

ALUMNI BULLETIN

Indiana University School of Dentistry

VOL. IV

JULY, 1942

No. 4

Dental Students Trained for War Service

Army and Navy Reserve Com- missions Granted

The administrative officers of Indiana University and the school of dentistry are pleased to announce that the teaching facilities of the school of dentistry are now being effectively utilized for the training of future dental officers for the Army and the Navy of the United States. As a result of changes in army and navy regulations which were recently approved by the Adjutant General's Office of the War Department and by the Secretary of the Navy, approximately 97.5% of the school of dentistry enrollment now either have army or navy reserve commissions or have applications filed for such commissions. The new regulations also make reserve commissions available to pre-dental students who have been accepted for admission to the 1943 freshman class.

Naval Reserve Regulations An- nounced

A recent communication received by Dean William H. Crawford from the Navy Department, Washington, D. C., read in part as follows:

"The Secretary of Navy recently approved a change in navy whereby it is now possible for those pre-medical students who have been accepted for entrance to, and all medical students (Freshman, Sophomores, Juniors, and Seniors), in Class A medical colleges, to be appointed in the United States Naval Reserve in Class H-V (P), provided they meet the physical and other requirements for such appointment. . . . Students of Class A dental colleges may apply and be commissioned as Ensigns H-V (P), U. S. Naval Reserve, in the same manner as students of medical colleges."

The Adjutant General's Office of the War Department recently issued a bulletin stating in part

(Continued on page 3)

RECENTLY APPOINTED TO FACULTY

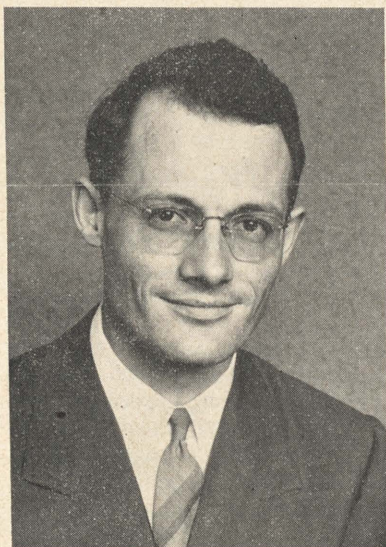


Dr. Grant Van Huysen

As this issue goes to press, Indiana University School of Dentistry is anticipating a bright future for the department of oral diagnosis under the leadership of Dr. Grant Van Huysen, newly appointed Professor of Oral Diagnosis, who joined the faculty July 1st. Dr. Van Huysen's background qualifies him eminently for the responsibility of presenting the problems of diagnosis in all its ramifications.

After taking his pre-dental training at the University, Dr. Van Huysen began his dental education at the University of Pennsylvania in 1921, graduating in 1925. The following six years were spent in general practice in New York State. Feeling the need for future information regarding the unsolved questions confronting him in practice, Dr. Van Huysen accepted a Rockefeller Fellowship in Dentistry at the University of Rochester Medical School where he studied in the departments of pathology, roentgenology, gross and microscopical anatomy. During this period and since he has been teaching, he has been actively engaged in research and has published eighteen articles on original research relating to roent-

(Continued on page 3)



Dr. Richard S. Michener

Dr. Richard S. Michener, a member of the 1942 graduating class, is now serving on the staff of the school of dentistry as a dental intern. Dr. Michener was born in Kokomo, Indiana on March 20, 1916. He attended grade and high school in Kokomo and subsequently enrolled in Indiana University where he became a member of Delta Upsilon fraternity. He received the degree, Bachelor of Science, in medicine in June, 1938.

Dr. Michener entered the school of dentistry in September, 1938. He maintained a high scholastic record as a beginning dental student. Because of the excellence of his scholastic attainments throughout his four years of study of dentistry, he was elected at the time of his graduation to alumni membership in Omicron Kappa Upsilon, the scholastic honor society for students of dentistry.

While a member of the sophomore class, he was married to Miss Mary Esther Smith on February 24, 1940. Mrs. Michener received the Bachelor of Science degree in Education from Indiana University in 1938. Dr. and Mrs. Michener reside at 1649 North Alabama Street, Indianapolis.

