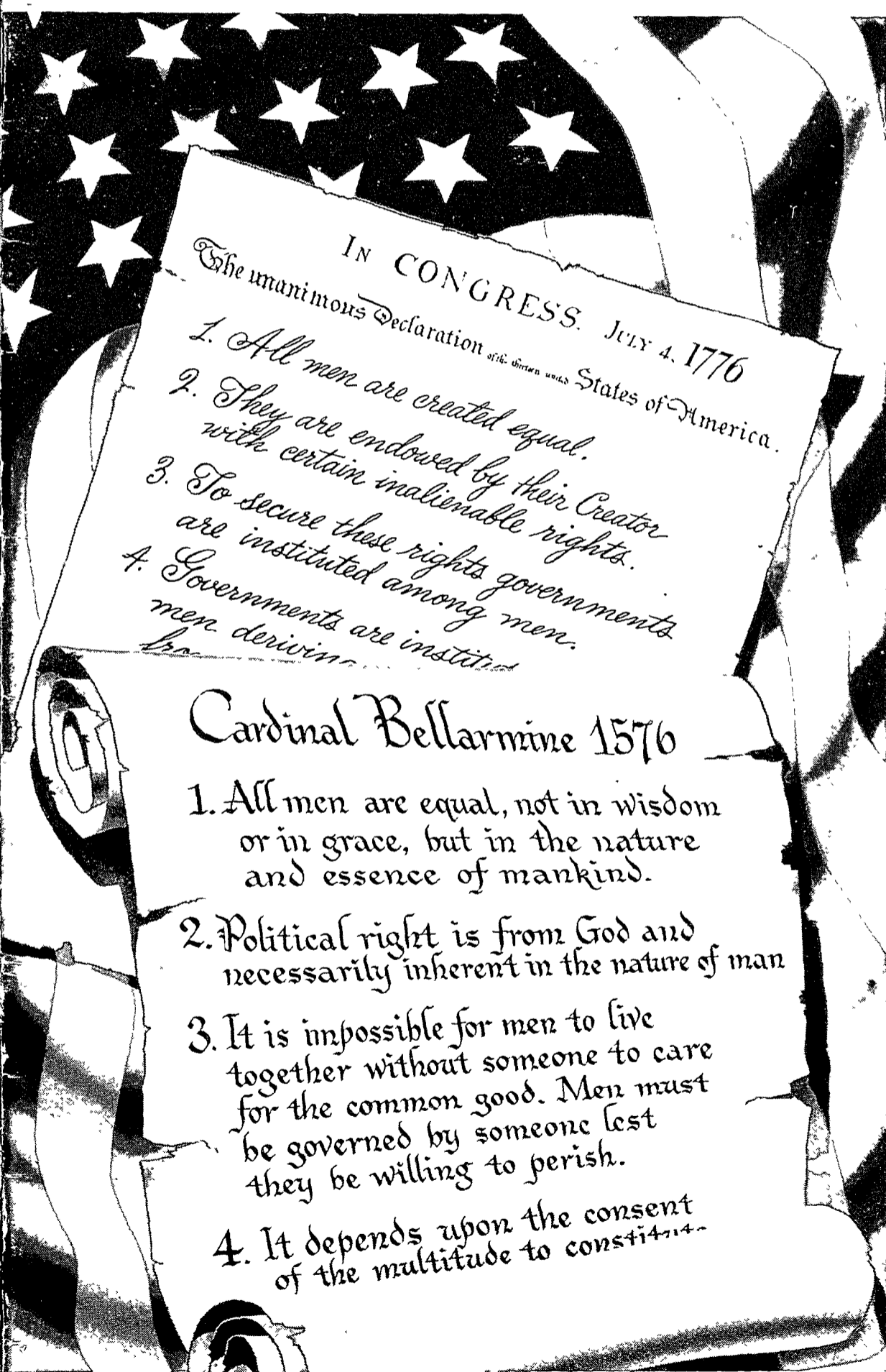


Notre Dame

A Magazine of the University of Notre Dame

JULY • 1949



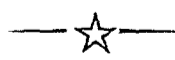
IN CONGRESS, July 4, 1776
The unanimous Declaration of the thirteen united States of America.

1. All men are created equal.
2. They are endowed by their Creator with certain inalienable rights.
3. To secure these rights governments are instituted among men.
4. Governments are instituted by men deriving their just powers from the consent of the governed.

Cardinal Bellarmine 1576

1. All men are equal, not in wisdom or in grace, but in the nature and essence of mankind.
2. Political right is from God and necessarily inherent in the nature of man
3. It is impossible for men to live together without someone to care for the common good. Men must be governed by someone lest they be willing to perish.
4. It depends upon the consent of the multitude to constitute a government.

The President's Page Rev. John J. Cavanaugh, C.S.C., President of the University of Notre Dame	3
Germ-Free Life Robert F. Ervin	5
Don't You Fret! Dr. Daniel C. O'Grady	11
Notre Dame War on Cancer and Tuberculosis Follows Successes Against Malaria Henry C. Mayer	13
A New Century at Notre Dame (Fifth in a Series)	14
Why Rent Control? Tighe E. Woods	16
Vaccination Against Syphilis, Better Diag- nosis, May Stem from Young ND Man's Work	18
Experiment in Altruism John P. Walker	20
Spring Sports James Butz	22
A Look at Audio-Visual Teaching Aids	24
All-Star Sponsors of the New Science Center	27



The University of Notre Dame

UNDERGRADUATE SCHOOL

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

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

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

The College of Law.

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

GRADUATE SCHOOL

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

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

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

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



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

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

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

Notre Dame

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

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VOL. 2

JULY • 1949

NO. 3

The President's Page

I wish to signalize the emergence of a new landmark in Notre Dame's history. This new landmark is the strong, growing financial support that is being given by Notre Dame men and friends of the University toward the much-needed Science Center.

It is highly significant that the total amount received by the University, thus far in 1949, from alumni and friends, is more than twice the corresponding figure for last year. The support given to Notre Dame by alumni and friends has been most encouraging.

Besides, many Foundation committees, several local Notre Dame alumni clubs, and several individual benefactors have pledged themselves to pay for rooms in the new Science Center.

Approximately one-half of the funds required to construct the Science Center have been received. By the end of the year, we have reason to think, nearly the entire \$1,750,000 will be available.

To compare the June 6th standing of 1948 and 1949:

1948—5,334 alumni had contributed \$101,758.42 and 270 friends had given \$41,834.35.

1949—4,117 alumni had contributed \$163,086.88 while 408 friends had given \$137,035.75.

The Notre Dame Foundation has shown by results that it is a tremendous potential for the development of Notre Dame. The story of what Notre Dame has been accomplishing is being told to an increasing number of interested friends, and thousands of well-wishers have been proud to learn that their beloved "Fighting Irish" of the

gridiron are really representing an institution whose educational achievements are of the same quality as its football.

Small gifts have featured the support given to the Science Center. This is very meaningful and will grow more significant as the years run by.

The Notre Dame Foundation has made a good beginning toward telling the Notre Dame story to the hundreds of thousands who look to Notre Dame as a powerful fountainhead of right-thinking and clean-living young men, our country's leaders of tomorrow.

I should like to express my heartfelt thanks again to the hundreds of alumni and friends who are actively working as Foundation chairmen, committeemen, class-agents and helpers throughout the United States. Without their help Notre Dame could never have hoped for the Science Center that is now beginning to emerge as a magnificent reality from the mists of hope.

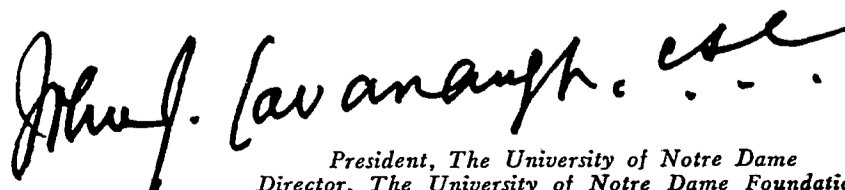
There is still much work to be done and I wish to exhort everyone to continue the generous and self-sacrificing efforts toward the end which is in sight.

The University's science program on the Mutual network on Universal Notre Dame Night was a fascinating episode in our history. We have received dozens of enthusiastic messages of comment. The University

owes much gratitude to the Mutual Broadcasting System, to Mr. Edgar Kobak, to Station WGN of Chicago, to Mr. Frank Coughlin, the author of the program, and to the staff of WGN for this very interesting program. It must have come as a revelation to thousands of listeners.

I should like to relate to you an incident which has touched me very deeply and which I think is symbolic. A young girl, who is an alumna of a Catholic college, sent a message to Notre Dame explaining that she desired to help toward the establishment of the Science Center. The only means by which she could support the project was the gift of a diamond-set ring which she had received from her mother. She asked the University to dispose of the ring and use the proceeds to help with the Science Fund. This utterly unselfish desire to be of assistance has a quality of inspiration that indicates that Notre Dame, Our Lady, has put Her Hand to the task of guiding our efforts in this—as Her loving Hand has guided the destiny and growth of the University of Our Lady for 107 years.

In the beautiful month of May, the prayers that rose nightly from the Grotto where the students gather as they have done for so many decades to praise Our Lady, are Notre Dame's pledge that we will not forget that our lives and our work are dedicated to the Mother of God.


President, The University of Notre Dame
Director, The University of Notre Dame Foundation



This germ-free monkey, having been delivered into a germ-free cage by Caesarian section, is being fed a sterilized milk formula. The long rubber gloves are sealed into the side of the cage.

Germ-Free Life

The Amazing Story of LOBUND and Its Revolutionary Approach to Study of Pathological Conditions of Unknown Cause: Heart Disease, Tooth Decay, Radiation Sickness, Possibly Cancer—in World's First and Only Center of Germ-Free Animals Reared for Research

By Robert F. Ervin

The author is the business administrator of LOBUND (Laboratories of Bacteriology, University of Notre Dame), of which he became an assistant in 1936 immediately after his graduation from Notre Dame with a B.S. degree in pharmacy. He received an M.S. degree in bacteriology in 1938, and joined the Notre Dame faculty in 1939.

Ervin engaged in government research in LOBUND during World War II. Author (with other LOBUND personnel) of five publications on germ-free life, he also is Associate Editor of LOBUND Reports and Co-Editor of Graphic Health Charts. A contributor to the Journal of Laboratory and Clinical Medicine and the Journal of Documentary Reproduction, Ervin is a member of several scientific societies and in 1947 was president of the Indiana Branch of the Society of American Bacteriologists.

EVERY normal animal harbors dozens of kinds of germs throughout its life—from its first breath on.

Because it harbors so many kinds simultaneously, and because they vary in the body from day to day and from diet to diet, science has not been able to study the specific effects of each.

Yet modern medicine has needed to know the specific effects of each of these germ species. If we had known which ones produced harmful effects, and which produced beneficial effects, we would have been able to make intelligent efforts to avoid the former and to take advantage of the latter.

Now, however, science IS able to study the specific effects of specific germs, thanks to LOBUND (Laboratories of Bacteriology, University of Notre Dame). And such revolutionary studies, attracting international attention, are being made today.

LOBUND, the world's first center of completely germ-free animals reared for research, can study the effects of any specific kind of germ—by raising animals which are free of all bacteria, and then subjecting them to the species of germ to be studied while successfully excluding all other species from the experiment. Not only do these techniques make it possible to study the role of "normal" germs; they also constitute what seems to be the basic approach to the study of pathological conditions whose causes are unknown—at best, only suspected: heart disease, tooth decay, radiation sickness and possibly cancer.

Early History

All this has stemmed from the dream of one man, James A. Reyniers, Director of LOBUND and Research Professor of Bac-

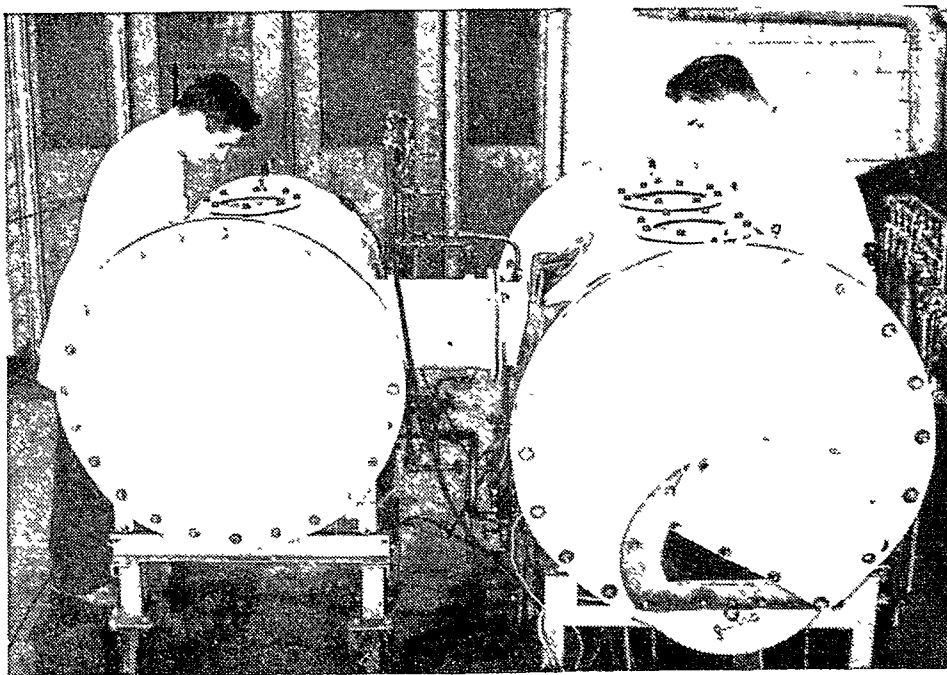
teriology—a dream begun back in 1928, when he was a not-untypical Notre Dame undergraduate.

Despite the difficulty of earlier attempts since 1895 to raise germ-free animals as research tools, Reyniers had hope. He wanted to study the individual bacterial cell and to eliminate contamination from bacteriological experiments. The failure of others before him left many of his friends skeptical of his belief that it was worth more time and money and heartache. But he started toward his goal—with nothing but determination, hard work and an ability to make and sell archery equipment to defray his earliest costs.

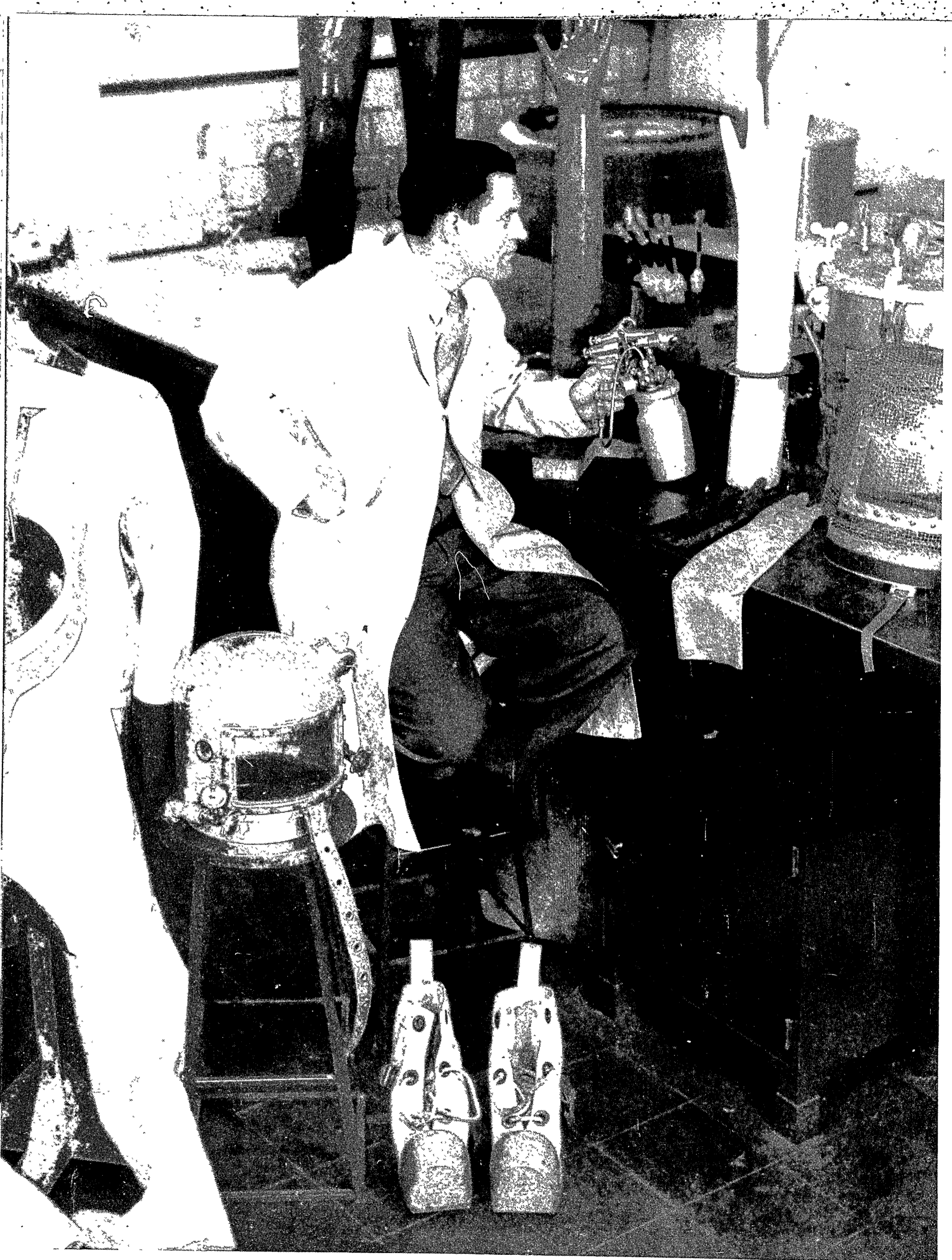
Reyniers immediately won the sympathy and encouragement of the late Rev. Francis J. Wenninger, C.S.C., then Dean of the College of Science and Head of the Biology Department, and the Most Rev. John F. O'Hara, C.S.C., now Bishop of Buffalo, then Vice-President and later President of Notre Dame. Since that time, the University administration and the Congregation of Holy Cross have given LOBUND's Director invaluable support and assistance.

