# ALUMNI BULLETIN

Indiana University School of Dentistry

VOL. III | MARCH, 1941 | No. 3

## School Registered In Full by New York State Examining Board

**U. Dental School Registered in Full by New York State Board.**

Official notification has been received from the University of the State of New York that the New York State Board of Dental Examiners will accept in full graduates from Indiana University School of Dentistry, effective September 1, 1940.

According to Handbook No. 10 of the University of the State of New York, graduates from only twenty dental schools are allowed full credit, and heretofore graduates from Indiana who desired to locate in New York were required to complete another year in some school accredited by the University of the State of New York.

A letter written January 6, 1941, by Irwin A. Conroe, Director of the Division of Higher Education, University of the State of New York, reads as follows:

My dear Dean Crawford:

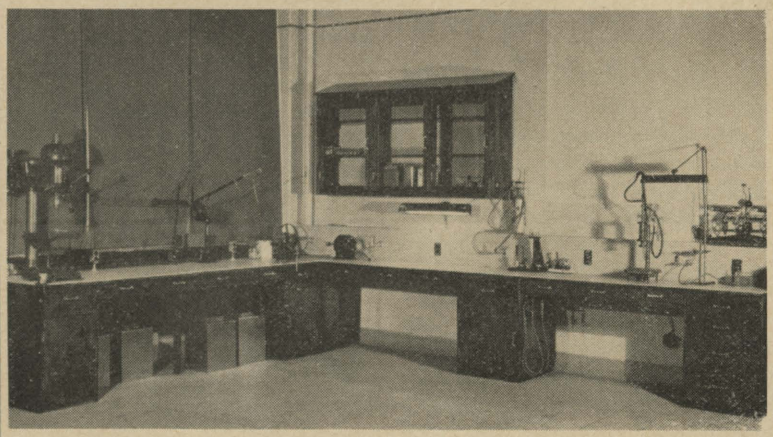
I write to advise you that this department has registered the School of Dentistry of Indiana University as of the date of September 1, 1940. This registration is based upon the report of the survey of Dr. Minor J. Terry and upon the additional documentary material you have sent to us concerning your program as it is now in operation.

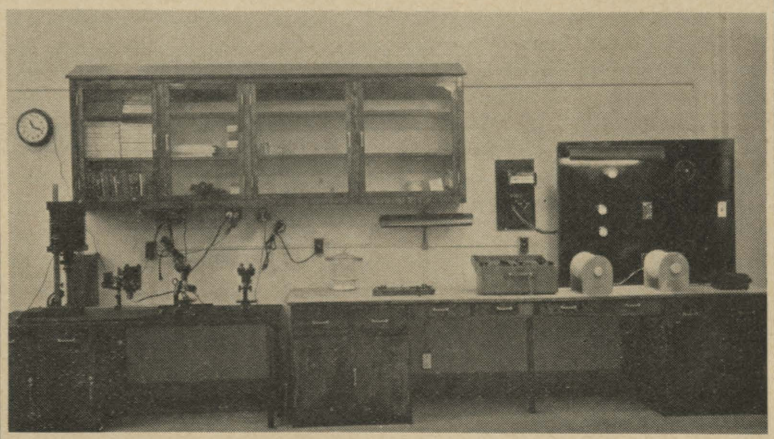
Very sincerely yours,
Irwin A. Conroe, Director."

While it is probable that only a few graduates from Indiana will wish to go to New York, still it is our desire to produce dentists sufficiently well trained so that there will be no evaluating board which will not be willing to accept them.

Indiana is very proud of the high honor it has received of registration by New York.

## DENTAL MATERIALS RESEARCH LABORATORY





## Research in Dental Materials

The principal problem of investigation in dental metallurgy this year has been centered about the physical properties of various wrought gold wires or alloys. The dental profession is constantly annoyed by breakage and unsuitable properties of wires. The difficulties arise from two sources: first, selection of wires with improper properties, and second, from abusive or negligent heating during soldering and subsequent to soldering.

