This item is part of the North Carolina History of Health Digital Collection. Some materials in the Collection are protected by U.S. copyright law. This item is presented by the Health Sciences Library of the University of North Carolina at Chapel Hill for research and educational purposes. It may not be republished or distributed without permission of the Health Sciences Library.

The North Carolina History of Health Digital Collection is an open access publishing initiative of the Health Sciences Library of the University of North Carolina at Chapel Hill. Financial support for the initiative was provided in part by a multi-year NC ECHO (Exploring Cultural Heritage Online) digitization grant, awarded by the State Library of North Carolina, and funded through the Library Services and Technology Act (LSTA).

For more information about the collection, or to search other volumes, please visit:

| | http://hsl.lib.unc.edu/specialcollections/nchealthhistory | |
PROCEEDINGS
OF THE
NORTH CAROLINA DENTAL SOCIETY

FORTY-SEVENTH ANNUAL MEETING
HELD AT
CHARLOTTE, N. C.
JUNE 28-30, 1921

AND
THE NORTH CAROLINA LAWS RELATIVE TO DENTISTRY

CODE OF ETHICS

Dr. H. O. LINEBERGER, Publishing Committee
Raleigh, N. C.

RALEIGH, N. C.
COMMERCIAL PRINTING COMPANY
1921
OFFICERS AND COMMITTEES, 1920-1921

Officers

Dr. W. M. Robey, President,
Charlotte, N. C.

Dr. John J. Battle, Vice-President,
Rocky Mount, N. C.

Dr. H. O. Lineberger, Secretary,
Raleigh, N. C.

Dr. Browning Lewis Crump, Essayist,
Laurinburg, N. C.

Dr. R. M. Morrow, Treasurer,
Burlington, N. C.

Committees

EXECUTIVE

Dr. J. H. Wheeler, Chairman, Greensboro, N. C.
Dr. J. H. Judd, Fayetteville, N. C.

Dr. J. A. McClung, Winston-Salem, N. C.

ETHICS

Dr. J. R. Edmonson, Chairman, Wilson, N. C.
Dr. W. T. Martin, Benson, N. C. Dr. W. B. Ramsey, Hickory, N. C.

LEGISLATIVE

Dr. F. L. Hunt, Chairman, Asheville, N. C.
Dr. J. M. Fleming, Raleigh, N. C. Dr. E. J. Tucker, Roxboro, N. C.

AUDITING

Dr. Whitfield Cobb, Chairman, Winston-Salem, N. C.
Dr. P. C. Hull, Charlotte, N. C. Dr. J. M. Holland, Statesville, N. C.

ORAL HYGIENE

Dr. J. C. Watkins, Chairman, Winston-Salem, N. C.
Dr. J. C. Johnson, Raleigh, N. C. Dr. C. C. Keiger, Charlotte, N. C.

PROGRAM

Dr. H. L. Keith, Chairman, Wilmington, N. C.
Dr. R. M. Olive, Fayetteville, N. C.

BOARD OF EXAMINERS

Dr. J. Martin Fleming, Chairman, Raleigh, N. C.

Dr. F. L. Hunt, Secretary, Asheville, N. C.
Dr. J. H. Wheeler, Greensboro, N. C.
Dr. J. S. Spurgeon, Hillsboro, N. C.
Dr. C. A. Thompson, Wilson, N. C.
Dr. J. S. Betts, Greensboro, N. C.
Selwyn Hotel Ballroom, Charlotte, N. C.

Tuesday Evening, June 28, 8:30 o'clock.

The meeting was called to order by Dr. J. H. Judd, President, Fayetteville, N. C.

Invocation by Rev. H. G. Hardin, Pastor Trinity Street Methodist Church.

Address of Welcome by Col. T. L. Kirkpatrick.

Response by Dr. J. S. Betts, Greensboro, N. C.

The President: We will now have the roll call.

The President: I would like to state that Dr. Fleming is acting as Secretary for us tonight. Dr. Lineberger was detained on account of a wedding, I believe.