Physical Plant

Reyniers invented and built his own ingenious micro-manipulation instruments and germ-free apparatus which made it possible to inject, dissect and isolate single cells of microorganisms or tissues, affording a way to exclude undesirable germs from any bacteriological research. These were the days (and nights!) in a rickety little laboratory in old Science Hall. Today LOBUND has 45 laboratories and offices, 43 technicians, seven research scientists and four office personnel in the Biology Building (entire first



After Caesarian delivery, a litter is transferred from the rearing cage (left) through a sterile lock into the operating cage (right). There the animals are fed by hand until "weaned."



A LOBUND technician plastic-coats a glove form — for a special diving suit needed in the new apparatus for rearing a colony of germ-free animals.

floor) and in a brand new germ-free-life laboratory building, animal house and machine shop just north of the campus.

The financing of so large a research organization is a heavy and constant problem to the University Administration. Much of the operating expense is being defrayed by interested friends who have learned of its work only recently, and by industrial, governmental and research agencies which need LOBUND's techniques, equipment and "know-how" to solve some of their problems.

Three Divisions

LOBUND has three administrative divisions: GERM-FREE LIFE, BIOLOGICAL ENGINEERING and MICRURGY. The Germ-Free Life division is the largest and today is attracting the most attention. It offers immediate "practical" applications and has been in a better position to collaborate with outside research centers. The other two divisions, not yet so far advanced, promise equally original and important medical and biological techniques.

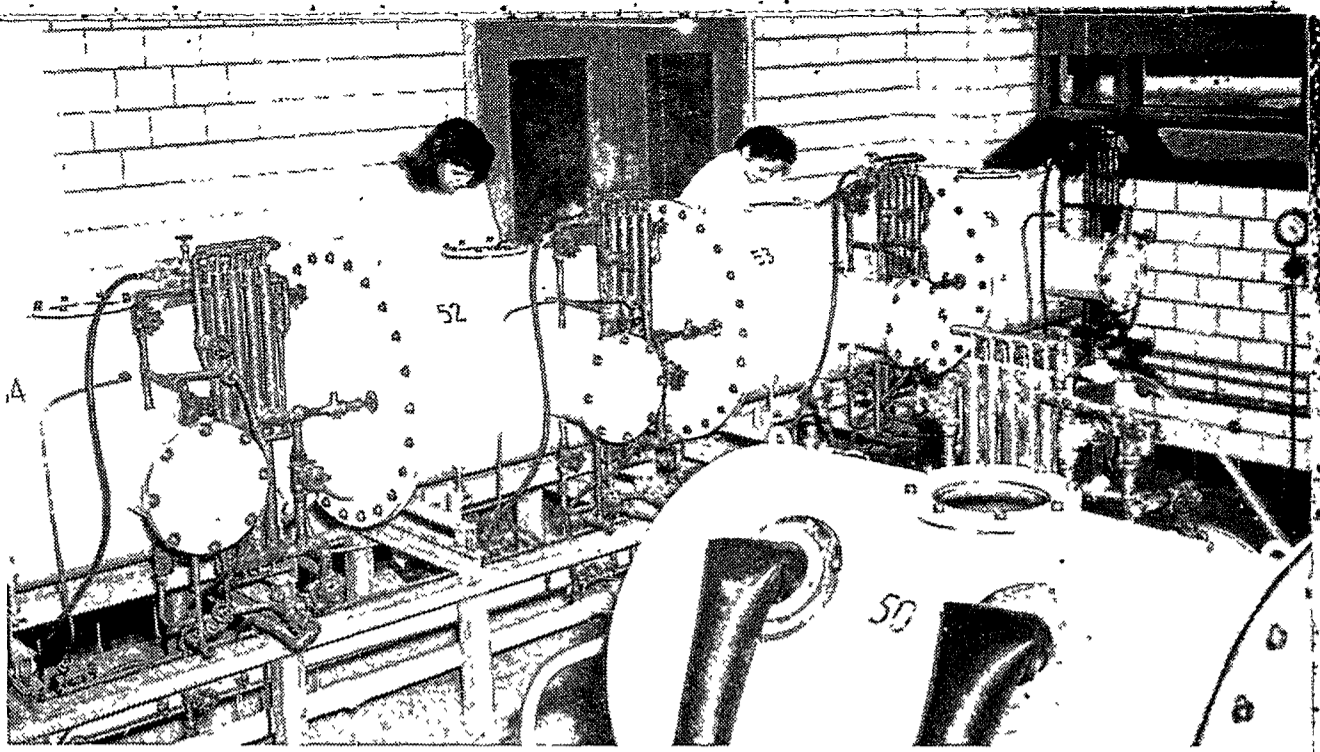
The three divisions, as will be seen, are closely inter-related. Knowledge of biological engineering necessarily antedated the germ-free system which, however, can be reversed to study engineering problems in the handling of biological material. Micrurgy uses germ-free techniques on a micro-scale, while both germ-free and biological engineering utilize the special instruments perfected in micrurgy to study certain cellular phenomena.

Germ-Free Life

Animals are obtained germ-free in two ways. In the case of mammals (rats, guinea pigs, mice, monkeys, etc.), a Caesarian section is performed in a sterile environment just before normal birth is expected. Chickens and other germ-free animals hatched from eggs are procured by sterilizing the fertile eggs in a germicidal bath as they are passed into the germ-free environment.

Once obtained, these germ-free animals are kept in a specially designed cage from which all germs are excluded but into which sterile food, water and air are introduced. They are not removed until the end of the experiment.

In preparation for a typical germ-free-rat experiment, an operating cage is bolted to a rearing cage; and these two units are sterilized with steam under pressure. The timed-pregnancy rat is anesthetized, strapped down to an operating board and sent through a sterile trap into the operating cage. The operator and his assistant, working through rubber gloves sealed into the walls of the cage, deliver the baby rats by Caesarian section. The litter is placed in a small pan and passed into the rearing cage through the connecting cylinder. The rearing cage is then detached and hooked to a sterile air line, and the special milk formula is sterilized into the rearing unit through a small sterile lock attached to the side. The rats are then weighed and the hourly feeding schedule begun. Every hour, 24 hours a day, seven days a week for three weeks, the little rats are fed individually through an eye dropper fitted with a tiny rubber nipple. On the 14th day (when the rat's eyes first open), solid food is presented. Finally, on about the 24th day, the rats are weaned.

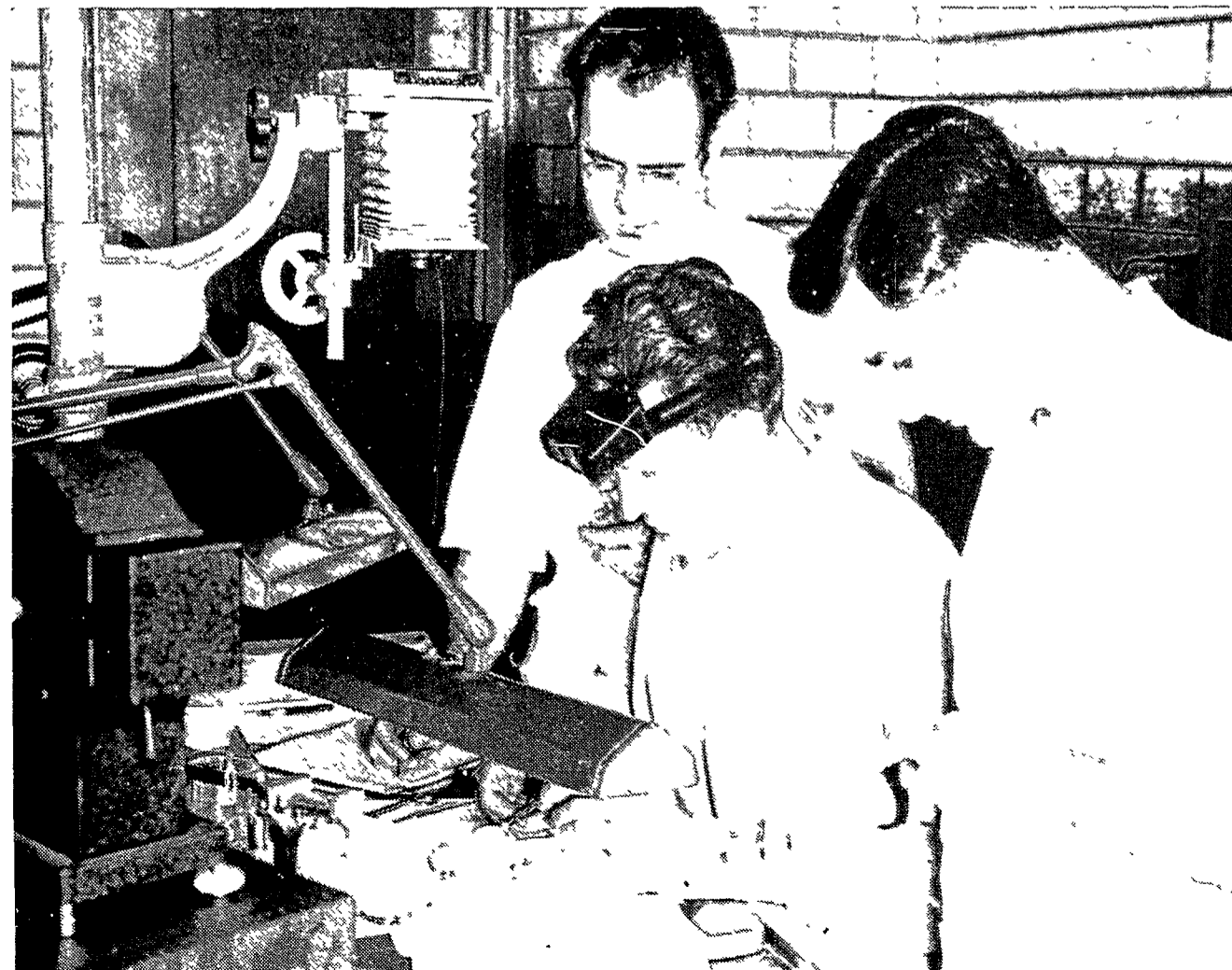


Note filter tubes for sterile air — mounted on each rearing cage — and sealed-in gloves in foreground.



The new Germ-Free Life Production Laboratory. Of interest to some future scientist may be the variety of 1947 biological specimens in the cornerstone.

A germ-free chicken is autopsied by Dr. H. A. Gordon, LOBUND physiologist. Waiting to receive blood and tissue for analysis are Dr. T. D. Luckey, chief biochemist, and Morris Wagner, chief bacteriologist.



Once or twice a week during the experiment, a technician has removed cultures from the germ-free cage and tested them in the bacteriology laboratory to make sure the rats are germ-free and stay germ-free. Even a pin hole leak in a rubber glove might contaminate and ruin a valuable litter of animals. During the course of the experiment, the sterilization crew has been testing the air supply, transferring the rats to clean cages and passing food into, and cultures out of, the cage.

The biochemical staff has been preparing special diets, keeping a check on the growth curves, testing the effect of sterilization of the diets and handling other duties bearing upon the animals' nutrition. The physiologist and his staff have noted any untoward symptoms in the rats, autopsied any which may have died and made plans for proper disposition of the animals and their tissues at the termination of the experiment. It takes about 500 man hours of work to raise one litter of rats 25 days. When weaned, they can be maintained with much less effort.

At the end of the experiment (we have reared germ-free chickens over 400 days and rats over 300 days), final cultures are taken for bacteriological study and the animals removed to the autopsy laboratory, where photographs are taken and the animals carefully and completely autopsied.

The blood may go to serology for determination of antibody content, livers to biochemistry for a check on vitamin content, teeth examined by research dentists for any signs of decay and organs sliced on a microtome and examined microscopically. When LOBUND's research team gets through with one of these germ-free animals, there is practically nothing which has not been weighed, photographed, studied microscopically, analyzed or measured. Findings are

recorded with the other experimental data. These animals are so valuable that nothing is wasted.

Accomplishments To Date

Germ-free animals must be reared in quantities large enough to be used on a wide variety of problems. Techniques must be devised to keep these animals as normal as possible for as long as possible. They must be described completely so that they can be compared in every respect with so-called "normal" animals. A large enough staff must be trained in the necessary specialized and intricate techniques. There must be collaboration with other centers whose specialists in many fields of science may help. All of these things LOBUND and Notre Dame have done, are doing, or will be able to do in the immediate future.

In our new germ-free-life laboratory, a *fantastic apparatus is being built to house an entire colony of germ-free rats*. A man dressed in a diving suit will be introduced into the big tank through a vat of germicide. He will clean the cages, feed the animals and send out as many rats per day as are necessary for individual experiments. This will be the stock colony supply of germ-free animals for science.

LOBUND is collaborating with other centers interested in helping on germ-free life problems or which want to use these unique animals for some special research of their own. Since the animals cannot be shipped, and since this is the only place in the United States where germ-free animals are reared, the work must be done at Notre Dame. Among such collaborators are The Office of Naval Research, Parke, Davis & Company, Walter G. Zoller Memorial Dental Clinic of the University of Chicago, Regional Poultry Research Laboratory, and the Kellogg Company.

LOBUND's apparatus has been perfected and in use, now, for a number of years. *Both chickens and rats have been reared through two generations*. Techniques for this long-range program have been publicized in *LOBUND Reports* and elsewhere.

Our survey studies on these and other animals have uncovered many important medical "leads." The collaborative program with the Zoller Dental Clinic has indicated the ultimate answer to the cause of tooth decay. Evidence already has been found to change many long held theories in nutrition. Our work with Parke, Davis & Co. research laboratories has thrown new light on the role played by micro-organisms in the intestinal tract.

We also are in the process of studying the serology, anatomy, physiology and biochemistry of germ-free animals. These studies are giving us the base line from which we can read results of future experiments with this new biological tool.

Biological Engineering

By making slight changes in the Reyniers Germ-Free System, it is possible to use it for other things than rearing germ-free animals. For example, bacteria can be sealed into the apparatus so that they can't become contaminated with other types of germs. With this equipment studies can be made on large quantities of disease germs in pure culture with complete safety to the research staff. It is also feasible to test effects of various types of gasses upon these bacteria in a closed and controlled environment.