Many different wires have been secured from different manufacturers and have been subjected to a wide variety of heat treatments. Old wires were tested after employing heat treatments recommended in the American Dental Association specifications for wrought alloys. In addition, wires heated to temperatures required for soldering operations and to higher than soldering temperatures, which might accidentally be given during soldering providing the parts being soldered were improperly invested or fluxed.

Some wires seem to be affected very markedly by varying heat treatments, and the serious effect is usually a loss in strength and ductility. This is caused by heating wires to elevated temperatures followed either by accidental or intentional hardening heat treatments. Other wires remain remarkably uniform in their properties by a very wide variation in

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## Combined Academic And Dental Degrees Offered at Indiana

The College of Arts and Sciences joins with the dental school in prescribing a course of study which leads to an A.B. or B.S. degree and the D.D.S. degree in seven years.

The academic degree will be offered by the College of Arts and Sciences to those completing the prescribed course after three years in the Arts College and one year in the School of Dentistry. Thirty hours of credit for subjects taken in the dental school will be allowed toward the academic degree. This program has been made possible by two recent developments. One of these was the formal arrangement whereby courses given in the dental school were placed on the credit hour basis. A committee, appointed by the president and consisting of three members from the dental school and three members from the Bloomington campus, has deliberated this problem and has agreed on a policy which has been accepted by the Board of Trustees. Establishing the dental school on a credit hour basis has made it possible for the College of Arts and Sciences to evaluate credit for courses in the freshman dental year to be used toward the academic degree.

The second development making possible the present combined degree program is the change which has taken place providing for the teaching of the fundamental sciences of anatomy, physiology, histology and embryology, and chemistry in the regularly established departments in the university. The College of Arts and Sciences has been reluctant to accept a substitute for the teaching of these subjects in the established departments.

Dean Stout and the faculty of the College of Arts and Sciences are to be commended highly for their excellent program and for all the work required to accomplish this end. Their efforts are

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**ALUMNI BULLETIN**

**Indiana University School of Dentistry**

**A free and non-profit bulletin issued quarterly by Indiana University School of Dentistry for the purpose of keeping its Alumni informed of the activities and progress of the school.**

*Editor-in-Chief*
Harry J. Healey
*Research Editor*
Virgil D. Cheyne

# The Dental School Library

The following new books have been added to the library since the publication of the November issue of the Alumni Bulletin:

A. D. A.—Accepted Dental Remedies 1940 6th ed.
Addicks—Silver in Industry 1940
American Association for the Advancement of Science, Proceedings 1934-1940
Americana Annual 1940
Bartels—Outline of Bacteriology 1929
Bodecker—Fundamentals of Dental Histology and Embryology Including Clinical Applications 1940
Brauer—A Brochure on Pedodontics n.d.
Campani—Granulomas, quistos e abcessos de origem dentaria 1940
Cohen—Ceramics in Dentistry 1940
Cunningham—Manual of Practical Anatomy 10th ed. 1940
Dental Centenary Celebration, Proceedings 1840-1940
Fowle—Smithsonian Physical Tables 8th ed. 1934
Goadby—Diseases of the gums and oral mucous membrane 4th ed. 1931
Guggenheim—Otosclerosis 1935
Laws of the State of Indiana—1925, 1929, 1931, 1933, 1935, 1936, 1937, 1938
Quarterly Cumulative Index Medicus V. 27, Jan.-June 1940
Research Conference on the Cause and Prevention of Dental Caries 1938
Robinson—Foundations of Professional Dentistry 1940
Squibb and Sons Co.—Medical Division—Physicians' Vitamin Reference Book 3rd ed. rev. 1940
Stille—Ohio Builds a Nation—2nd ed. 1939
Vilella—Metallographic Technique for Steel 1938
Wakeley—Aids to Operative Surgery 2nd ed. 1934
Ward—American Textbook of Operative Dentistry 7th ed. 1940
Weeks—Discovery of the Elements 1939
Wheeler—Textbook of Dental Anatomy and Physiology 1940
Wheeler—Tooth form Drawing and Carvings—1939

Several old volumes of the Missouri Dental Journal, American Medicine, and Medical Record have also been placed on the shelves.