Induction Ceremonies for General Hospital 32 Held

Hospital Unit Sponsored By Indiana University

A new all-Hoosier military hospital, General Hospital 32, was commissioned an army unit in colorful ceremonies at the university medical center in the late afternoon of May 13. The new hospital carries on the tradition of Lilly Base Hospital 32 formed in 1917 for the previous world war. The professional personnel of the hospital unit, composed of 47 commissioned medical and dental officers and 72 nurses, were sworn into military service during the induction ceremonies by Lieut. Col. I. F. Peak, commanding officer of the medical school R. O. T. C.

Commissioning of the unit was held on the lawn of the quadrangle west of James Whitcomb Riley Hospital and was witnessed by more than 3,000 persons, headed by army, state, city, and university officials.

Governor Schricker and President Wells Lead Processional

A half-hour concert by the Indiana University band preceded the processional, headed by Governor Henry F. Schricker and President Herman B. Wells. Following the faculty, army, and civic representatives came the newly commissioned officers, led by Dr. C. J. Clark and Dr. Charles F. Thompson, lieutenant colonels, who organized the unit, Dr. Glenn J. Pell, ranking as a major in charge of the dentists, and Miss Aurelia Willers, in charge of nurse enlistments.

Impressed by the solemnity of the occasion, the audience stood at attention while the officers in khaki uniforms and the nurses in conventional white garb repeated the oath of loyalty administered to them by Lieut. Col. Peak. Col. Clark accepted the officers' insignia on behalf of the unit.

President Wells Delivers Induc- tion Address

President Herman B. Wells addressed the assembled group and

(Continued on page 3)

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Indiana University
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The Dental School Library

The following new books have been added to the library since March 23, 1942:

- Adelman—Simplified orthodontia 2d edition, 1941
Bell—Textbook of pathology 4th edition, 1941
Cahn—Pathology of the oral cavity, 1941
Cipes—Prescription writing and formulary for dentists, 1941
Cumulative Book Index, 44th annual cumulation, 1941
DeKruif—Fight for life, 1938
DeKruif—Health is wealth, 1940
DeKruif—Men against death, 1932
Duncan—Diseases of metabolism, 1942
Ehrich—Pathology for students and practitioners of dentistry, 1941
Feldman—Exodontia 3d edition, 1941
Goodman & Gilman—Pharmacological basis of therapeutics, 1941
Greenfield—X-ray technic and interpretation of dental roentgenograms, 1938
Gross & Ehrlich—Diagnosis and treatment of head injuries, 1940
McBride—Juvenile dentistry 3d edition, 1941
McCoy—Applied orthodontics 5th edition, 1941
Morton, Truex, Kellner—Manuel of human cross section anatomy, 1941
Nicholson—Laboratory medicine 2d edition, 1934
O'Rourke & Miner—Dental education in the United States, 1941
Orthodontic directory of the world 12th edition, 1942
Pack & Livingston—Treatment of cancer and allied diseases, 3 volumes, 1941

- Polk's Indianapolis City Directory, 1942
Price—Nutrition and physical degeneration, 1939
Quarterly Cumulative Index Medicus, volume 30, 1941
Rice—Textbook of bacteriology 3d edition, 1942
Schwartz—Modern methods of tooth replacement, 1942
Seldin—Practical anesthesia for dental and oral surgery 2d edition, 1942
Smith—Building a dental practice, 1941
Visual education in dentistry 4th edition, 1940
Winter—Operative oral surgery, 1941
Yearbook of the State of Indiana, 1941

Omicron Kappa Upsilon Elects Alumni Members

Three 1942 Graduates Receive Honor

As part of the school of dentistry's honors day exercises held to confer honors earned by members of the 1942 graduating class, the active membership of Theta Theta Chapter of Omicron Kappa Upsilon, scholastic honor society for students of dentistry, presented gold keys to three of the class members.

Nominations Made by Dean Crawford

According to the constitution of the honor society, twelve per cent of the class could be elected. This twelve per cent, or three as it was in the case of this year's class, was elected by ballot. Those considered for election were the members of the class who comprised the upper third of the scholastic standing after the four years of study in the school of dentistry. These persons were nominated for consideration by Dean William Crawford as provided in the constitution.

The basis for the election of these students was on a seventy-five per cent consideration of their scholastic record and a twenty-five per cent consideration of their possibilities and probabilities for becoming highly creditable and honorable members of the dental profession.

Dean Briscoe Addresses Class

The students elected to the honor society from the 1942 class were: Morris Meyer Stoner, New London, Connecticut; Richard Shenk Michener, Kokomo; and William Fay Henning, Boonville. Each of these persons received a gold key which is symbolic of membership in the society.