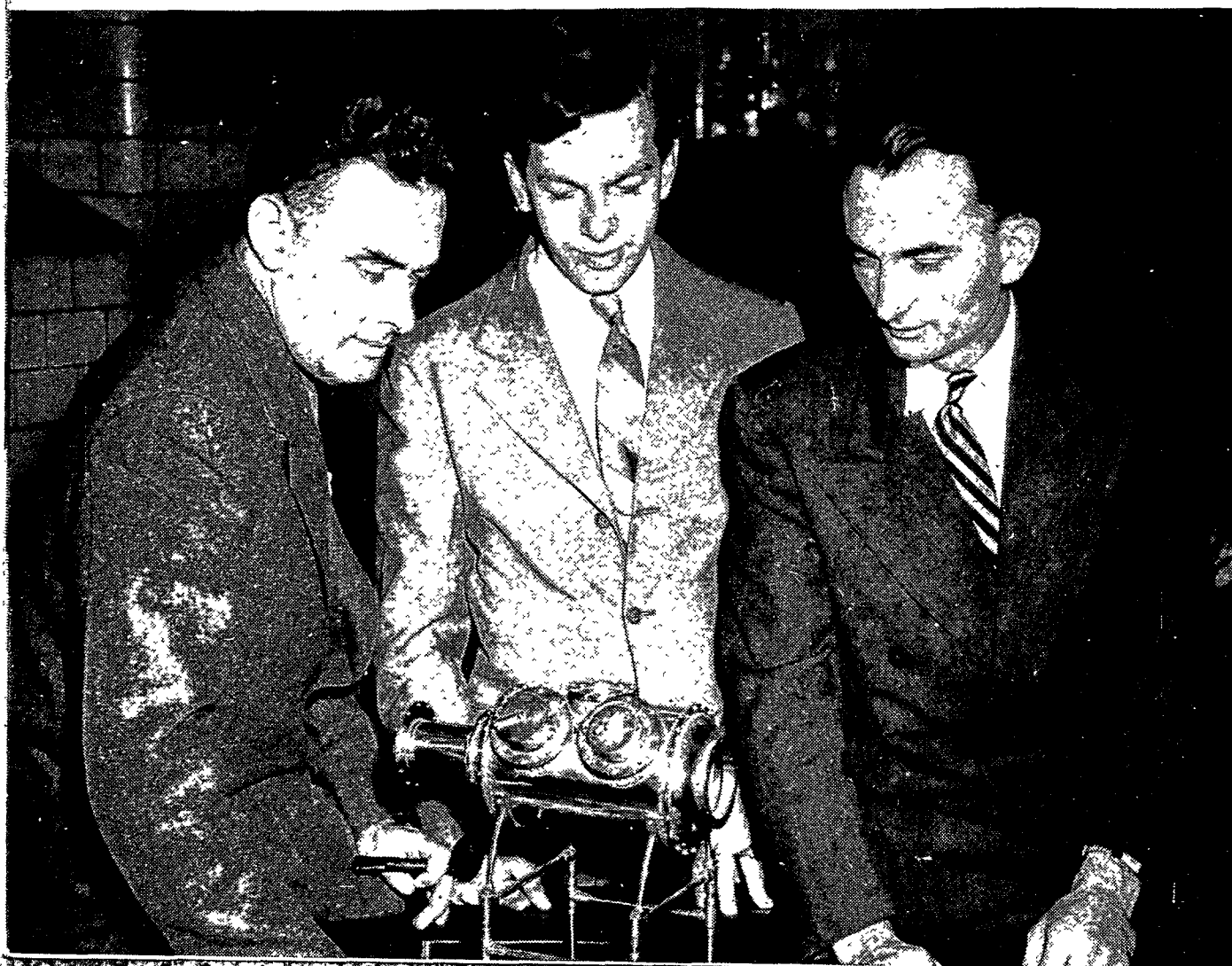
Thus, in LOBUND's Division of Biological Engineering, experiments are going on with the problems of air-borne infections and their control. It is because of these experiments with disease organisms that LOBUND's doors are locked. And it is here that we are studying new and better methods for producing special diets needed in germ-free-life research. For example, we are working with larger equipment in an attempt to spray dry these milk formulae and thus obtain a more uniform product.

All experiments in the biological engineering division have very "practical" applications. An entire wing of the famous Cradle in Evanston, Ill., contains the Reyniers Cubicle System for prevention of air-borne epidemics among children in nurseries, orphanages and hospitals. This system resulted from biological engineering experimentation. Another problem being studied is that of large-scale production of vaccines for medicine.

Micrurgy

Very little is known about the life cycles of bacteria—even about the nature of the bacterial cell itself. Yet, since bacteria are the units with which bacteriologists work and upon which so much of man's knowledge of disease depends, this information must be obtained—and the sooner the better for man. Science, for example, would like to know more about the mechanism by which bacteria transmit their characteristics from one generation to another. Since a well defined nucleus cannot be demonstrated in bacteria (as in other cells) what is this mechanism of inheritance? By what means do bacteria change and vary? Why do some

LOBUND administrative staff examines germ-free cage model. Left to right: Professors James A. Reyniers, founder and director; Philip C. Trexler, assistant director, and Robert F. Ervin, business administrator.



bacteria produce disease and others not? Under a microscope, there is no great difference in appearance between those which cause sickness and those which do not. How do bacteria build up resistance to sulfanilamide so that this famous drug can no longer rid the disease germ from the patient's body? Why is pneumonia worse one winter than another? And, finally, can bacteria change into viruses or vice versa?

To answer questions like these, we must know more about the nature of the bacterial cell itself. But these cells are so minute that to dissect, inject, isolate and analyze them under the microscope require very special tools and techniques. In LOBUND's Micrurgical Division, these tools are being invented, built and put to use on just such problems as are listed above. Precision machine tools, micro-manipulators, micro-injectors, micro-forges and other micro-instruments are being made. With them, and with original techniques, LOBUND's scientists may answer some of these questions before long.

One machine developed in this division will automatically count bacteria in a sample of water or broth more accurately and quickly than ordinary methods used in bacteriology.

The Staff

Tightly knit and a real "team," LOBUND's staff is one of its top assets.

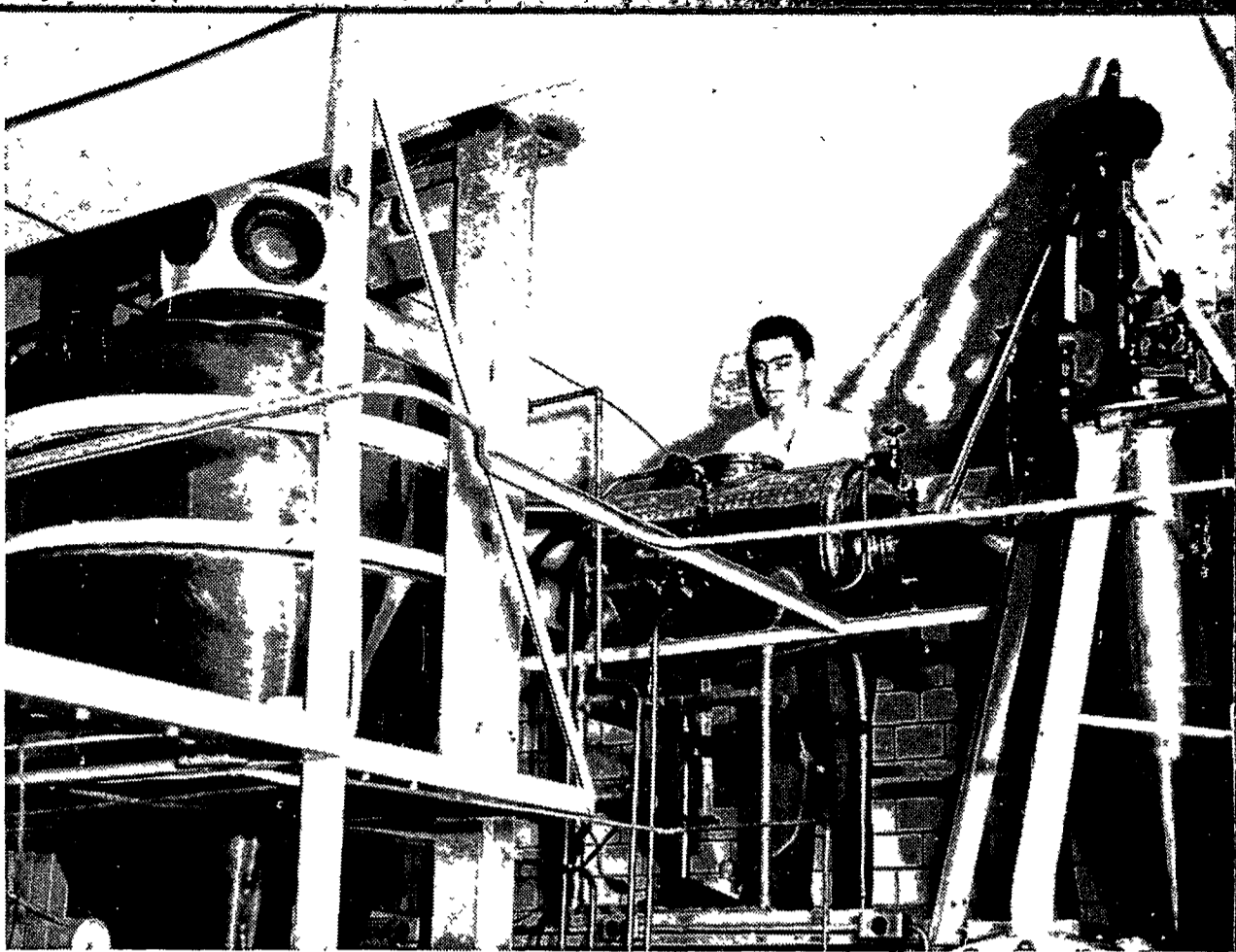
It is administered by Reyniers as Director, Philip C. Trexler as Assistant Director and the writer as Business Administrator. Trexler, who joined Reyniers as a laboratory assistant in 1932, during his undergraduate days at Notre Dame, heads the Micrurgical Division and directs LOBUND's technical development. He has done much to help perfect LOBUND methods and equipment. The writer joined Reyniers and Trexler in 1935, in his senior year at Notre Dame.

The research staff is comprised of Dr. H. A. Gordon, physiologist; Dr. T. D. Luckey, biochemist; Morris Wagner, bacteriologist, and Bernard Teah, in charge of germ-free-life production. Each directs technical staffs trained in their specialities.

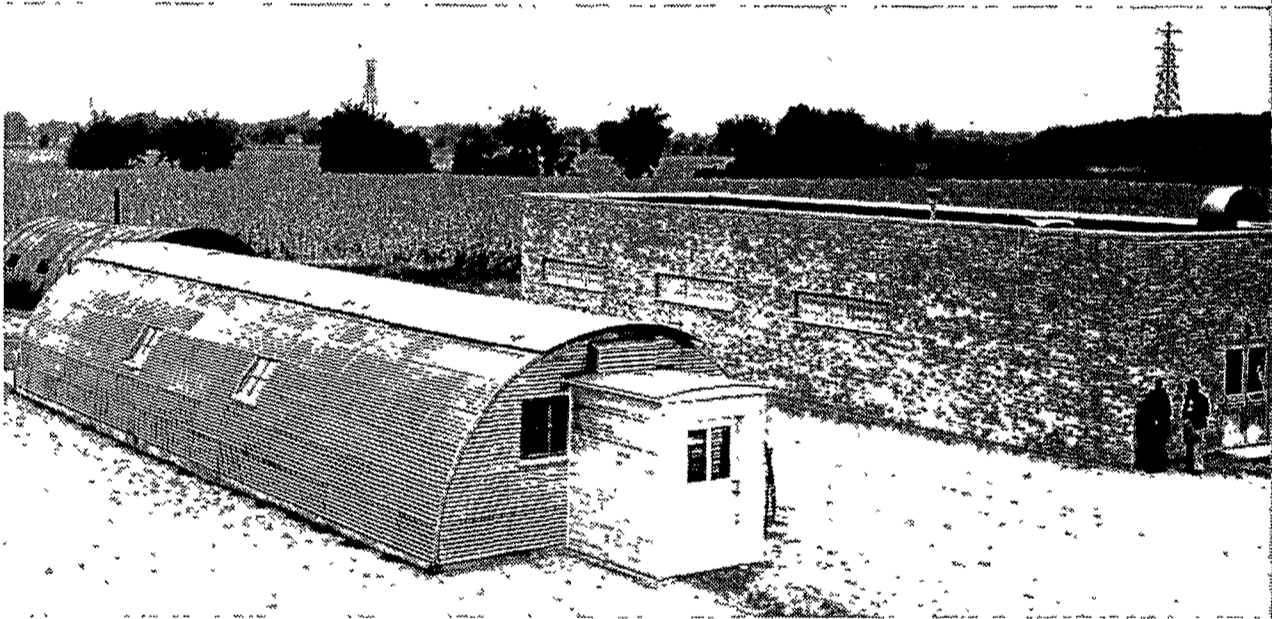
LOBUND and Notre Dame

We often have been asked, "Where does LOBUND fit into Notre Dame?" The answer is that LOBUND was *started at Notre Dame, built by Notre Dame . . . is part of Notre Dame, unique to Notre Dame.* While it is unusual for a University to have a research organization separated from its academic organization, it is not unusual for a University to do large-scale research. Notre Dame's LOBUND is separate from the academic because of the specialized nature of its work, the scope of its research program, its full-time staff of 50, its continuous year-round operation and the ultimate separation of physical plant. Some of LOBUND's research men also teach in the University; and, when the pressure of building eases, some arrangement will be made at a graduate level for students to work and study in LOBUND itself. Subjects taught by the staff include bacteriology, hygiene, biochemistry and immunology.

Research is an essential part of every modern university. It is necessary not only

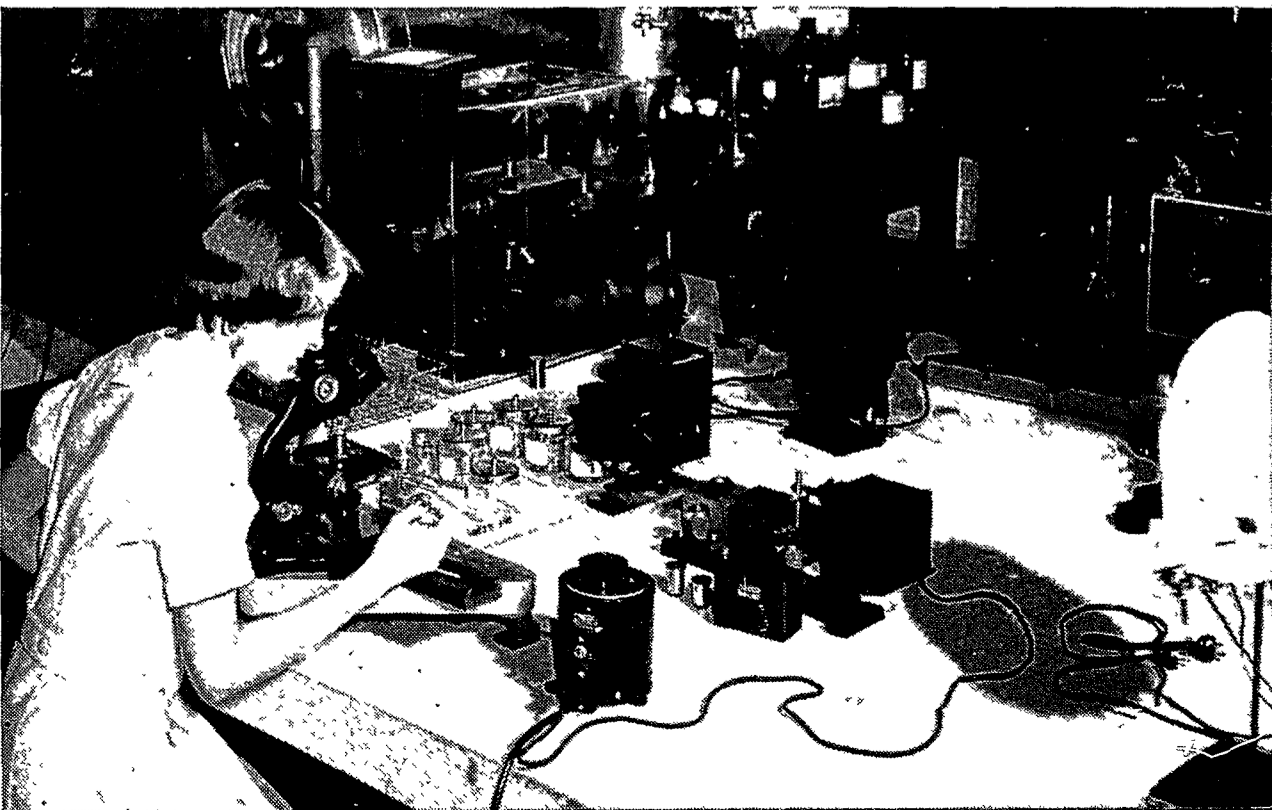


Bernard Teah, germ-free life production chief, working with apparatus in Biological Engineering division, where germ-free system is used in reverse. Instead of sealing organisms out and rearing animals within, bacteria are sealed in to prevent escape or contamination by unwanted germs.