# Fluorine and Dental Caries

Dr. H. Trendley Dean, dental surgeon of the United States Public Health Service, Washington, D. C., visited the dental school December 11th. In the evening he addressed the faculty and student body under the auspices of the Junior Society of the American Dental Association on the subject of the role of fluorine in the control of dental caries.

Considerable interest has been shown by the dental profession in fluorine in the past few decades. It has long been known that the drug is one of the most active of the elements. Hydrofluoric acid was first described by Marggraf in 1768, but because of its activity it was not until 1886 that Moissan, a French chemist successfully liberated the element. In 1916, G. V. Black and F. S. McKay, Northwestern University, first described the detrimental effects of fluorine upon developing teeth. Although it was not known until twenty-five years later that the drug was the etiological agent, they described what is now known as fluorosed or mottled enamel. Black, relating at the time the manner in which the deformity was brought to his attention, mentioned that several years earlier some dentists living in Colorado first told him of the gross appearance of these teeth as they occurred in the mouths of individuals. They were usually chalky or discolored and were structurally weak. It was very difficult to retain fillings in such teeth. Those affected seemed to be confined to certain districts of the country.

After the causative agent in mottled enamel was known, the United States Public Health Service immediately began an investigation of water supplies in areas where the condition had been reported. When it was found that fluorine present to the extent of 1 or 2 parts per million in the drinking water was detrimental, the Service sought measures for its reduction. The problem was then taken up by sanitary engineers, nutritionists, physiologists and pathologists whose duty it is to determine what general detrimental effects this drug may have in addition to upsetting the structure and appearance of the teeth.

Long before the relation between fluorine and mottled teeth was discovered, reports by workers in the dental field were commenting upon the susceptibility of mottled enamel to dental caries. In fact, Black and McKay had mentioned in their first report that, in regard to the teeth of children so affected, there seemed to be no more caries than in those of other communities where endemic mottling was unknown. This, they pointed out, was contrary to what one would expect to find in teeth so rough and pitted.

Soon after fluorine was linked with mottling, Dean began to publish comparisons of the occurrence of caries in some communities having moderate quantities of the element in their water supplies with those having very low quantities. As an outgrowth of this work, he has definitely established that there is an inverse relationship between the two. Furthermore, he has demonstrated that it is possible to regulate the amount of fluorine ingestion to the point where the teeth can be kept free of mottled enamel yet have a low incidence of dental caries. This optimal amount seems to lie near 1 part per million or slightly below.

Investigations at the present time are concerned with attempting to explain the manner or "mechanism" bringing about the observed inhibition of dental caries by fluorine. Miller, University of Chicago, in 1938, was the first to demonstrate that induced rat caries could be largely prevented by additions of sodium fluoride or calcium fluoride to the rat's food or water. In the same year, Armstrong and Brekhus, University of Minnesota, compared the fluorine content of enamel from normal human teeth with that of carious teeth and found that the sound teeth averaged 0.0114 per cent, while that of carious teeth averaged 0.0068 per cent. Cox, Mellon Institute, Pittsburg, also obtained less fissure caries in the molar teeth of rats which were fed fluorine during the developmental period of their teeth. Cheyne, University of Rochester (now at the Indiana University School of Dentistry), in 1940, found that fluorine administered orally to desalivated rats was effective in temporarily inhibiting caries, but that saliva was more important, acting as it did to carry previously ingested fluorin back to the oral cavity. In th connection, studies with radioac tive fluorine injected into th blood stream, was almost imme diately carried to the oral cav ity via the saliva. He foun that it then acted to saturate th food and bacteria (which we be lieve to be agents responsible fo caries) in the neighborhood of th tooth.