Other honors were presented

during the program and before the audience of approximately 150, which was composed of underclassmen, faculty, assisting staff, and guests. An inspirational address was delivered by Dr. H. T. Briscoe, dean of faculties of the university, as the featured part of the program.

ANNOUNCEMENT

Physical Properties Of Dental Materials

For the first time a complete summary of the more than one hundred reports on research conducted in the dental laboratory at the National Bureau of Standards during the last twenty-two years has been compiled by the Bureau Staff in cooperation with the Research Commission of the American Dental Association. This publication, designated Circular C-433, has just been issued.

The summary covers restorative and accessory materials such as amalgam, gold alloys, denture base resins, cements, investments and impression materials. Details of test methods, many of which were developed at the Bureau, including illustrations and descriptions of testing equipment, will be found of particular value to dental schools and research laboratories. The specifications of the Federal Government and of the Association are included in the book.

The active cooperation of the American Dental Association made possible the extension of the data accumulated at the Bureau to show more clearly their dental headings, namely theoretical significance and technical applications. The small amount of repetition necessary for this dual treatment may be excused since it makes possible the addressing of two groups of reader interests in one publication. Furthermore, the combining of these two phases of the research gives greater clarity and unification to what otherwise might appear to be masses of data on unrelated materials.

The dentist will find explanations for some of the many problems which confront him daily, such as excessive expansion (or shrinking) of amalgam, shrinkage of gold inlays, solubility of cements, etc. He will find techniques suggested which will eliminate or reduce these difficulties.

For students at dental schools, the book will be excellent as a text or as necessary reference material. Libraries, not having all

of the individual publications, will find this volume the answer to their unsuccessful attempts to secure complete sets of the reports.

The publication appears under the joint authorship of Wilmer Souder, Ph.D., Principal Physicist of the National Bureau of Standards, and George C. Paffenbarger, D.D.S., Research Associate of the American Dental Association. The price is 75 cents. Copies are obtainable from the Superintendent of Documents, Government Printing Office, Washington, D. C.

THE PULP IN HEALTH AND DISEASE

Dental caries is generally conceded to be the most prevalent disease in our modern civilization. Because its natural sequela is that of toothache, this is the most common complaint of civilized man. For the most part the prevention and cure of toothache constitutes the most urgent duties of the dental profession. Because toothache is a disease of the pulp, knowledge of the embryology, anatomy, physiology of this structure is of vital concern to the student of dentistry.

The ease of destruction of the pulp is directly related to its location and embryological structure. Developmentally the pulp remains relatively undifferentiated. The primary function of the pulp is the formation of dentin during tooth development. In the natural scheme of things it was never intended that the tooth be subjected to carious destruction, fracture, and restorations. Consequently, in its preservation of vitality and conduction of pain stimuli the pulp undergoes changes in its normal course of function following these stimuli from these agents. Under stimuli there is a decrease in the number and form of the cellular elements and a modification of the soft tissue reticulum and a deposit of secondary dentin upon the walls of the pulp chamber. The pathological expression of this change may be the vacuolization of the odontoblasts, hyalinization of fibrils, aggregations of dense strands with retraction, and formation of pulp nodules.

In the adult tooth the delicate cell structure is held in place by fibrillar attachments which are traversed by vascular and neural ramifications. The vascular features are of special significance with relation to the dense unyielding walls in which the tissue is placed. This makes adaptability

difficult and hampers the free action of exudation and resorption in hyperemia and inflammation. The completion of the foramina at a relatively early age makes additional demands upon the physiological flexibility of vascular changes.

The ordinary function of the tooth of which the pulp is an integral part is unequaled by any other tissue of the body as respects the thermal, chemical, bacterial, nutritional, and mechanical influences to which it is subjected. Hyperemia, the response of a pulp to irritation of the above nature is essentially an engorgement of blood within the pulp. The initial response after momentary reflex vascular spasm is vasodilatation with hyperemia and congestion. Transudation and oedema follow. The fate of a hyperemic pulp is complete resolution or, as is more frequently the case, progression to inflammation. In recovery, the stimulus must first be removed then will follow restoration of vascular tonicity, regression of oedema, and final resumption of the previous status.