New LOBUND animal house (left) and machine shop.

The more delicate work with micromanipulation apparatus is done on this vibrationless concrete table in LOBUND'S Micrurgical Division. In the background: incubators and constant temperature baths used in bacteriological and tissue culture experiments.



because research is requisite to graduate work, but because, through research, universities can make valuable contributions to the nation's common good. It need not in any way conflict with industry or government; rather, it should *complement* their work. Pure or basic research, as contrasted with applied research, is especially adaptable to university effort. The LOBUND research program is fundamentally basic research.

The Future

Thus far, Notre Dame has financed most of the development of LOBUND with its own funds. It has built all of the physical plant (some \$400,000), purchased most of the apparatus (valued at some \$150,000) and borne a large share of the running expenses. It has backed the development of the Germ-Free Division to the point where it can take research grants and contracts from the outside and thus reduce the cost to the University. But there are still things to be done; and, to do them, Notre Dame needs help. The Division of Biological Engineering and Micrurgy are well started and their future is unmistakable; but they are not as completely developed as is Germ-Free. With the physical plant separated by more than a quarter of a mile, and with a premium on space in the Biology Building, more of the small-type buildings (about \$200,000 each) are needed on the 40-acre plot north of the campus. And finally, there is need for LOBUND endowment so that this work can be less dependent upon outside research contracts.

Meanwhile, LOBUND keeps working—on its fascinating problems, with its unique techniques, in its special laboratories, with its eyes on the future and a cover over the clock.

And interested visitors are always welcome.

DEBATE TEAM WINS NATIONAL TOURNEY HONORS

The University of Notre Dame debating team won the Midwest debating championship at the West Point National Invitational Debate Tournament held recently at the United States Military Academy.

In the thirty-four team field competing at West Point, which were selected from more than 300 colleges and universities engaging in forensic activities, Coach Leonard Sommer's Notre Dame debaters were ranked fifth in the United States. This position includes both speaker ratings and won-and-loss records.

Other honors compiled by the Notre Dame debaters at the national tournament included a rating as the No. 1 Catholic University debating team and second in the United States on individual speaker ratings. Notre Dame defeated Pepperdine College, Baylor, Louisiana State University, Stanford, Montana University and the United States Military Academy before being eliminated in the quarter-finals of the tournament.

Representing Notre Dame in the West Point tournament were senior Frank Finn, of Denison, Tex., and sophomore William Carey, of Pittsburgh, Pa.

ND ATOMIC RESEARCHERS PLEDGE ALLEGIANCE TO U. S.

A 100 percent voluntary "Oath of Allegiance" to the United States Government recently was signed and submitted to the Atomic Energy Commission and the Congress of the United States by students in the graduate school at the University of Notre Dame who are holders of Atomic Energy Commission Fellowships.

Graduate students at Notre Dame were awarded eight out of a total of forty-four fellowships made available by the Atomic Energy Commission for the 1948-49 school-year.

The statement, signed both by Notre Dame graduate students who have held 1948-49 Atomic Energy Fellowships and by those who have been newly appointed for 1949-50, pointed out that they are "profoundly disturbed by the unfortunate publicity which has attended the work of the Commission in its efforts to promote invaluable research in the atomic field through financial encouragement of students in a number of our great universities." Jeopardizing this program, they said, "will jeopardize progress vital to the American people."

"We, therefore, wish to go on record as affirming our complete allegiance to the United States Government, and our complete loyalty in carrying out the valuable work in which we are engaged," the statement continues. "This work, at Notre Dame, is carried on in the midst of a great American educational tradition. The fundamental principles of the University's religious and educational background are thoroughly integrated in the fundamental principles upon which the Government of the United States was founded, and upon which it must continue to rest if it is to endure."

The Notre Dame fellowship holders declared in the statement that "we believe that other students and other universities engaged in this great field for our future as a nation share this loyalty and integrity, and we deplore the possible sacrifice of progress which can accompany adverse publicity attending any exception to this general condition."

The students concluded: "Therefore, speaking for the Atomic Energy Commission Fellows at the University of Notre Dame, we reiterate our loyalty to our Government, our belief in the integrity of our scientific research, and our hope that present suspicions will not be allowed to obscure the great contributions which private educational institutions, as well as tax-supported schools, can and do make to America."

PROFESSOR FISCHER PREDICTS FUTURE NEWSPAPER CHANGES

"'Last Newsboy Dies' is a headline some of the babies born this morning will live to read", predicts Professor Edward A. Fischer of the Department of Journalism at the University of Notre Dame, in an article in a recent issue of "America" magazine, national Catholic weekly, in which he says

that "facsimile" will revolutionize the newspaper world.

Professor Fischer expresses the view that "facsimile" is due to replace the old-fashioned newspaper, sending newsboys, linotype operators, stero-typers, compositors and pressmen to membership in a vanishing generation.

The Notre Dame professor explained that the new "facsimile" newspapers will be the size of a large magazine, have wide columns, large type and many pictures. A complete detour will be made around the mechanical department with stories typed on a vari-typer and placed before a "scanner", which converts these impulses back into print and produces the "facsimile" newspaper, he pointed out. Professor Fischer observed that already the St. Louis "Star-Times" and "Post-Dispatch" and the Philadelphia "Record" and the Miami, Florida, "Herald" have operated "facsimile" newspapers.

Professor Fischer wrote that newspaper operating costs will be cut by 90 per cent by conversion to "facsimile" and cost of starting a newspaper in a large city will be reduced from hundreds of thousands of dollars to about \$20,000. The only holdup today is the novelty of the idea and the production of receivers that can be sold or rented at a low cost, according to Professor Fischer. Publishers who own several hundred thousands of dollars worth of equipment are naturally hesitant about declaring it obsolete, according to the Notre Dame professor, but rising mechanical costs and the competition of television may bring "facsimile" to the fore in only a few years.

STUDEBAKER PRESIDENT TALKS TO ENGINEERING GROUP

More than 300 college professors and representatives of industry met here recently for the twelfth annual session of the Indiana-Illinois Section of the American Society for Engineering Education.

The Rev. John J. Cavanaugh, C.S.C., President of Notre Dame, welcomed members to the University at the opening session.

Harold S. Vance, Chairman of the Board and President of the Studebaker Corporation, delivered the principal address during the initial session entitled "Industry Looks to College."

N. W. Dougherty, Dean of Engineering at the University of Tennessee, spoke at the luncheon on "Professional Registration of Engineers."

Other sessions included panel discussions on such subjects as "Visual Aids", "Extending the Campus Boundaries", "Cooperative Research Between Industry and Universities", "Transition from College to Industry", "The Humanistic-Social Aspects of Engineering Education", and "Engineering Libraries".

Coordination of activities for the meeting were under the direction of W. D. Drinkwater, Assistant Professor of Aeronautical Engineering at Notre Dame and Secretary-Treasurer of the local section of the Society.

don't you Fret!

“Our secular scientists in psychotherapy and mental hygiene have not exploited the resources of HOPE or its corresponding virtue of fortitude. If people want what Msgr. Sheen calls ‘peace of soul,’ let them find in religion the importance of this theological virtue—and a confidence not elsewhere or otherwise available.”

By Dr. Daniel C. O'Grady

WORRY is a form of fear response; and, to understand the former, it would be well to examine the latter.

In Aristotle's day the popular definition of fear was “the expectation of evil” (*Ethics*, 1115a). St. Thomas, who lists fear among the five irascible passions, says that its object is a future evil, difficult and (seemingly) irresistible (*Ia* 2ae, Qq.41-45). He mentions among its objects things *sudden* and things *strange*, and these are also enumerated by contemporary psychologists as normal stimuli. McDougall called fear the emotional quality that accompanies the instinct of escape or self-preservation, and Woodworth defined it as the emotion aroused by a danger situation.

Despite some of our contemporaries, fear is standard equipment—F.O.B. the maternity hospital! And, despite the late F. D. R., there can be no complete “freedom from fear.” It is one of the basic emotions, part of our native endowment; and it ranges in degree, expression and variety from simple startle-reactions through misgivings, apprehensions, frights, scares, anxieties, alarms, flight and stampede to the paralysis or immobility of panic, dread, utter horror and sheer terror.

But, we repeat, fear is normal and inevitable in some situations. For comparative illustration, consider the case recently reported of an infant devoid of pain sensations. While the first reaction of the reader might well be “How fortunate!”, it would, on second thought, more likely be “How dangerous!” Because one of the functions of pain is to signal distress, to serve as a warn-

ing. Likewise, a hypothetically fearless man would often be in grave peril.

Aristotle, who gives us in his *Ethics* the golden mean doctrine of virtue, with vices defined as excesses or defects of the former, asserts that an excess of courage or fearlessness is typical of a madman or an insensible person; and he adds that a rash man is a boastful pretender. In other words, true courage is not incompatible with prudent caution (1115a7ff.). The overconfidence and extreme optimism of the reckless daredevil are symptomatic of the fools who rush in where angels fear to tread. Samuel Johnson expressed the same opinion when he said: “I never thought confidence, with re-



spect to futurity, any part of the character of a brave, a wise or a good man. Bravery has no place where it can avail nothing . . .” (Boswell; *Aetat.* 75). The confidence of ignorant, drunk, sanguine and pugnacious people is rated by Aristotle as pseudo-courage (1116a). For him as for Johnson, death is the most terrible of all things, and he regards bravery proper as fearlessness in the face of noble death and military emergency. Of course, the pagan Aristotle knew nothing of that voluntary endurance of death for faith or virtue, which Christians call martyrdom. Among other things which he says are commonly feared are disgrace, poverty, disease and friendlessness; and this list corresponds, in reverse, fairly closely to W. I. Thomas' list of basic human wishes, *viz.*, security, response, recognition and novelty, about which we must say something later.

It is a fault, says Aristotle, to fear *what*, *as* or *when* we shouldn't; and the excess of fear (or the defect of courage) is cowardice. He calls the coward a “despairing sort of person” and mentions the suicide in this context. Aquinas describes despair as an “avoidance of good.” The present writer is tempted here to digress on pessimism, fatalism, defeatism, nihilism, skepticism, quietism, Buddhism and even Stoicism; but space limitations forbid, so, fear not, gentle reader.

We are not concerned in this article with morbid fears or with such neurotic symptoms as phobias, but we can well employ a useful distinction that pertains to the psychology of the normal mind and personality. I refer to the difference between acute or transient emotions and persistent states or chronic conditions, both virtuous and vicious. Thus, a fright is a temporary experience; but worry is less fugitive and ephemeral. Some psychologists call moods “emotional hangovers,” and they refer to disposition or even temperament as a mood that lasts a lifetime. (The reader has no doubt heard of the even-tempered man who was always sore!). Webster's cartoon character, “The Timid Soul,” is a fair illustration of fear as an attitude—as a permanent frame of mind or outlook.

Worry is usually an unpleasant mental state or emotional attitude. I say “usually” because some people seem to make a career

The author, a Notre Dame philosophy professor, has been Associate Editor of The New Scholasticism, official publication of the American Catholic Philosophical Association, since 1946.

A member of the American Society for the Advancement of Science, Royal Astronomical Society of Canada and Mediaeval Academy of America, he has contributed to America and Thomist, and has written a textbook on cosmology and (with the Rev. Charles C. Miltner, C.S.C.) an Introduction to Metaphysics.

A native of Ottawa, Dr. O'Grady joined the Notre Dame faculty in 1926 and became an American citizen a few years ago. He received Ph.B. and Ph.D. degrees from the University of Ottawa, an M.A. from Catholic University of America, and was an Army clinical psychologist and personnel consultant in World War II.

of it, thereby resembling those who "enjoy" poor health. They are frequently if not constantly preoccupied with dissatisfying prospects. When this probing of their own mental wounds reaches the stage of self-torture, it is, of course, pathological or abnormal; and this tendency to recurring fears would be called, in the jargon of psychiatry, an *anxiety state* (rather than mere worry). It is continuous, vague and diffused.

That there are injurious situations and dangers in human life—both private and public, both personal and social and both domestic and foreign—nobody sane will deny. That the impending possibilities are fraught with peril and menacing prospects is a perennial feature of our terrestrial routine and quotidian concerns apart from the special emergencies and crises and disasters which have to be anticipated if they are to be prevented or evaded. Worry is therefore warranted, at least as preliminary to planning. Our cares and troubles are the objective counterparts and causes of worry; and they usually consist in some real or fancied practical problem—that is, some obstacle or difficulty.

From the field of common sense and ordinary experience (to say nothing of the realm of folklore), proverbial sagacity has its say. The wisdom of the human race, so to speak, assures us that "it won't make any difference a hundred years from now"; "most of the things we worry about never happen"; "he doesn't know when he's well off"; "don't make mountains out of mole-hills"; "don't let your bleeding heart run away with your bloody head"; "don't worry, it probably won't be fatal, and if you die you can't worry", etc. There are also such half-truths as "the only thing to fear is fear itself", "what you don't know won't hurt you", etc.

Moving upward to psychotherapy (but still on the profane, secular level), we get such reassurance and counsel as the following: fight is better than flight; face the facts, confront the situation, evaluate its causes, don't postpone considering the problem; confide and confess; get advice; do something; develop balancing factors, i.e., compromise, adjust, seek antidotes.

But we are told today that, because of worry, peptic ulcers and cerebral hemorrhages have become the occupational diseases of American businessmen and that the situation is getting desperate, because virtually epidemic.

If so, the conclusions of the moral philosophers should be of some help because they unanimously advise us that happiness is not to be found in (a) wealth, prosperity, affluence and opulence; nor in (b) fame, glory, renown, prestige, publicity, etc.; nor in (c) influence, power, authority, control, etc.; nor in (d) pleasure, sport, fun, entertainment, amusement—"liquor, ladies and lyrics", as a modern hedonist put it.

Such goals are fickle, capricious, unstable, transitory. Vanity of vanities, all is vanity. "Modern man seeks happiness", says one critic, "but only finds *success*." Those who try to find their felicity in that modern fetish "security" should be reminded that

the man in America with the most security is one with a life-sentence to Alcatraz. His host is the richest one on earth and the guest has guaranteed board, room and tuition in perpetuity. The insurance agent, of course, can offer you a life policy in case you die too soon or a pension-plan in case you live too long, thus getting you both ways with the tempting solace of security.

To get an estimate of our situation and to gain orientation and perspective, we must always remember the end; and by the end is meant not just the result or outcome of life, but its aim and purpose. Human acts are means and should be justified by being proportioned to human destiny. As St. Thomas says, the end is the first principle in the practical order. So let us put first things first. *Too many people worry about the wrong things. They fear the loss of comparative trivia and are relatively unconcerned about grave matters. Their theory of importance is fallacious and their scale of values needs revision. Let them turn to our fourth source of advice, to moral theology, to religion.*

Montaigne said that a liar was brave before God but a coward before men. Religion tells us that the fear of the Lord is one of the seven Gifts of the Holy Ghost and that the beginning of wisdom is the fear of the Lord. *If people want not just peace of mind, but what Sheen calls "peace of soul," let them find in religion the importance of HOPE, one of the three theological virtues supernaturally infused. Let them formulate some "articles of hope" on this basis and they will find a reliance, a trust and a confidence not elsewhere or otherwise obtainable.*

Indeed, our secular scientists in psychotherapy and mental hygiene *have not exploited the resources of the natural passion of hope (or its corresponding virtue of fortitude).*

This pursuit of good as future, difficult but possible (The Thomistic definition) is a constructive source of reassurance and reinforcement—and is a remedy or antidote for excessive worry.