It is obvious from this brief re view that much experimental wor remains to be done before th mechanism of caries prevention understood. It is encouraging t note, however, that for the firs time in the history of dentistry the profession has discovered tangible agent which does and ca be expected to have a suppressin effect upon dental decay.

A note of warning must b sounded at this time. With th threat of an accumulation of flu orides in the human body, leadin to possible serious pathology, grea caution must be observed in th means of administering this drug This phase of the problem is no being actively studied in the vari ous laboratories throughout th country and until we obtain mor information than is now available it is well to consider the subject o fluorine still in the experimenta stage.

# Alumna Presents Piano to Student

A recent issue of the Alumn Bulletin carried an account of th establishment by the School o Dentistry and the University of student lounge in the dental build ing. In recalling our own year in school, we of the alumni ca readily appreciate the need an value to the student body of suc a room for recreation and relaxa tion during unassigned scho hours. The present student bod is likewise greatly appreciative o this most welcome innovation giv en them to aid in making the undergraduate days more plea ant and enjoyable.

One member of the alumni wh became aware of the existence the student lounge had the desi to make a donation which wou add to the comfort of the loung This person was Dr. Anna Cluthe, Evansville, Ind., a gra uate in the class of 1904. Saturday, February 1, Dr. Cluthe gift, a very beautiful Behning p ano was delivered to the Scho of Dentistry and placed in th student lounge. Dr. Cluthe e pressed the wish that the pia

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# Prosthetic Teaching Problems

We are often questioned regarding techniques and instruments employed in our teaching of full denture construction. For the most part these questions are prompted by a wholesome desire for information. Occasionally however, they are couched in language which suggests criticism or at least a misunderstanding of our teaching problems and objectives.

The following lines are written in an effort to acquaint our readers with some of our teaching problems and at the same time answer some of the questions mentioned above. A little reflection on this subject and we are at once aware that, unlike other branches of restorative dentistry, opinions as to correct procedures in denture construction are many and varied. Instruments and methods are almost as numerous as are the recognized authorities. Many techniques have been built around some instrument or material which prove to be more of a commercial venture than a professional advancement.

It is possible that some of us are a bit overimpressed by the involved techniques advocated by some authorities and are unwisely stampeded into the conclusion that successful prosthetic practice necessarily involves complicated procedures.

Thinking along the line of the other extreme it would be a grave mistake to conclude that there is any substitute for a painstaking technique and that precision methods and instruments could be dispensed with as unnecessarily complicated.

We must keep in mind that progress in prosthetic teaching does not necessarily contemplate the acceptance of every new theory or instrument as soon as it is introduced. A critical analysis of the offering of the clinicians at our conventions and society meetings together with a studious consideration of the best in dental literature reaffairms and emphasizes our contention that we are confronted with the same fundamental problems today as were presented at the inception of dental teaching. The fundamentals of denture prosthesis do not change, and it is not possible to change their character or minimize their importance by surrounding them with a camouflage of controversial technical details. If there is any one place where fundamentals should be stressed and stripped of all their superfluities, it is in the class rooms and teaching clinics of our dental schools.

Articulators and their manipulations have come in for a lion's share of the discussion at many of our clinics. Let us consider the possibilities and limitations of an articulator instrument.

Firstly, it should be adjustable to receive and preserve a record of the various jaw relations both in centric and eccentric positions. This should be construed to mean that the casts can be so positioned in the instrument that they will be in correct relation to each other in centric, protrusive, and lateral positions of the mandible. These positions of course are registered by check bite records taken at the functional limits of the mandibular excursions. This means that the articulators must be a three dimensional instrument, that is, one which is not only capable of taking a registration of the eccentric condyle positions but also will reproduce incisal positions registered upon a suitable component incisal guidance assembly.