Pain in the hyperemic or inflamed pulp is brought about by swelling and pressure upon the nerves of the pulp due to the rigid walls in which the tissue is encased. Roughly, pain is proportional to the degree of irritation and to the extent of pulpal damage. Operative trauma, to which teeth are so frequently subjected, ruptures blood vessels to produce hemorrhage and disturb dynamic equilibrium. When this happens in an

unyielding cage there follows an aggravation of the congestion to produce vascular effects associated with thrombosis, hemorrhage, infarction, and necrosis. In this connection, it may be said that transudation of a serious nature will also be followed by active inflammation processes of exudation and diapedesis. If the noxious agent ceases to operate at this stage it is possible to have the reaction pass through resorption to healing by organization and fibrosis. The balance is precarious, however, and infarction and strangulation of the pulp are invariably followed only by necrosis.

Abstract from student term paper in Oral Histology, R. Quentin Royer.

Dental Students

(Continued from page 1)

that, "Authority is granted to corps area commanders to waive the provisions of paragraph 5, AR 140-33, for the appointment as second lieutenant, Army of the United States (Medical Administrative Corps), of physically qualified male citizens of the United States above the age of eighteen years who are bona fide accepted matriculants at approved dental and veterinary schools within the United States. Officers so appointed will not be ordered to active duty until eligible for appointments as first lieutenant, Army of the United States (Dental or Veterinary Corps)."

As of July 1, 29.5% of the currently enrolled students in the school of dentistry had received or had filed applications for navy reserve commissions while 68.0% had received army reserve commissions or had applications on file for the same.

Van Huysen

(Continued from page 1)

genographic studies, tumors, dental caries, and histologic changes in teeth due to various causes.

Dr. Van Huysen taught gross anatomy, histology, and embryology at the Medical College of Virginia for three years, and for the past four years he has been Associate Professor of Dental Pathology and Diagnosis at the Dental College of the University of Louisville.

We heartily welcome Dr. Van Huysen to our faculty and are sure that the combination of opportunities at Indiana, his enthusiasm, his background, and his ability will bring much prestige, respect, and development to the school in which we all have so much pride.

Induction Ceremonies

(Continued from page 1)

paid tribute to physicians, dentists, and nurses as members of professions who have a high sense of social responsibility. Continuing, he said, "It is not strange, therefore, that in time of national peril they should so quickly and willingly volunteer for war service."

Other persons on the speakers platform included Dr. Carleton B. McCulloch, ranking surviving officer of the original Base Hospital 52 in World War I; Miss Florence Martin, superintendent of nurses in that unit; Dean William H. Crawford; Dean W. D. Gatch; Mayor Reginald H. Sullivan; most Reverend Bishop Joseph E. Ritter, who delivered the invocation; Reverend W. A. Shullenberger, who conducted the benediction; Col. Walter S. Drysdale, commanding officer at Fort Benjamin Harrison; Gen. Robert H. Tyndall, director of the Marion County Civilian Defense Council and commander of the 150th Field Artillery of the Rainbow division in the first World War; Indiana University trustees, and officials and representatives of the Indianapolis Chamber of Commerce and the Indianapolis chapter of the Red Cross.

The unit, when completed, will have a total personnel of 700, including 120 nurses. There will be 73 officers, including a number to be assigned by the army and a commanding officer, also to be assigned. All officers will continue their medical and dental practices until the unit is called into active service, the date for which may be several months distant, according to the organizing officers.

Department of Histopathology Reports on Fluorine and Dental Caries

The attention of the alumni is directed to a publication in the May, 1942, issue of the Journal of the American Dental Association titled *Human Dental Caries and Topically Applied Fluorine: A Preliminary Report*. The author, Dr. Virgil D. Cheyne, is Associate Professor of Histology and Pathology, in the school of dentistry.

In the publication, which is a report on investigations conducted by the department of histopathology and research, a method is outlined for the application of fluorine to human teeth *in situ*, and the results of a clinical series of such applications in a group of human subjects are presented.

Graduate Study Takes Form at I.U.S.D.

First Student Begins His Work Under Newly Organized Program

Under the very capable guidance of Dean Fernandus Payne of the Graduate School of Indiana University, the first student has begun his work which, when satisfactorily completed, will lead to the Master of Arts Degree. Dr. Morris Stoner, who graduated in this year's class with highest scholastic average, was chosen as a graduate student and is studying under the direction of the Graduate Dean and Dr. Thomas D. Speidel, Professor of Orthodontia. Dr. Stoner was granted one of the scholarships made available by the Riley Memorial Foundation.