NOTRE DAME RECEIVES BEQUEST FROM TRUSTEE

A total of \$40,000 has been left to the University of Notre Dame in the will of the late William J. Corbett, Sr., well-known Chicago shoe merchant, according to an announcement by the Rev. Robert H. Sweeney, C.S.C., Executive Assistant to the President at Notre Dame.

Mr. Corbett, pioneer shoe merchant and president of the C. W. Marks Shoe Company in Chicago, was a member of the Associate Board of Lay Trustees at Notre Dame from 1941 until his death in May, 1948. He was awarded posthumously an honorary doctorate degree by Notre Dame at the 1948 commencement last June.

The will specified that the \$40,000 will be added to an original fund of \$34,000, founded in 1934, the income of which will be used to increase the present Mediaeval Institute Library at Notre Dame.

N. D. CONCERT BAND PLAYS BENEFIT FOR POLIO PATIENTS

The University of Notre Dame concert band made a detour during its annual Spring trip to make a crippled youth and his buddies happy.

Members of the band voted unanimously to play a benefit performance before patients at the Infantile Paralysis Foundation in Warm Springs, Georgia. The performance at Warm Springs was in answer to a request from Mrs. J. Thomas Sexton, mother of a 20-year old paralytic from Toledo, Ohio, whom she terms "Notre Dame's Number One Fan", and from John Joyce, of Spartanburg, S. C., a graduate of Notre Dame in 1941 and Governor for the Notre Dame Foundation in South Carolina, who also is a patient at the Foundation.

The Indiana Motor Bus Company went along by contributing the mileage for the round trip from Atlanta to Warm Springs for the two chartered busses in which the band travels.

NROTC RIFLE TEAM TAKES NATIONAL TITLE

The Naval R.O.T.C. rifle team at Notre Dame has been named winner of the national marksmanship championship among naval units in the 1948-49 William Randolph Hearst R.O.T.C. rifle matches.

Donald J. Murphy, of New York City, a student in the College of Commerce, won the individual marksmanship championship. Murphy formerly was a member of the Xavier High School rifle team of New York City which won the National Junior Army Championship in the Hearst Matches of 1946.

Members of the championship Notre Dame team in addition to Murphy are: James W. Hartman, of Vanderlip, W. Va.; Oscar F. Beumel, of Evansville, Ind.; Francis G. Brickson, of San Antonio, Tex.; and Edward J. Walsh, of Newburgh, N. Y.

Notre Dame won by a comfortable 20-point margin over 52 other colleges and universities.

ATTORNEY GENERAL TOM CLARK SPEAKS AT LAW CLUB BANQUET

Tom C. Clark, Attorney General of the United States, was the principal speaker at the Hoynes Law Banquet held recently at the University of Notre Dame.

The banquet, named for the late Col. William Hoynes who was the first dean of the Notre Dame law school, is sponsored annually by the Notre Dame Law Club for graduating seniors in the College of Law. The Notre Dame Law Club is composed of students in the Notre Dame law school. President of the club is John Hyland, of Penn Yan, New York. James Cassidy, of Peoria, Illinois, was chairman of the banquet.

Notre Dame War on Cancer and Tuberculosis Follows Successes Against Malaria

By HENRY C. MAYER

The author, a sophomore in Notre Dame's Department of Arts and Letters, will major in Journalism. He is a native of Louisville, Ky., and attended St. Mary's College and Xavier University of Cincinnati before entering Notre Dame. He has written for the Xavier University News, The Record (Louisville Catholic weekly), the Xavier publicity department and the Notre Dame Scholastic, student weekly.

HAVING scored notable successes in the development of anti-malarial drugs after the sources of quinine were cut off during World War II, Dr. Kenneth N. Campbell, professor of Chemistry at Notre Dame, undertook new efforts several years ago in behalf of anti-cancer drugs—efforts which already have earned much interested consideration in many medical circles.

Compounds related to poisonous *colchicine* (obtained from the common meadow flower, saffron) have received Dr. Campbell's chief concentration in his search for a drug or drugs with which to combat cancer.

Briefly, he explains the principle of his research in this way:

"Colchicine can alter seed germination in such a manner that the new and very large flowers may be obtained in varieties like the phlox. It also cause changes in the cancer cells of animals. But, being highly poisonous, its use results in death. Therefore, with this alkaloid as a model, we are endeavoring to synthesize materials similar to it which would be less toxic to human beings."

There has been encouraging progress: some of the new compounds already have been shown, through experiments on animals, to be both active and less poisonous. These compounds are sent to the National Cancer Institute in Washington, D. C., and to the Sloan-Kettering Institute in New York City for testing. The Campbell anti-cancer research has been subsidized thus far by the U. S. Public Health Service.

It is interesting to note that Professor Campbell—one more in a long line of bril-

liant Notre Dame chemists who have succeeded the great Father Julius A. Nieuwland, C.S.C., discoverer of the components of neoprene synthetic rubber here on the campus in 1916—came to Notre Dame in September, 1936 just three months after Father Nieuwland's death. And he immediately established laboratories for work in medicinal and hydrocarbon (petroleum) chemistry.

Having battled the handicaps of old Chemistry Hall, as have all the rest of the almost-incredibly successful Nieuwland successors, Dr. Campbell is anxiously awaiting construction of the new Notre Dame Science Center (see page 27), scheduled to start when sufficient numbers of people have become sufficiently acquainted with the unprecedented value for all of mankind of the unique work being done in science at Notre Dame—sufficiently acquainted to wish to make possible the furtherance of such work by contributing to the Science Center fund.

It is one of Dr. Campbell's most cherished hopes to see, in the new Science Center, an endowed laboratory and money for assistants to help him toward successful completion

of his experiments. He also hopes to see Notre Dame become the first college or university to establish a Division of Research in Medicinal Chemistry.

The work of Dr. Campbell and 11 student assistants in the war-time development of anti-malarial drugs was a boon to some 300,000,000 persons afflicted by the disease every year.

When the supply of quinine was first curtailed early in the war, both manpower and supplies were at a premium. The search for substitutes remained for a time on a merely voluntary basis—by several universities. Later, the committee of medical research of the Office of Scientific Development drew up contracts with Notre Dame and other institutions, placing Dr. Campbell in charge at Notre Dame as responsible investigator. In three years, over 14,000 compounds were tested throughout the nation for anti-malarial activity.

The Notre Dame project was responsible for compounds related to the widely-publicized SN-7618, a chlorinated organic compound much superior to both quinine itself and to atabrine, the German-discovered synthetic first produced in this country in 1942, in relieving *symptoms*. It does not cure relapsing malaria; but it cures malignant tertiary malaria more quickly than does atabrine or quinine and is a better *treatment* than either for relapsing or vivax malaria. It causes neither the yellowness of skin nor stomach disturbances caused by atabrine.

In 1945, the last year of the contract, Notre Dame concentrated on anti-malarials of the *plasmochin* type. Another German-developed drug, plasmochin itself is effective in treating relapsing malaria but is too toxic to be used safely. Related compounds have great anti-malarial activity (some as many as 100 times as potent as quinine), and research workers hope to find one not too toxic for satisfactory use. Compounds of this kind offer a very real promise of an actual cure for relapsing malaria—the variety which is seldom fatal but most widespread and most difficult to terminate.

Dr. Campbell has received many letters of congratulation from officials of the Office



Dr. Campbell

(Continued on Page 26)

PARENTS WROTE PRESIDENT ABOUT COLD BATHS, TWO CIGARS A WEEK, "EAR TROUBLE" AND JULES VERNE

*Excerpts from letters to Father Morrissey
in his first years as eighth president of
Notre Dame*

"My son has never been a bad boy! His worst failing was he did not want to go to school regular. So, I thought I would put him in a school where he would have to go regular. When I left him, I little expected that he would stay, but I brought him there in good faith! . . . I was not trying to experiment with you, as you say, but with the boy."



"Allow George to smoke one cigar twice a week."



"Why do I have to pay for Edward now? You never explained to me that I should have to pay until Edward had finished! My son Edward did not come to Notre Dame to experiment. His intention before he left home was to stay until Christmas. I intended to pay after Christmas, when he was through."



"Will you please see that Harvey is not required to bathe in cold water, as the attack of congestion he had last spring was due to taking a cold bath!"



"Johnny wrote home that he had something on his ear. He says he cannot here (sic) well, but we thought it was because he wants to come home. Would you see his ear and tell us about it?"



"I am sorry to have to tell you something against my dear son Edouard, but I hope that this little hint will be for his best. He has an extraordinary love for reading interesting books, viz.: novels, and amongst them the relations of voyages of Julius (sic) Verne are of great attraction to him. . . . You will be able to help him, I am sure."

Fifth in a series of articles on the history of the University of Notre Dame (adapted from NOTRE DAME, ONE HUNDRED YEARS, by Arthur J. Hope, C.S.C.)

ONE suspects, at times, that both the writers and readers of history pile too much of the story of human change at the "locomotive end" or the "caboose end" of the 100-year trains which we call "centuries." Not every passing phase dies with the "last gasp" of a departing century, and not every major innovation sprouts just as the "dawn" of a new century breaks into its first full light.

And so it has been at Notre Dame, where the first 50 years (from November, 1842, to the 19th Century's last decade) were anything but a skin to be shed or a scaffolding to be razed. Those years poured into Notre Dame's lifestream the very *essences* of a university now much larger, to be sure—but still dedicated to the same devotion to God and country and to the training of young men in moral, responsible leadership which were the sole reasons for it having been founded.

And yet, in the case of Notre Dame, an unusually large number of old and new landmarks of time and change must, indeed, have been discernible at the turn of the century—as Notre Dame began its second *half-century*. *Almost* imperceptibly, at the time—but not quite:

They went right on distributing the mail on the lawn beneath the trees; the prefect of discipline went on intercepting letters bearing South Bend postmarks, to nip budding romances with the girls of St. Mary's, and the boys went right on after Sunday breakfast getting their Sunday papers from the fellow with the white horse and flat cart in front of Sorin.

But think of the latter months of 1893, which would have been observed as Notre Dame's Golden Jubilee had it not become, indeed, its "year of great sorrow." Father Walsh died at 40 on July 17, after 12 years as president. Nine days later, Father Alexis Granger died—the Notre Dame boys' beloved father confessor through the University's *first* 50 years, pastor of the church and largely instrumental in having the new (present) church erected. And then, on October 31, Father Sorin himself, Notre Dame's founder, passed on at nearly 80.

(Such sorrow always has marked Notre Dame's 25-year observances: the University postponed its Golden Jubilee until 1895; it had been founded at the time of the Mexi-

A New Century at Notre Dame

**AFTER 1893, ITS "YEAR OF GREAT SORROW,"
CAME NEW GREAT MEN • A FULLER CURRICULUM
• THE GROTTO • THE FIRST WIRELESS MESSAGE**

can War; its 25th anniversary had fallen at the close of the Civil War, its 50th in the years leading up to the Spanish-American War, its 75th in the course of World War I and its 100th during World War II).

Father Walsh had asked on his deathbed that he be succeeded as president by the Rev. Andrew Morrissey, an Irish native who came to the United States when 10, taught a college algebra class at 12, came to Notre Dame as director of studies when 25 and became vice-president at 32. In a sense, Father Morrissey was the first president in his own right after Father Sorin; for Notre Dame's founder, even after leaving the presidency to become provincial in 1865, had remained its *de facto* leader. On the other hand, Father Morrissey's "fear" of wealthier colleges and universities—a fear that Notre Dame could not expect to compete with those having so much greater endowments—might have tended to deter the University's growth and progress had it not been for the bold and enlightened spirit of some of his increasingly scholarly faculty.

There were the Zahms, for instance:

Father John A. Zahm, who recruited many top-notch students to the school (many from Latin America), and who was made a doctor of philosophy by the Vatican in 1894, did much to uphold the Church in the eyes of science—as so many of Notre Dame's scientists continued to do and are doing today. Father Zahm was provincial from 1898 to 1906—and there was a new, decided emphasis upon true scholarship.

Albert F. Zahm, a Notre Dame graduate in 1883 and member of its engineering faculty until 1893, was the virtual *founder* of aeronautical science. His thinking led to the world's first wind tunnel at Notre Dame and the world's first wind tube (built by Zahm in 1901), a man-carrying glider and a successful model helicopter. He organized America's first International Aeronautic

Congress at Chicago in 1893, where he was first to describe the modern method of launching a plane (10 years before the Wright Brothers' flight at Kitty Hawk).

And there was Dr. Jerome J. Green who, guided by the findings of Marconi and Dugre in Europe, became in 1899 the first American to send a wireless message—from the church tower to St. Mary's College. Dr. Green was the first in Notre Dame's part of the country to experiment with X-ray, and many doctors in the area brought patients to the campus for pictures of fractures and internal disorders.

Father Nicholas Stoffel organized a student production of *Oedipus Tyrannus* in the original Greek in the same year, with the Apostolic Delegate in the audience. Soon after, he edited an *Epitome of the New Testament* in the original Greek—even did the typesetting himself.

Economics and more history were added to an expanded curriculum at about that time, when Father Morrissey returned from a trip to Europe. In 1900, a five-year journalism course was set up—consisting of four years of English, politics, philosophy and religion, with a fifth year (under one of several skilled newspapermen) in reporting, news-gathering, editorial writing and proof-reading.

By now, there were 700 students at Notre Dame. Although relatively isolated, the University had become well known. The student body was being addressed not only by the traditional Class II Egyptologists with lantern slides, but by Professor VanDyke of Princeton (author of *The Other Wise Man*), William Howard Taft, William Jennings Bryan, William Butler Yeats, Henry James and many others.

Construction of Notre Dame's famous Grotto had begun in 1896, thanks to Father Thomas Carroll, who had graduated in 1855 and decided in later years to sponsor a rep-

lica of the grotto at Lourdes on the grounds of his alma mater. It was built of huge boulders under the trees near the lake, with the statue of Our Lady in a niche at the right, and of Ste. Bernadette facing the Blessed Virgin from below. The Grotto has remained one of Notre Dame's most cherished institutions.

The new gym, which had been dedicated in 1899 by a triple track meet (ND 36, Chicago 28, Illinois 25) burned the following year. A new fireproof replacement was built in 1901. Meanwhile, a "newfangled" system of central heating for all the buildings was developed—deemed "revolutionary" enough that a model was sent in 1900 to the Paris exposition.

Any history of the period would be incomplete without mention of the new bakery of 1902, for which the bakers were imported from Holland. The special "breakfast bun" for which it became famous prompted a poem from the pen of J. P. McAvoy—and at least one visitor used to take them back to New York by the bag.

A wedding in the campus church in 1901 was, according to the *Scholastic*, student weekly, "the social event of the month and second to none in grandeur. Costumes of the bride and groom were remarkably attractive, the pretty blushing face of the bride being set off by her *bright red dress*, while the stately form of the groom was all but majestic in his well-fitting *seersucker coat and checkered trousers*."

Class dances became a Notre Dame institution with the Senior Ball of 1905—and the University got together with eight other midwestern colleges at about that time to exclude professionalism from football. Col. John R. Fellows, New York District Attorney, a non-Catholic and non-alumnus, instituted a fellowship at Notre Dame in 1906

(Continued on Page 26)

Why Rent Control?

By **TIGHE E. WOODS**

A Statement of One Point of View by the Federal Housing Expediter—a 1933 Notre Dame Graduate

The author, now 38, has been Federal Housing Expediter since 1947. He was active in Chicago property management for nine years before becoming OPA examiner in the Chicago Rent Control Office in 1942. Mr. Woods was graduated from Notre Dame in 1933. He was a Navy radar officer on an attack transport from 1944 until the end of World War II. He has three children.

TENANTS and landlords are not the only groups which should be concerned with rent control.

We have rent controls for only one reason: because there is a shortage of houses which people of average income can afford to buy or rent. We make no claim, of course, that rent control helps bridge this gap between demand and supply. I make that rather obvious statement only because we frequently hear certain people say that we still have a housing shortage despite all these years of rent control, the plain inference being that, somehow, rent control has prolonged the housing shortage. The fact that new housing construction has not been under rent control for about two years seems to be the best answer to that.