Secondly, it is desirable that the articular contain a built-in milling machine to aid in eliminating faults in occlusion which occur as a result of dimensional instability during the processing of the denture bases.

Lastly, the articulator should possess accurately fitted parts capable of withstanding rough usage. It is quite possible for an articulator to possess the foregoing qualities and still be a simple instrument.

There are a number of instruments on the market which possess these qualities, and we would hesitate to say that there is any one instrument which is better than all the others. The techniques employed for making articulator records are many, but fundamentally they are the same. We have chosen to discuss articulators not because it is the most important phase of prosthetics, but because it is a controversial subject and presents an example of how fundamentals may be obscured by technical details.

Impression techniques, denture base materials, and many other phases of prosthetic dentistry might be discussed at length in our classes and they do come in for a great deal of consideration, but it is the consensus of opinion among most dental teachers today that more stress should be placed on the teaching of fundamentals and necessary objectives. These factors remain constant while instruments, methods, and materials are ever changing.

Our most important teaching problems today is to arrange our course content so that our graduates will appreciate and understand fundamentals and objectives and at the same time make our teaching sufficiently broad to prepare the student to overcome the obstacles in the path leading to this goal.

# Selective Service and The Dental Students

Numerous inquiries are made from time to time as to the effect of the Selective Service Act upon the dental student. At the present time 22 students have received draft questionnaires, have returned them to their local boards, and have in turn been classified. In all cases the classification has been 1 D or available for service but deferred until the completion of the current school year. Induction into the service at the completion of this year would seriously interrupt the preparation of the underclassmen for the rendering of future dental health service to the public.

The Murray bill, passage of which is now pending in Congress, would enable the dental student to be further exempted until completion of his course of study in dentistry except in case of actual involvement in war by the United States. It also has favorable provisions for dentists who are drafted but who do not hold reserve commissions.

On January 6, 1941, Mr. Murray introduced the following bill in the Senate of the United States which was read twice and referred to the Committee on Military Affairs:

"A BILL

To amend the Selective Training and Service Act of 1940.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that section 4 of the Selective Training and Service Act of 1940 is hereby amended by adding at the end thereof the following new subsection: "(c) Any man selected for training and service under this Act (1) who has been awarded a degree of doctor of medicine or doctor of dental surgery by a recognized medical or dental school, (2) who holds a valid license to practice medicine, surgery, or dentistry in any State, Territory, or possession of the United States, or the District of Columbia, and is engaged in such practice at the time of his selection, and (3) whose physical and mental fitness for such training and service has been satisfactorily determined, shall, in lieu of induction into the land or naval forces of the United States for such training and service, be commissioned as an officer in the Medical Department Reserve, Officers' Reserve Corps, and ordered into the active military service of the United States as provided in the joint resolution approved August 27, 1940."

Sec. 2. Subsection (d) of section 5 of such Act is hereby amended by adding at the end thereof the following new sentences: "Medical and dental students at recognized medical and dental schools, and internes and resident physicians, surgeons, and dentists at recognized hospitals, shall be exempt from training and service (but not from registration) under this Act. Notwithstanding any other provision of law, any such medical or dental student, interne, or resident physician, surgeon, or dentist who is a member of a reserve component of the land or naval forces of the United States shall not be ordered or called to active duty or into active service in any of such forces without his consent, except in time of war."

## University Faculty Men Hear Dean Crawford

Dean William H. Crawford discussed the educational progress of dentistry at the monthly meeting of the Men's Faculty Club at the club's quarters in the Union Building, Bloomington, on January 14.

Professor W. T. Morgan of the Department of History, president of the Faculty Club, introduced Dean Crawford as a graduate of the University of Minnesota and Dean of the School of Dentistry since August, 1939. This was Dean Crawford's first occasion to address the Bloomington faculty as a whole.

Election of officers for the year and a question and answer period followed Dean Crawford's talk.