Remodeling of space in the dental building adjacent to the children's clinic has been completed and provides very excellent accommodations for research in problems relating to orthodontia and graduate study.

Many problems present themselves for study in this broad and important field, and one of the first to be approached is the study of the early loss of deciduous teeth and its effect on the malposition of the permanent teeth. That malposition of the permanent teeth results from early loss of deciduous teeth is supported by many clinical observations, but there is little objective evidence to support or disprove this idea. It is planned to obtain data on these points in the following manner:

By means of accurate, comparable, objective roentgenograms, photographs and models, the relationships of the oral and dental structures will be recorded periodically. Precise measurements can be made on these serial records. These records will be made of the same children on whom the caries study is made. These children will receive only the minimum essential dental care, i.e., prophylaxis of the teeth and extraction of infected teeth. This situation should be comparable to the conditions in which a socialized dental program would operate as such a program's first objective would be the elimination of infection and would be unable to do corrective treatment.

Thus, the information obtained from this study should be of value to both the social health worker and the dental practitioner.

Alumni Bulletin Received "At Sea"

The editor of the Alumni Bulletin recently received a letter from Lieutenant Jarabak, Dental Corps, United States Navy, in which he acknowledged receipt of the April issue of the Alumni Bulletin. He is assigned to the U. S. S. Albemarle, a seaplane tender, which is now in service "somewhere at sea."

Lieutenant Jarabak graduated from the school of dentistry in 1939. He successfully completed the regular navy entrance examination shortly after his graduation and was commissioned as Lieutenant, Junior Grade. Since that time he has been promoted to a Senior Grade or full Lieutenant.

A brother of Dr. Joseph R. Jarabak, Indiana Harbor, Lieutenant Jarabak visited the school of dentistry to renew acquaintances with the members of the faculty during a recent leave.

Facial Restoration Case Reported

Prosthetic Section Restores Mutilated Head and Facial Structures

(The recently established Facial Prosthesis section of the department of Prosthetic Dentistry is now actively functioning as part of the school of dentistry curriculum. The following case report of a recent replacement has been submitted by Dr. John McCullough who is directing the work of the Facial Prosthesis section—Editor's Note)

Because of the continually increasing number of cases with facial deformities and mutilations, a course in Facial Prosthesis was added to the curriculum of the Prosthetic Department of Indiana University School of Dentistry in January, 1942.

Up to the time of this writing disease and surgery, together with traumatic injuries, due to accidents, have constituted the reasons for restorations of this nature. However, it is felt by many that, as evacuations take place from the far flung battlefields of this war, replacements will be necessary for those traumatic facial injuries incurred in combat warfare. Some civilians will probably be maimed in the course of bombing attacks, and those people will also be candidates for either plastic surgery or prosthetic restoration—whichever may be the most feasible and produce the best results in a particular case.

While quite miraculous results are daily attained through plastic surgery, it has been determined that in some instances the results obtained by either surgery or prosthesis would be very comparable, and in such cases the choice may very well be left to the patient. In other cases the degree of mutilation is so great and the time required for hospitalization and surgery are so prolonged that the probable end results of such cases do not economically justify plastic surgery. All of this type of cases at the University Hospitals are prosthethized.

First Half Year of Service Completed

By July 1, this section of the Prosthetic Department will have been operating for six months, and during this time eight cases have been cared for, two of which were entirely experimental, at the request of the Plastic Surgery Department, and will later be completed as surgical cases.

Five cases were actual replacements of facial deformities, and in each of these cases the replace-

ment was made with a pre-vulcanized latex with a variation of other materials and dyes as each case required. The remaining case was an intra-oral replacement and was made of an acrylic resin.

Any one of several plastics may be used as well as latex in some cases, although the type of material to be used in a particular replacement is controlled largely by the existing conditions in the tissues of that specific case.

Case Report Presented

The accompanying pictures illustrate the results obtained in one of these cases and there follows a brief description of the work entailed on this particular case.