How, you may wonder, does this housing shortage affect those who are neither landlords nor tenants? In the first place, down through the ages, food and shelter have been the two prime material necessities of man. Rent control means making one of those necessities available to people at prices they can afford. In rent control your Government steps in and in a sense becomes its brother's keeper. And, since you are the Government, you, consciously or not, are a party to it. That of itself is why you, as neither landlord nor tenant, should know about and be interested in rent control.

But there is more to it than that. As so often happens, what is good from a moral or spiritual standpoint is also good from a practical, business standpoint. That is true with rent control. For some months now, we have been making surveys in all cities and areas under rent control to find out what the housing situation is in those localities. As a part of those surveys, we ask local citizens how they feel about removing rent controls. It may surprise you, as it did me at first, that most business people want us to continue controls. That is true of manufacturers, bankers, merchants—even some real estate men.



That appears to run counter to the philosophy that people act in the interest of their class or group, the logic running something like this: real estate men want rent controls abolished; real estate men are business men; therefore, all business men want rent controls abolished.

But your manufacturer, your banker, your merchant know what would happen if a third of this country's population suddenly had to pay a lot more for rent than it does now. The merchant knows what that would do to the sale of food, clothing and durable goods; the producer knows what such a slump in sales would do to his mill or factory, and the banker realizes what such a drop in business would do to our whole economy.

Oh yes, I am familiar with the cry of the real estate industry that landlords should not be made to carry the burden of keeping our economy on an even keel. As an ex-landlord, I would be the first to agree were that the case. But it isn't, and I think I can show you why it isn't.

It may come as a surprise to many of you that, despite all you've heard and read about landlords going broke under rent control, landlords generally are at least as well off under rent control as they were before and certainly a large percentage are better off. As Al Smith used to say, let's look at the facts:

Before the acute housing shortage, landlords ordinarily counted on a substantial loss in scheduled rents from vacancies and non-

payment of rents. At the same time, they were forced to spend considerable sums for competitive items, such as decorating, in order to retain old tenants and to attract new ones. They were also obliged to make minor repairs.

However, since the housing shortage became critical, losses from vacancies and non-payments have almost disappeared. At the same time, the need for competitive expenditures vanished and most tenants have been forced to assume the cost of minor repairs. Landlords' incomes have also been greatly increased by 1,746,000 individual adjustments we have granted, by general area rent increases affecting approximately 430,000 housing units made effective on the recommendations of local rent advisory boards, and by the 15 per cent leases signed for 2,265,000 units under the 1947 and 1948 Acts. These factors more than offset expenditures actually incurred by landlords for essential items.

As a result, the net operating income of landlords has increased substantially above the pre-war level and foreclosures have declined even below the low levels of the prosperous war years.

Do I have any figures to back up that statement? I have. A survey of 95 cities by the accounting division of OPA found that the net operating income for both large and small rental units in 1946 was 24 to 31 per cent higher than the average for 1939-40. In 1946, the net operating income had declined slightly from the war-time peaks but was approximately the same as the level in 1942 when most rent controls were established. Although operating costs have risen since 1946, there is every reason to believe that they have been offset by rent increases from individual and area-wide adjustments and from 15 per cent leases.

No comprehensive studies of landlords' operating position generally are available for the years after 1946. However, in 1948 a thorough survey was made in New York City at the request of the local Rent Advisory Board. This survey found that the net operating income in 1947 was 9.7 per cent higher than in 1943, the year in which rent controls went into effect in that city.

In addition to these figures, I should like to point out that for a long time now—since 1944 in fact—we have had what we inaccurately termed a "hardship" adjustment. I say "inaccurately" because we found that many people thought a landlord had to be on the verge of bankruptcy before being able to qualify for an adjustment under that provision. Actually, it provides that a landlord can qualify for a rent increase if he can show that he is making less money now on his rental properties than he made on them during his two best years since 1939.

That is why I said a while ago that landlords generally are at least as well off now as they were before rent control and many of them are better off. The ones who came into our area offices and showed that they weren't as well off were given increases that made them so. And the figures I have cited in general back me up in my statement.

Why then, you may ask, has there been all this talk about rent control putting landlords out of business when actually foreclosures are at an all-time low? And why this fight against rent control when landlords are doing as well under rent control as they did before? I'll tell you why, and the answer is just as human as it is simple. No one who has a business likes to be told what he can charge for the things he sells — especially when what he has to sell is in short supply and the merchant knows his customers have to buy it or else. It annoys — to put it lightly — the owner of rental housing property to see his neighbor charge what the market (and future good will) will bear for the articles this neighbor is selling, while the Government prohibits him from accepting a prospective tenant's offer of \$100 for an apartment or house on which the Government has fixed a legal maximum rent of \$60.

And so the owner of rental property complains that he is being discriminated against; that price controls have been lifted from every other line of business but his own. But he overlooks one important difference between what he has to sell and what his neighbor has to sell. With few exceptions, what his neighbor sells the customer can do without or find somewhere else; what the owner of rental housing property has to sell — shelter — the homeless family must have.

I realize, of course, that the real estate industry resents the charge or even the implication that, in times like these, it would make a killing if given the chance. However, I would like also to point out that none of the national or local organizations representing segments of the industry can police its own members. As in every industry, there are some — a majority — who want to do the decent thing, and there are others who are not bothered by such scruples. Rent control protects the industry against those who would give it a black eye.

I am sure that those of you who are neither landlord nor tenant don't want to see either of the other two groups taken advantage of under rent control. Neither do I, and that is why I have been steering a middle course; and that explains why, as usually happens in such cases, I have been catching it from both sides.

Landlords

Now I want to turn to landlords and tell them in general what they can look for under the present Act. Under the new Act, it is not enough to stop at the break-even point. We must make it possible for a landlord to get a fair return above that.

Let me give you an example. Suppose a landlord comes into an area rent office and shows that his expenses amount to \$300 but his income from the property only amounts to \$275. Under the previous Act, he qualified for an adjustment under our adjustment provision. Under that provision he was granted an increase to bring his rental income up to \$300 — that is, to wipe out his deficit. (That of course, did not preclude him from seeking an additional increase under another of our adjustment provisions.) Now, under the new Act, we

are not to stop at a rent increase that will merely enable the landlord to break even, but we are to increase his rent to a fair figure above that.

Another section in the new Act which apparently appeals to the real estate industry is so-called home rule or local option on decontrol. Under it, a state or municipality can decide for itself whether rent controls should continue in the areas over which they have jurisdiction. My statement that this section apparently appeals to the real estate industry is based on newspaper clippings I have seen indicating considerable activity, especially on the part of local landlord groups, in behalf of decontrol of cities and towns. Under the Act, the governing body of a city, town or village is required to hold a public hearing after 10 days notice before it can vote to remove controls. Approval of the Governor is also required. In a number of cities and towns local landlord groups have requested local governing bodies to hold such hearings. It is our policy in making decontrol surveys to get the opinions of city officials, business men, veterans, real estate dealers and other civic leaders on the need for continued rent control. As a rule, when such a representative group of local citizens agrees that rent controls are no longer needed in a city, I am sure the time has come to remove controls — whether by my action or by action of a city governing body.

The "local option" decontrol provisions in the Act are in addition to the right of local advisory boards to recommend decontrol and my right, as Housing Expediter, to end controls on my own initiative — as I did in more than a hundred counties or parts of counties shortly after the new Act was passed. There is this important difference between decontrol actions taken by states or municipalities and those taken on recommendation of local advisory boards or on my own initiative: when a state or municipality decontrols, it is permanent and there is no provision in the Act by which controls could be brought back even if conditions arose making it desirable; when I decontrol, either on recommendation of a local board or on my own initiative, I can restore controls if conditions warrant it. It is because of the authority given me under the new Act to recontrol that I took a chance on removing controls in more than a hundred counties. States and cities are in the same situation under the present Act as I was in under the previous Act; they have to make certain they are right before they act, because if they make a mistake there's no way they can correct it.

If a tenant were to ask me which of the strengthening provisions of the Act I regarded as most important, I would reply that it is the provision which gives the Housing Expediter control over evictions. The Expediter has not had that authority since June 30, 1947. Lack of it made all the difference in the world in an effective compliance program. This is why:

Under the old Act, when a landlord wanted to evict a tenant he merely had to notify the tenant, citing as his reason one of the grounds listed in the Act. It was a

matter between the landlord and the tenant, plus the local court if necessary. We who were charged with responsibility for administering federal rent control were not in on this vital phase of the program.

A tenant, under the old Act, had the right to sue a landlord for a rent overcharge or to complain to his area rent office that he was being overcharged. We know that few of the tenants took action against overcharges or reported such violations to our area offices. The average tenant who was being overcharged was not reporting it because he was afraid of receiving an eviction notice, possibly on a trumped-up charge, if he did. He knew, if he received an eviction notice, he had his choice of two actions, neither of which he relished: he could meekly submit and move out, or he could go into court — and you know how the average layman wants to keep out of court.

The new Act has remedied that situation. Few if any landlords are going to take a chance on coming into an area rent office to seek permission to evict a tenant merely to intimidate a tenant who reported a rent overcharge. On legitimate eviction cases, of course, the landlord can pursue his legal recourses in an orderly manner.

Because this matter of evictions is so important in an effective rent control program, I should like to tell you something about the regulations we issued recently — exercising power given us by Congress to control evictions in a manner that will not, as has been charged, deprive a property owner of the use of his property but at the same time will protect a tenant against being evicted as a reprisal for incurring his landlord's displeasure.

Grounds for Eviction

We have set up 12 separate and distinct grounds for eviction. We divided them into two groups. One group consists of seven grounds on which a landlord may evict by merely giving written notice to the tenant and the area rent office and allowing the time specified in the regulation for the tenant to move out. Such notice must state ground for eviction, facts supporting such ground, and date tenant is required to vacate. If the ground is non-payment of rent, the notice must also include a statement of the amount of rent due and the period or periods for which it is due.

We call this the non-certificate group. I have already mentioned non-payment of rent, which falls into this group. Not less than three days notice is required under our regulation. If local or state law permits a longer period of notification to the tenant, local law applies. Committing a nuisance or using the premises for illegal or immoral purposes is another eviction ground in the non-certificate group. Ten days' notice is required. If a tenant violates a substantial obligation of tenancy — as, for example, conducting a business in part of the premises contrary to the terms of the agreement the tenant has with the landlord — he can be evicted on 10 days' notice. If

(Continued on Page 26)

Vaccination Against Syphilis, Better Diagnosis, May Stem from Young ND Man's Work



Dr. Nelson

DISCOVERY of (1) apparent natural antibodies against syphilis in human blood, (2) the possible means of vaccination against syphilis and (3) a new test for syphilis has been announced by Dr. Robert A. Nelson, Jr., 26-year old Johns Hopkins University instructor who switched to "pre-med" in his senior year at Notre Dame after completing three-fourths of Notre Dame's four-year engineering course.

The discovery "caused a stir," as *Time Magazine* phrases it, "at a symposium held in Washington (April, 1949) by the American Venereal Disease Association and the U. S. Public Health Service." In the words of the *Washington (D. C.) Evening Star*, it is "a medical discovery regarded by specialists as highly significant."

If remaining obstacles are overcome, the way is open to the world's first anti-syphilis vaccine—and the conquering of this venereal disease in a manner similar to that in which the ravages of smallpox and diphtheria have been reduced.

The first "break" in Dr. Nelson's long hours of research came just a year ago this month—at 3 o'clock on a hot July morning.

"Late sessions like that frequently happen with us," he reports. (With several colleagues, Dr. Nelson had been working six days and nights a week). "We had been studying the survival of syphi-

lis spirochetes—attempting to learn their effect upon living organisms. Doctors had suspected that there was some type of antibody present in syphilis victims, but nobody had been able to demonstrate it."

And then, early in that July morning—"it just happened; our experiment paid off. Set up the day before, it was due to be checked at 3 a. m. I was there alone. When I saw what had happened, I waited 'til the others showed up at 9 to tell them about it."

This is what had happened, beyond any doubt—for the first time:

Syphilis spirochetes (*Treponema pallidum*) had been "immobilized"—apparently killed—by specific antibodies (countersubstances) existing in blood serum taken from a human syphilis victim. Such antibodies were theretofore unknown.

Significantly, it was Dr. Nelson himself who made that very experiment possible. For his earlier research had enabled living spirochetes to be taken from laboratory rabbits. Until then, all efforts to keep syphilis spirochetes alive outside the blood stream had failed.

Dr. Nelson is quick to acknowledge that he doesn't know just what the newly-discovered antibodies actually are. They can't be

seen through a microscope. But he does know that syphilis spirochetes are completely "immobilized"—rendered completely non-infectious—when exposed to syphilitic blood serum for even a few hours.

The new "immobilization test" thus made possible *seems* to be foolproof—which is more than can be said for the traditional Wassermann test, only relatively reliable alternative. The Wassermann, which has been used since 1906, frequently yields "false positives"—indicating that patients have syphilis when, in reality, they may have malaria, leprosy, pneumonia, meningitis, chickenpox, measles or no disease at all. Under Dr. Nelson's "immobilization test," however, no syphilis antibodies have been found in blood serum taken from 50 patients suffering *other* diseases, or from 19 persons with presumed "false positive" Wassermans.

And every one of 60 known syphilis victims was revealed by the "immobilization test" to have the antibodies in his blood.

Chief remaining obstacle to broad, general use of the "immobilization test"—and, perhaps, vaccination itself—is the difficulty in obtaining enough virulent spirochetes from rabbits. One rabbit can supply only enough for 15 or 20 "immobilization tests." And "the germs used in each experiment number in the millions," reports the Washington Star, "and methods have yet to be found to make the germs multiply outside the blood stream."

Dr. A. S. Kahn, at Johns Hopkins from India on a fellowship from his government, has been working with young Dr. Nelson on the research—as have Drs. Judith A. Diesendruck and H. E. C. Zheutlin—all under the supervision of Dr. Thomas B. Turner, a pioneer in venereal disease research and a professor of bacteriology.

Science Holds No Vaccine Against the Moral Diseases

THERE can be no more striking instance of the fact that,^o while scientific advance can be a blessing for a world of moral and spiritual men, it can be a frightening thing in a world of immoral or amoral men, than this arresting report on the research of Notre Dame's young Dr. Nelson.

Just as atomic energy may be used for good purposes or evil, so vaccination against syphilis might bless mankind with sounder health or curse it with an even greater sexual promiscuity than that which prevails today.

It is an established fact that 3,200,000 Americans now have syphilis—and a well-grounded suspicion that many more thousands, who have not reported it, also suffer from that dreaded venereal disease. And it is estimated that nearly 30,000 American deaths were caused by syphilis alone in 1948. It is profoundly to be hoped that any techniques which stem from Dr. Nelson's work may vastly reduce the blindness, the crippling, the insanity, the other suffering and the deaths directly attributable to syphilis.

At the same time, this new hope for a weapon against *one* scourge should serve to strengthen us in our determination to prevent *another*.

It has been a year of unusual evaluation of the extent to which man's religious, spiritual and social standards have lagged behind his scientific progress.

It was Jacques Maritain, for example, who stated at

the M. I. T. Mid-Century Appraisal of the Social Implications of Scientific Progress: "The question faced by the world is quite simple: Will men be able to submit the use of science and the power of technique to wisdom?"

It was Winston Churchill who, on the same occasion, insisted that "to guard and cherish" the flame of Christian ethics "is still our highest guide . . . our first interest, both spiritually and materially. The fulfillment of spiritual duty in our daily life is vital to our survival. Only by bringing it into perfect application can we hope to solve for ourselves the problems of this world, and not of this world alone."

As expressed in Notre Dame's Guide for Benefactors, *The Substance of Things Hoped For*, "Notre Dame is one of relatively few universities still insisting upon the *indissoluble* nature of leadership, responsibility and moral principles—still training men not only *for* standards of *living*, but *in* standards of *life*—still concerned not only with the training of good doctors, lawyers, architects and chemists, but even more with the training of good *men* who are *also* good doctors, lawyers, architects and chemists."

In the midst of such developments as Dr. Nelson's and the capture of atomic energy, it becomes all the more imperative that the world redouble its efforts to keep moral and spiritual values apace of scientific advances.