## Alumna Presents

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be accepted by the students in the name of the girls in the class of 1904. Besides her these included Margaret E. Shaw, Mary E. Fox, and Dora F. Ellison. A suitable plaque is being prepared for the piano and will bear the names of these four alumni.

We compliment and congratulate Dr. Cluthe for her generosity and for the interest which she has shown in the student body of her Alma Mater.

# Alumni Addresses Sought

In checking our alumni files we find that there are entirely too many cards marked "No Trace." Surely someone knows where these graduates are located. We have listed their names and classes below, and if you have any information regarding them or if you have moved yourself, please drop a card to the school giving us the correct address.

Brown, Morris Norman '40
Iden, Eugene Dixon '40
McClintick, Oliver Elmer '40
Porter, Ernest Henry '40
Robinson, Wm. Alverton '40
Eastman, Ralph '39
Glassley, Richard '39
Harvey, Dale '39
Jarabak, John '39
Alpert, Abraham '38
Brant, Bridane W. '38
Brown, Ernest Arthur '38
Hoop, Wm. Tomlin '38
Madden, Raymund H. '38
Pease, Edward Laird '38
Pitzele, Arthur A. '38
Rubin, Louis '38
Scudder, John F. '38
Shiek, Lewis V. '38
Schock, Joseph Peter '32
Smith, Marvin D. '31
Burris, Wilfred T. '31
Evans, Walter '26
Howard, Neil W. '25
Pusstelnik, Meyer '24
Nelson, Edwin W. '23
Shankman, Samuel '23
Grant, Elmer S. '22
Witter, Leroy S. '22
Leary, Lovell '21
Richards, Paul Edward '21
Young, Harry A. '19
Irwin, Donald F. '18
Richards, S. Paul '18
Goodwin, Archie '15
Henson, R. A. '15
Gilbert, Clifford B. '15
Frech, Arlington '14
Kellams, E. I. '12
Lankford, J. C. '12
Huston, Charles O. '12
Griffith, Paul B. '11
Nesbit, R. W. '11
Seidel, Isadore '10
Hopkins, Robert H. '09
McMurray, W. L. '09
Jones, Elmer C. '08
Heyler, W. H. '07
Smeigh, A. A. '07
Smith, G. H. '07
Taggart, Charles '06
Van Kirk, O. A. '04
Schoemaker, S. E. '04
Williams, H. M. '04
Fenstermaker, D. B. '04
Shaw, Margaret E. '04
Krapohl, F. A. '03
Lewis, Delbert '03
Lowder, O. H. '03
McCann, J. F. '03
Tattershall, C. B. '03
France, R. R. '02
Jones, F. C. '02
Rogers, J. E. '02
Fritts, W. J. '01
Green, Sidney, '01
Riley, L. A. '01
Slater, B. S. '01
Taylor, J. W. '01
Faries, W. F. 1900
Lafferty, Fred L. 1900
Starr, O. E. 1900
Stevenson, Lloyd 1900

# Annual Mid-Winter Alumni Meeting Held

On January 13 the alumni made its annual trek back to the portals and halls of its alma mater. The occasion was the mid-winter meeting which is sponsored jointly each year at this time by the Indianapolis Dental Society and the School of Dentistry Alumni Association.

The unusually large attendance was greeted and welcomed by Dean William H. Crawford for the first time. Illness prevented his participation in last year's meeting. Dean Crawford and the faculty made available for the use of the Alumni all of the clinical, laboratory, and lecture room facilities of the School of Dentistry.

The clinics offered in the afternoon session, covered various phases of dentistry and were conducted by members of the alumni from throughout the state as well as from Indianapolis. Dean Crawford was included in a group of faculty members who gave clinics. Arrangements for the clinics were under the direction of Dr. A. W. Spivey, Indianapolis. Speakers at lecture sessions held in connection with clinics included Dr. E. Byron Kelly of Chicago, and Dr. J. H. Sharon of Cincinnati.

