done, the originator's attorney advises they should in effect regain the full ownership of the company at no additional cost to themselves either in taxes or otherwise.

The University has been further advised by the originator's attorney that it is possible that the Internal Revenue Service at the proper time might contend that the redemption of the stock by the corporation was comparable to the receiving of a dividend by the University or by the remaining stockholders. However, the originator's attorney advises that any possible detriment is far outweighed by the plan's advantages. In the event the Internal Revenue Service were to contend that the University received a dividend, this would have no tax consequences at all, since the University is a tax exempt organization. In the event the Internal Revenue Service should contend that the surviving stockholders had received a dividend, it would at worst result in the surviving stockholders regaining the full ownership of the corporation at a bargain purchase; that is, they would be repurchasing full ownership of the corporation at a figure which would equal their individual income taxes on the constructive dividend received, which figure in most cases would be a great deal less than the fair market value of the stock received. In addition, their own tax basis for purposes of a future resale would be increased by the amount of the constructive dividend, which, in the event of a future resale, would save additional taxes.

For additional information, about estate planning please address the Rev. John J. Cavanaugh, C.S.C., Director, Notre Dame Foundation, Notre Dame, Indiana.