Experiment in Altruism

A Typical Instance of Notre Dame's Commerce Council Accomplishing Its Purpose: "To Bring Men of Achievement into Closer Association with the Work of the College of Commerce and to Enable Them to Share the Responsibility of Training Tomorrow's Leaders."

By **JOHN P. WALKER**

The author, graduated from Notre Dame in June, was editor and managing editor of the Dome, student annual, in 1947 and '48, respectively. He was feature and photographic editor of the Scholastic, student weekly; Student Council secretary; Commerce Forum president, and listed in Who's Who Among Colleges and Universities. He plans to enter the publishing or advertising field.

THE high chime of Sacred Heart Church rang through the rainy darkness. It was 4:15 a.m. Corridor lights shone dimly from the residence halls. Nothing stirred.

Nothing except 30 undergraduates — trying to be on time to meet their bus as it splashed around the circle at the campus entrance at 4:30.

These were the members of Notre Dame's Commerce Forum (a group which meets every two weeks to hear and discuss a paper prepared by one of its members on subjects ranging from the tariff to moral implications of federal aid to education). On this occasion, the Forum was setting out on its second annual industrial tour under the gracious sponsorship of James Gerity, Jr., President of the Gerity-Michigan Corporation, Adrian, Mich., a member of the Advisory Council for the Notre Dame College of Commerce.

The Council, consisting of 28 prominent American business and industrial leaders, was organized a little more than a year ago "to bring men of achievement into closer association with the work of the College of



Mr. Gerity

Commerce and to enable these men to share the responsibility of training tomorrow's leaders."

The Commerce Forum was met at his sleek Adrian plant by Gerity himself and Scott Hager, his Director of Industrial Relations. The company's top officials attended a lunch for the Notre Dame boys, and explained their tasks and some of the problems which faced industry in a growing buyers' market.

Following a tour of the Gerity plant, in groups of four and five and an hour or so of relaxation and refreshment at the Gerity home, the Forum was taken to Detroit's Dearborn Inn for dinner and several hours' practical, informal instruction by Harley Earl, General Motors Vice-President in charge of design, and other automotive officials.

Early the next morning, the boys attended

the Ford Motor Company's merchandising school, under the direction of Vice-President McGinnis, a Notre Dame alumnus. Here they studied an instructional motion picture on proper and improper methods of conducting an automobile dealership.

After lunch, in Flint, Assistant Chief Engineer Ragsdale of the Buick Division of General Motors explained the operation of Buick's torque converter (or "Dynaflow Drive," as the advertising and promotional material calls it)—then, with other engineers, led a tour of Buick's motor assembly, testing, Dynaflow, final assembly and engineering departments.

The boys had walked 12 miles getting invaluable close-ups of modern industry.

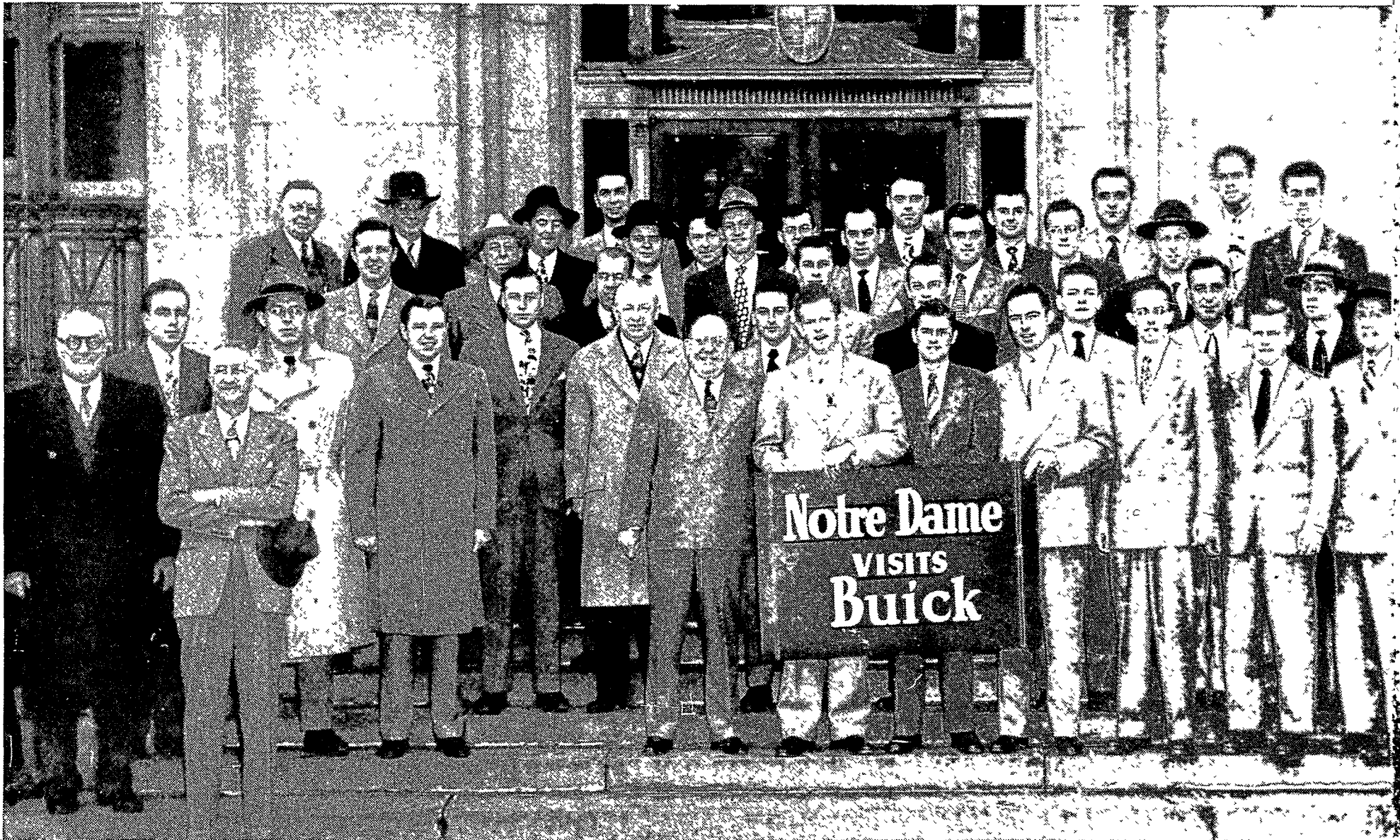
In saying goodbye to them, Gerity generously added:

"I get a lot from my exposure to such top-notch young college men as you members of the Commerce Forum. I've learned a lot from you in these two days."

But Jim Gerity wasn't trying to *get* anything. He was *giving* something: "a chance," as one of the members put it, "to see modern industrial units and their methods of operation; a chance to talk with department heads and workmen; a chance to learn a little more about where and how and why we might fit in after graduation; a chance to get that 'extra something' which it takes more than a classroom to provide."

On the trip back, the tired Forum members made it pretty clear to each other that they all regarded the two-day opportunity as one made possible by Gerity's "experiment in altruism"—and that they were all deeply appreciative of his generosity and of the great deal it had enabled them to learn.

GERITY - MICHIGAN COMMUNICATION



Spring Sports

By JAMES BUTZ

The author, graduated from Notre Dame in June, now is in the publicity and public relations department of the Wilson Sporting Goods Company, Chicago. A Journalism major and a native of Akron, O., he had assisted Sports Information Director Charles Callahan in Notre Dame's Department of Public Information, and was active on the Scholastic and Dome, student weekly and annual.

BASEBALL

Riding high on the crest of a victorious season, Notre Dame's baseball team has annexed 18 wins against 6 defeats with play-offs set for NCAA post-season contests. Coach Jake Kline's batmen have undertaken one of the most difficult schedules ever attempted by a Gold and Blue nine. Eighteen games were played with Big Ten teams, with Notre Dame winning 12 of the contests. In the next to final scheduled game, Purdue, Big Ten baseball leader, bowed to the Irish in a 5-4 setback.

Outstanding pitchers for Notre Dame included Walt Mahannah, right-hander from Memphis, Tenn., John (Lefty) Campbell, Lowell, Mass., junior, and Dick Smullen, a senior. Dick Maher, catcher, and son of the Western Michigan College baseball coach, has been pacing the hitters. Dick Giedlin, soph first baseman, was the main-spring in Kline's attack throughout the season. In connection with a remarkable record, Notre Dame has been selected to participate in the NCAA playoffs during

June. They will compete against Purdue in District 4 drawings.

Among the teams met by Notre Dame there were the following diamond standouts: Indiana, Iowa, Minnesota, Cincinnati, Terre Haute Phillies (professional), Wisconsin, Michigan, Illinois, Chicago, Ohio State, Western Michigan, Northwestern, Pensacola Naval, and Purdue.

OUTDOOR TRACK

John Helwig, shotputter, Bill Fleming, hurdler, Jack Murphy, javelin and Captain Bill Leonard, relays, paced the Notre Dame track team through a stiff outdoor schedule. The Irish took the Southern Relays, at Birmingham, Ala., on April 9, and two weeks later dropped a meet to Michigan State. The thinclads participated in the Drake Relays, won over Pittsburgh on Cartier Field and nosed out Missouri on the latter's home ground. Penn State defeated the Irish in a close meet, but Notre Dame came back

strong the following week to cop the Indiana State Meet against rugged competition.

Other appearances will find the Irish at Milwaukee in the Central Collegiate Conference meet and the NCAA in late June. Coach Elvin (Doc) Handy has just completed his seventh year of coaching the tracksters.

TENNIS

The loss of last year's star performers, the Evert brothers, didn't prevent Notre Dame's present tennis team from compiling an enviable record of six wins and three defeats in regular season competition. The 1949 aggregation was led by Co-Captains Bob David and Jim Rodgers. Gene Bittner, junior, and veteran monogram winner, was an outstanding point-getter in singles. The Irish won over Purdue, Western Michigan, Detroit, Western Reserve, Wisconsin and Marquette. Northwestern, Michigan and Michigan State handed defeats to the ND netters. It marked the tenth year that Walter Langford has coached the tennis squad and his teams have won 74 matches while losing only 14 in that period.

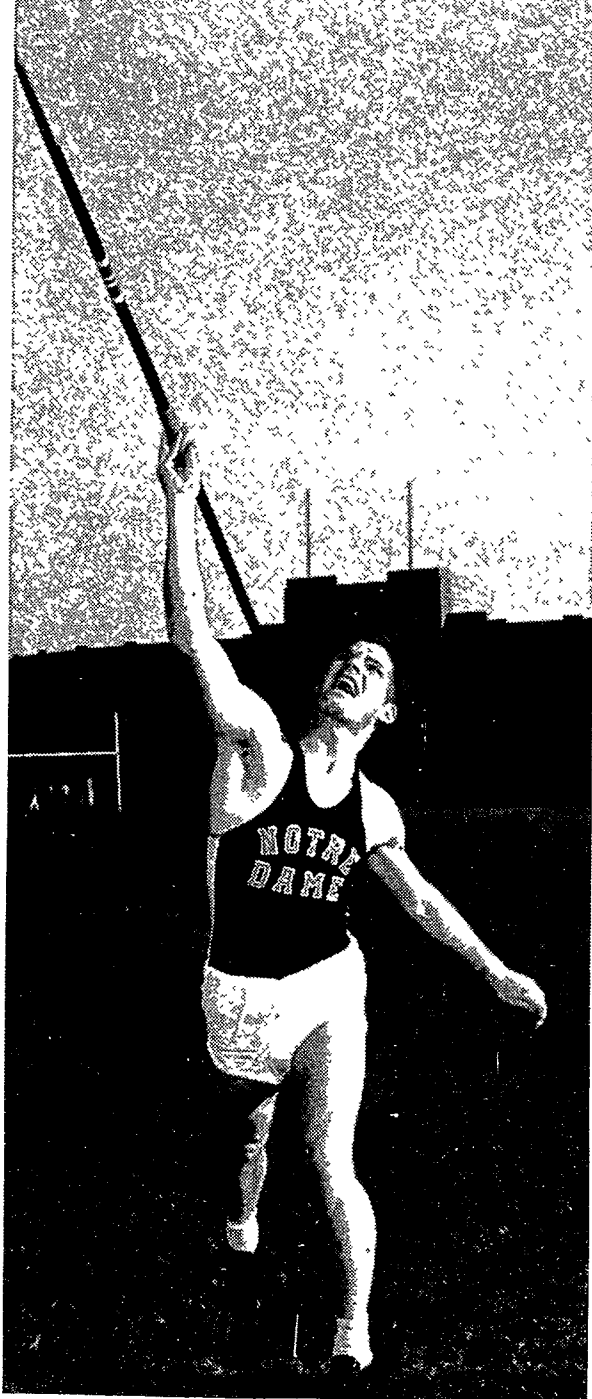
GOLF

Father George Holderith's golf squad achieved 6 wins against three losses during regular season play. They were runners-up in the Indiana Collegiate tournament at Lafayette. Captain George Stuhr and his mates won over Washington U. (St. Louis), Wisconsin, Purdue, St. Ambrose, Michigan State and Detroit. Minnesota, Northwestern and Indiana defeated the Irish. Father Holderith has been coaching golf at Notre since 1933, having had unbeaten seasons in 1933, '34 and '42.

Gene Bittner

Coach Kline under a belfry of bats.





Jack Murphy

George Stuhr



JESSAMYN WEST HERE FOR WRITERS' CONFERENCE

Miss Jessamyn West, one of the nation's best known short story writers and novelists, was a member of the staff at the Writers' Conference which was held recently at the University of Notre Dame.

Her short stories have seven times been chosen in the year's best short story collections.

Other staff members included: Henry T. Volkening, New York literary agent and critic; Richard Sullivan, Professor of English at Notre Dame, whose latest novel, "First Citizen" recently was published; John T. Frederick, Professor of English at Notre Dame, conductor for seven years of the program "Of Men and Books" over the Columbia Broadcasting System and editor of "The Midland" for twenty years; Rev. Leo L. Ward, C.S.C., Head of the Department of English at Notre Dame, who is a short story writer, critic and anthologist; and John Frederick Nims, Professor of English at Notre Dame, one-time editor of "Poetry" and author of poems that have appeared in national magazines.

Sessions at the Writers' Conference included workshops in poetry, short story and novel.

THEN, AS NOW

"Notre Dame had but one plea to make, and the plea was successful, 'Will those who love the young, and who desire to see them brought up in the fear and love of God, help us in the good work we have to do.'"—*Story of the disastrous fire of April 23, 1879, from NOTRE DAME, ONE HUNDRED YEARS.*

IT'S ALL IN THE FAMILY

The University of Notre Dame is one of the few major universities in the United States with no fraternities. It is the feeling of University officials that division of the student body into fraternity groups would tend to break down the unique family spirit which exists at Notre Dame.

RARE BOOKS DONATED AT REQUEST OF MINDSZENTY

Twenty-two large volumes of rare Latin texts have been presented to the Mediaeval Institute at the University of Notre Dame by the St. Stephen Academy of Budapest, Hungary.

The gift was made as a gesture of respect and admiration for the work of the Mediaeval Institute and at the request of Joseph Cardinal Mindszenty, subject of world-wide controversy in a recent Communist purge trial in Hungary.

The books, of various descriptions, deal chiefly with the relation of Hungarian history to the civilization of the mediaeval West.

"SOVIET SATELLITES"

"Soviet Satellites," a study of politics in Eastern Europe, has been published by the "Review of Politics," political science quarterly at the University of Notre Dame.

The book is edited by Dr. Waldemar Gurian, Professor of Political Science at Notre Dame and Editor of the "Review of Politics." With an introduction written by Dr. Andrew Gyorgy, of Yale University, the book features articles by experts on world affairs.

Among articles appearing in "Soviet Satellites," parts of which are published in the April issue of the "Review of Politics," are: "Church and State in Hungary: Background of the Cardinal Mindszenty Trial," by Stephen Kertesz of the Yale University Law School; "U. S. Foreign Policy and the Satellites of USSR," by Robert G. Neumann, of the University of California at Los Angeles; "Constitutional Trends in Eastern Europe, 1945-48," by Cyril E. Black, of Princeton University; and "Soviet Concept of Satellite States," by Sergius Yakobson, of the Library of Congress.