In the evening the annual Alumni Association banquet was held at the Indianapolis Athletic Club. During his address as principal speaker of the evening, Dean J. T. O'Rourke, University of Louisville School of Dentistry, declared, "Changing social and economic trends have brought an end to the period of expansion in the dental profession. There is now no escape for mediocrity, no moving on for the incapable."

Officers of the Alumni Association who were elected for the following year are Dr. J. W. Huckleberry of Indianapolis, President; Dr. Roy Smiley, Washington, Vice-President, and Dr. S. X. Pallardy, Indianapolis, Secretary-Treasurer.

# A.D.A. Junior Society Sponsors Seminar

The first meeting of the Junior Society of the American Dental Association was held at 7:30 P.M., Wednesday, December 11, in the auditorium of the School of Medicine.

The program consisted of a seminar conducted by Dr. H. T. Dean, Chief Dental Surgeon of the U. S.. Public Health Service, and Dr. Virgil D. Cheyne of the School of Dentistry faculty. The subject discussed was "The Role of Fluorine in the Control of Dental Caries."

The Junior Society was extremely fortunate to have the opportunity to present this program. Because of work done by him in this important phase of dentistry, Dr. Dean has a world wide reputation as an authority in this field. Dr. Cheyne likewise has attained a highly creditable reputation because of work done by him in dental caries.

Interesting statistical data was presented showing the effect of varying amounts of fluorine in the water supply of endemic fluorosis affected areas upon the structure and appearance of the enamel of the persons drinking that water. The caries inhibiting character of such altered or so called mottled enamel was described and demonstrated by Dr. Dean.

Because of the excellence of the program and the reputations of Dr. Dean and Dr. Cheyne, the Junior Society extended an invitation to attend this seminar to the entire student body, the faculty of the school of dentistry and of the school of medicine, and the members of the Indianapolis Dental Society.

That the seminar was of unusual interest to the audience was well evidenced by the numerous constructive questions which were presented by the student body and the guests.

## SOUTH AMERICAN ALUMNUS AUTHOR OF BOOK

It will be of interest to the alumni and particularly those of the class of 1918 to notice in the list of new books in the library as published in this issue one entitled, "Campani — Granulomas, quistos e abcessos de origem dentaria 1940." The book is written in Portuguese and the copy in the library is an autographed copy presented to the library by the author, Dr. Rodolfo Antonio Campani. Dr. Campani was a member of the 1918 graduating class and lives in Porto Alegre, Brazil, South America.

# I. U. Creates Department of Photography

**Importance of Visual Aids in Dental Teaching Brings Full Time Assistant.**

The need for visual aids teaching dentistry has never bee more apparent than it is toda Lecturers and clinicians rely hea ily on still and motion pictures presenting their material in a tru concise, and thorough manner.

As the volume of informati in dental subjects grows, the nee for conservative and impressi methods of presenting this know edge in a crowded curriculum b comes more essential.

It is the desire of Indiana Un versity to make available ever progressive method in teachin dental subjects. Therefore, th dental school has been authorize to employ the full time services a photographer whose duties sha be to assist in the production motion pictures, lanterns slide and photographs to be used teaching our subjects.

This position has been filled b Mr. William C. Heilman. Mr. Hei man has had considerable phot graphic experience and has bee working in the illustration depar ment of the medical school.

# Combined Academic

(Continued from page 1)

deeply appreciated by all tho interested in the progress of I diana University School of De tistry. We realize that this st marks an important milestone the realization of the growth, e pansion, and development of t dental school.

In announcing the action of t College of Arts and Scienc Dean Stout wrote as follows, "T sentiment in our faculty for th cooperation was unanimous. The was not a dissenting vote. I ho that it will bring happy resu for both of our schools."

# Research in

(Continued from page 1)

heat treatment, maintaining th strength and ductility even wh badly abused.

Microscopical study is being co ducted of all specimens, and it felt that much good will come this most interesting, fundament and practical study.