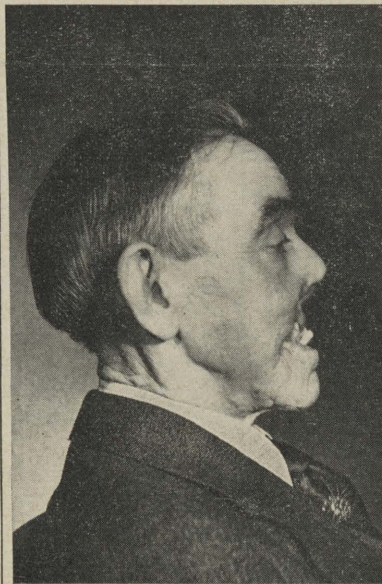


Figure 1

The disfigurement was the result of a carcinomatous growth removed in 1914 by arsenic paste. Because of the facial mutilation resulting from this treatment, the patient had neglected the mouth esthetics completely as can readily be seen in the photograph taken before any work was begun. (Fig. 1). The remaining natural teeth were removed, and full dentures constructed before anything else was attempted (Fig. 2). The dentures presented a problem because of the immovable scar tissue in the anterior part of the mouth particularly around the periphery of the dentures.

After the plates were functioning satisfactorily a face mask was made, the impression being taken in solvite, and a model or mask was poured in a cast stone. On this mask a wax model of the upper lip and the nose was constructed and then fitted to the patient and the necessary adjustments made.

This model was then invested in two halves and the wax washed out with boiling water after separation. Care had to be taken not to get the mould too hot because

the wax must not penetrate the plaster. If the "boiling out" procedure is followed as in denture cases, the wax penetrates the plaster and produces a film that later

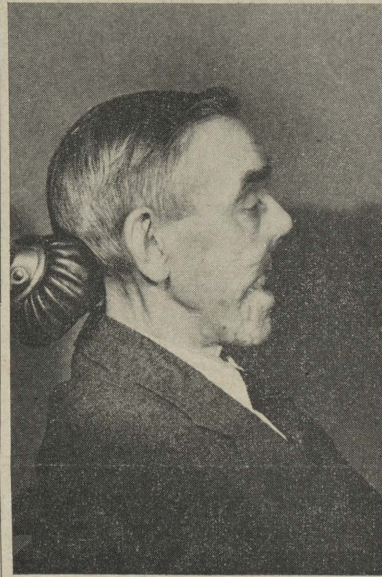


Figure 2

prevents the latex from dehydrating properly. Since the latex is a liquid material and therefore poured into the mould, a funnel shaped aperture was made through the back half of the mould for pouring. This also allowed a bulk of material to compensate for shrinkage in as much as latex "cures" by dehydration.

In this case one drop of a 1% solution of Biebrich Scarlet was added to 50 cc. of latex. When the dye had been thoroughly mixed with the latex, the mixture was poured into the mould and was allowed to stand for 24 hours. The appliance was then removed from the mould and left exposed to the air for another 24 hours.



Figure 3

At this time the replacement was ready for trimming and fitting to the patient. The trimming was done with sharp scissors, and

a liquid adhesive was applied to hold the appliance in place. In order to remove the sheen from the surface of the rubber most patients carry a compact and make up from time to time with powder. This produces a very skin like appearance on the surface of finished rubber replacement (Fig. 3).

Another case recently completed involved filling the entire orbit with latex and the incorporation of a glass eye. The technique and pictures illustrating the results obtained in this case will be published at a later date.

While, of course, the physical change is great and makes the patient again presentable to society without the use of bandages and patches, the psychological change effected by such replacements is so great that the patient seems to take on an entirely new outlook on life. When this occurs, the operator knows the case is successful and feels that a very real accomplishment has been made.

A. N. Burks, D.D.S., Dental Intern, Indiana University Hospitals, assisted in the work on the case here reported.

State Licenses Received By 1942 Graduates

Gratifying reports have been received concerning the performance of the members of the 1942 graduating class in their scholastic and operative demonstrations before the Indiana State Board of Dental Examiners. The examinations, which were the first to be given a class graduating as part of the accelerated war curriculum, were held in the school of dentistry building on May 11 to May 14 inclusive.

The four day examination consisted of two days of intense testing of the graduates' knowledge of the theory subjects studied during their four years of study and two days of operative demonstrations. The latter two days were divided into one day in which denture and crown and bridge construction was demonstrated by the applicants for state licenses and one day in which their clinical ability in various phases of operative dentistry was demonstrated.

The results of the examinations which were announced recently by Dr. D. Gordon Lamb, secretary of the Indiana State Board of Dental Examiners, revealed that all members of the 1942 class who applied for the examinations were successful in their efforts and have been granted licenses to practice in the state of Indiana.