The new book is priced at one dollar, with a special discount for quantity orders.

"SOUTH BEND TRIBUNE" AWARDS ANNUAL JOURNALISM PRIZES

F. A. Miller, President and Editor of the "South Bend Tribune", has established an annual award in the Department of Journalism at the University of Notre Dame, it was announced recently by the Rev. John J. Cavanaugh, C.S.C., President of Notre Dame.

The \$100 award, to be known as the "F. A. Miller Prizes for Excellence in Practical Journalism", will be given for outstanding work done on "The Journalist", weekly experimental newspaper published by students in the Department of Journalism at Notre Dame.

The award will be divided into five \$20 prizes to be presented for excellence in makeup, news writing, feature writing, editing and photography among Notre Dame journalism students who publish "The Journalist." Members of the "South Bend Tribune" will judge the students' work and determine recipients of the prizes.

ND PRAISED BY LOUISVILLE U.

Dr. John W. Taylor, President of the University of Louisville:

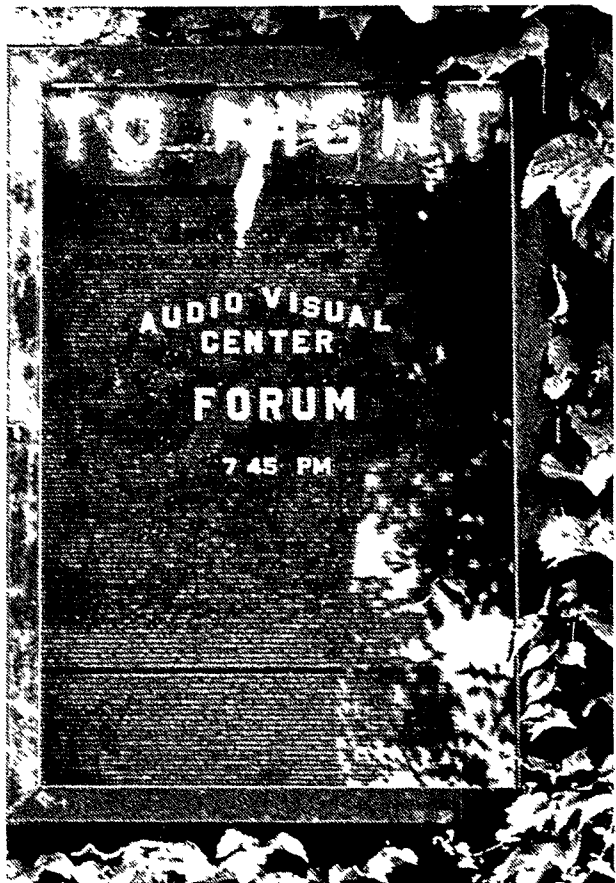
"I am sold on the value of intercollegiate athletics. Teamwork won us the last war and teamwork will make Louisville a great university like Notre Dame. That's just what I want."—*Chicago Tribune.*

COHENS AND KELLEYS

Although the University of Notre Dame is a Catholic school, approximately eight per cent of the student body is non-Catholic. In fact, among its graduates are Protestant ministers and a Jewish rabbi.

doctors of learning turn to eye, ear and throat . . .

A Look at
Audio-Visual
Teaching Aids at Notre Dame



NOT only to enhance the effectiveness of University instruction generally, but also to train undergraduates how to *teach* with the assistance of radio, recordings, slides and movies, Notre Dame's Audio-Visual Center was inaugurated only as a "special project" in early 1948 by the Rev. Howard Kenna, C.S.C., Director of Studies at Notre Dame.

Within four months, however, it had attained official status as an integral part of many aspects of the whole University program. It is supervised by Orville R. Foster, M.A., '44, who, after 22 years in radio work, came to Notre Dame as a part-time instructor in 1939.

The Audio-Visual Department hopes in time to supply films and recordings with which to supplement the teaching of every course in the University's curriculum, and eventually to develop a film and record library capable of supplying Catholic universities, colleges, high schools and elementary schools throughout the Midwest.

Films closely correlated with most subjects in the present curriculum, designed to add still greater breadth to the educational backgrounds of Notre Dame undergraduates, now are shown daily to faculty and student body alike.

Language class studies script in French at Audio-Visual Center.



A student portrays St. Thomas Aquinas in new Department of Philosophy movie.





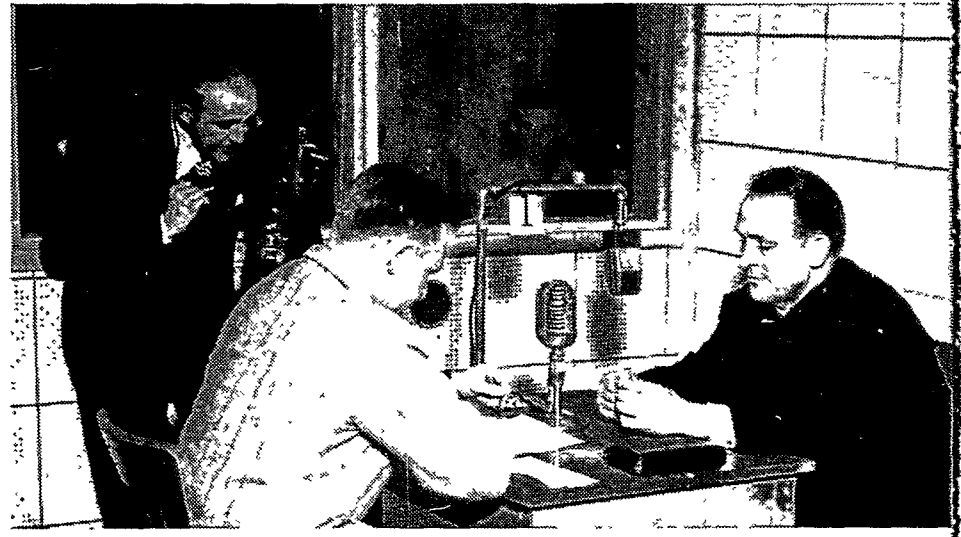
Two students and freshman coach film 400-foot movie on baseball fundamentals.



Visual aids in study of Psychology and teacher training.



Nuns learn to operate projectors in Summer School session.



President Cavanaugh leads daily student-body recitation of Rosary on Campus Radio Station WND. Scene will be incorporated into new movie on student life. Mr. Foster photographs group.



Aeronautical engineers study a smoke tunnel with aid of Audio-Visual equipment.



Father Maurice Sullivan, Army chaplain, with on-the-air class in Education.

Architecture student is photographed at work.



Audio-Visual aids assist this Biology class in study of heart.



NOTRE DAME WAR ON CANCER

(Continued from Page 13)

of Scientific Research and Development. He was invited to present some of his findings to a Symposium of Anti-malarials, conducted by the division of medical chemistry, American Chemical Society, in April of 1946, in Atlantic City. Dr. Campbell is chairman of that division of the society. Results of the Notre Dame research are embodied in a number of published scientific papers.

Meanwhile, Dr. Campbell is directing other research into the possibility of anti-tubercular drugs.

The son of a pharmacist, a native of Michigan and a graduate of the University of Chicago (1928), where he met his wife, Barbara, Dr. Campbell, with his wife-assistant, is co-author of a forthcoming book, *The Chemistry of Quinoline*, and of more than 25 published papers on medicinals. He came to Notre Dame in 1936 from the University of Illinois, where he had done research on synthetic Vitamin D and the yellow pigment (gossypol) of cottonseed meal. Earlier, he conducted research on aliphatic hydrocarbons at Pennsylvania State College. He received his Ph.D., degree from the University of Chicago in 1932.

Dr. Campbell is listed in *American Men of Science* and is a member of the American Chemical Society, Indiana Chemical Society, Indiana Academy of Science, American Association for the Advancement of Science and Sigma Xi, honorary scientific society.

WHY RENT CONTROLS?

(Continued from Page 17)

a tenant won't let a landlord inspect the premises or show them to a prospective purchaser, he can be evicted on a month's notice - unless, of course, the landlord is unreasonable about it or unless the tenant has a rental agreement with the landlord not permitting inspection or showing. If a tenant's lease has expired and all occupants of a rental unit are subtenants, the landlord may repossess on two months' notice. Two months' notice is also required in the remaining two grounds in this non-certificate group: where the housing accommodations are part of a company housing development and the tenant no longer works for the company, and where a state or city acquires housing accommodations for the purpose of making a public improvement.

The certificate group consists of five grounds under which evictions may be obtained only after the landlord has petitioned his area rent office and that office finds that the proposed eviction is proper. Under this group an owner may seek repossession of his property for one of the following reasons: he wants it for his personal use or for the use of a member of his family; he has contracted to buy the property and wants it for his own use or the use of a member of his family; he wants to remodel for continued use as housing accommodations or he wants to demolish it; he wants to withdraw it from the rental market, or it is owned by a religious, charitable or educational institution which wishes to use the premises to

house its staff. In all but one of the certificate grounds the waiting period allowed the tenant is three months. The exception is withdrawal from the rental market, in which the tenant is allowed six months.

Another strengthening provision of the new Act which I will mention only briefly gives the Expediter the right to sue for three times the amount of an overcharge. He had not had that authority since June 30, 1947. As a result of this restored compliance authority coupled with our control over evictions, I confidently expect to see the number of rent violations drop sharply.

In short, this new rent Act goes right down the middle, protecting landlords against rents that would deny them a fair profit, and protecting tenants against being charged a higher rent than the fair net operating income adjustment allows. And the Act at the same time gives both tenants and landlords an equal right to appeal from decisions by the Housing Expediter. All in all, it is a good law and I believe that both landlords and tenants will be happier under it than they were under the previous Act.

SCHOLARSHIP AID GIVEN TO NEEDY STUDENTS

Notre Dame offers 86 scholarships and scholarship grants, through the generosity of alumni, non-alumni friends and the University, to deserving students. However, it was only a half-century ago that the first scholarship was awarded, when Dr. Edward Johnson, of Watertown, Wisconsin, donated a fund of \$4,000, the income of which was to aid in the support of one student annually. In that same year, 1899, the Rev. Thomas Carroll, of Oil City, Pennsylvania, bequeathed \$5,000 to be used for "educating a needy student." Father Carroll also provided financial aid for the erection of the campus Grotto—a replica of the world-famed shrine in Lourdes, France. The University is anxious to increase scholarship awards through the assistance of interested benefactors.

A NEW CENTURY AT NOTRE DAME

(Continued from Page 15)

—one of the first of many such instances of those outside the Church and the University choosing Notre Dame to receive funds with which to supplement its contribution to the training of many young Americans in moral, responsible leadership.

Father Morrissev resigned as president in 1905, and was succeeded by the Rev. John W. Cavanaugh, who, in 1906, dedicated a statue of Father Sorin . . .

"in the name of those Christian educators who believe, as he believed, that the heart of culture is culture of the heart and that the soul of improvement is improvement of the soul."

PHYSICS PROF DEVELOPS ELECTRONIC POWER DEVICE

A new type of cathode (source of electrons), which for a fraction of a second will generate nearly six times as much power in a vacuum tube as the largest power station in the United States, has been developed by Dr. Edward A. Coomes, Professor of Physics at the University of Notre Dame.

The cathode, which is the most powerful low-temperature source of electrons ever developed, is used particularly in radar tubes and in all places where microwave power is used. During World War II, Dr. Coomes was on leave from Notre Dame to work on cathodes used in radar tubes. He recently received a government citation for war-time research.

It is significant that the cathode developed by Dr. Coomes is approximately 600 times more powerful than any which existed prior to the outbreak of World War II. The new cathode, developed by the Notre Dame scientist, helped to make possible the development of electron tubes capable of generating approximately 6,000 kilowatts. Dr. Coomes stated that this cathode is useable only in situations in which power is turned on and off within much less than one second. Otherwise, he explains, the power generated would melt the tube in which the cathode is used.

TWO SORTS OF DANGERS

A citizenry that does not understand the sort of world it lives in, that does not have a sense of the real values of civilization, that is blind to the ideals by which we live is a poor defense indeed. Universities deal with these things. Dictators realize this well enough. When they come to power they either mutilate them or shut their doors. They are afraid of their atmosphere and spirit. Do we, as free men, sense their value keenly enough to see them, not only as stepping stones to careers, but as foundation stones of democracy itself? That is perhaps the most important question which concerns the educational world today. Dangers are of two sorts. Financial insecurities are obvious in this day of decreased giving ability and reduced returns on investments. More subtle are the dangers from those who would regard proper academic freedom as something sinister and subversive.—From Report of Chancellor H. W. Chase, New York University.

N. D. STUDENT PAYS 70% OF EDUCATION COSTS

The student at Notre Dame pays 70% of the cost of education. The balance is made up by gifts from alumni and non-alumni, income from limited endowment, income from auxiliary projects, and by the unremunerated services of the priests and brothers of the Congregation of Holy Cross, who serve as teachers and administrators without salary.

IN BEHALF OF THE MORAL RESPONSIBILITIES OF SCIENCE IN THE ATOMIC AGE

The New
Science Center

gratefully welcomes the early assistance already generously assured (as of May 6, 1949) by the following

All-Star Sponsors

Already starring—but still casting—the University of Notre Dame Foundation proudly presents those who generously have undertaken the sponsorship of rooms in the new Science Center. From these rooms—intellectual molds in which academic sculptors produce not monuments but men—will come streams of youth scientifically and morally equipped to lead the world you hope for and work for and pray for. These are living

"Phidian columns"—to support a civilization, not crumble with one.

There is room for YOUR generosity—there are ROOMS for you in fact. As in the scientific miracle at Palomar, where stars are seen which human eyes never have seen before, we hope that our firmament will fill with the names of others who, like these early benefactors, will wish to commemorate their Faith in Enlightened Science.

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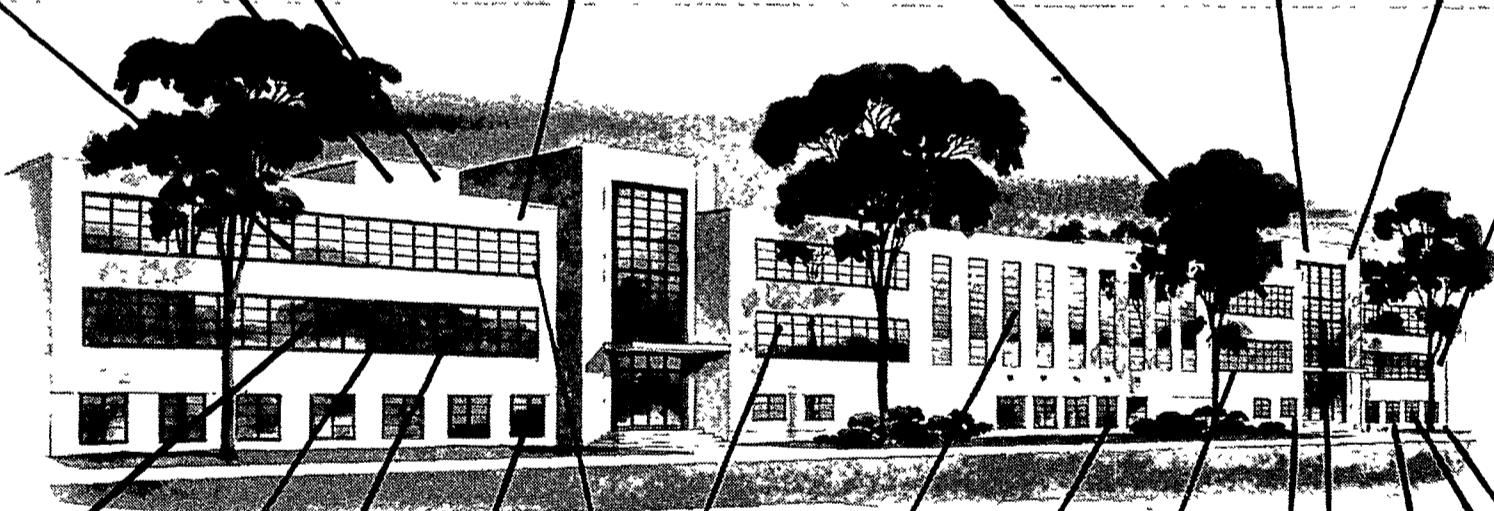
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