Applause.

Dr. Sam Levy, Charlotte, N. C.: It gives me great pleasure to introduce to you at this time our President, who will now deliver his address.

PRESIDENT'S ADDRESS

Dr. J. H. Judd, Fayetteville, N. C.

Mr. Chairman, Fellow Members, and Friends, of the North Carolina Dental Society.

The unsettled conditions of the year have afforded each of us opportunities for reading and for experimental work that were impossible during more strenuous years. Some may have allowed these opportunities to pass unimproved, while to many they have been a source of inspiration to reach higher professional standards. Then, too, many have realized that time spent in outdoor exercise, carefully and systematically taken, will yield large returns in steady nerves and clear brain. To all who have made use of these opportunities will come a realization of the fact that concentration of the mind and tireless experimenting will reveal in their work the results that they thought belonged only to great geniuses. It has been said that: "What men want is not talent, it is purpose; not the power to achieve, but the will to labor." And truly the purpose, and the will to labor, are possible to every one of us.

Some one has said that "the greatest need of dentistry at
this time is the education of the general public, not simply to
the individual care of the teeth, but to an understanding of what
to expect at the hands of the dentist. The dentist and the public
have much in common." Then it becomes our duty to give this
education to the public, and the place to begin is in the primary
grades of our schools, giving them instruction on Preventive
Dentistry and Oral Hygiene and requiring it to be put into practice
by giving daily toothbrush drills. In order to get this matter
definitely and permanently fixed in our educational system, it
must be incorporated in our text books on Physiology and Hygiene.

Another source from which much help in this training might
come is through the licensed Dental Hygienist. There is a large
field for them in this capacity, as well as their work in dental
offices. The latter needs no special emphasis, as we all recognize
their work in this field. With proper regulations, these trained
workers would be a very great help in educating and training the
young life of our State in the use and the care of their teeth.

To put the need of the Dental Hygienist more strongly, I quote
the following from a paper by Dr. Thaddens P. Hyatt, of New York,
read before our society last year: "As Dentistry progresses and
improves, it becomes more evident that dentists must have certain
conditions present in their field of operation in order to enable them
to give and to gain the best results from their work. No one condition
can be, or is, of more importance than the securing of a clean field as possible. This is the work of the Dental Hygienist,
and work for which she has been specially trained. That there
could ever have been any objection to having a dental hygienist has
always been a matter of surprise to me. I doubt if today there
remain any who still retain their opposition. All realize that
the amount of dental care needed by the people is far beyond the possi-
bility of being successfully handled by the dentist alone.

"Preventive measures of an educational nature must be established
and maintained, and practical as well as theoretical instruction
be given upon the proper care of the mouth. To my mind the Dental
Hygienist has already proved her success and her value in this
place and for many years the demand will far exceed the supply.
The Dental Hygienist is here to stay." Dr. Hyatt has made the
benefits to be derived very evident, and we realize our need, the
need of our State. Shall we line up for progress and "Get it done"? May I recommend that our Legislative Committee be instructed to
draft a suitable law for the licensing of the Dental Hygienist
and, upon the approval of the Executive Committee, present it to
the next General Assembly for ratification? And further, that the
Committee on Oral Hygiene be requested to confer with the State
Superintendent of Education relative to the incorporation of more
specific information on Oral Hygiene and Preventive Dentistry in our
Dr. Levy: I will now appoint a committee of three to report on the President's address, as follows: Dr. J. H. Wheeler, Dr. Whitfield Cobb, Dr. C. C. Keiger.

ANNUAL ESSAY

MODERN TENDENCIES AND FUTURE DENTISTRY

Dr. R. M. Olive, Fayetteville, N. C.

Within the last few years the earth has entered upon an era that surpasses the greatest expectations of the 19th century philosophers. Civilization has advanced at a rate comparable to dental progression; and today we are living in the Golden Age of Science.

In looking back upon this century we should review some of the most significant achievements of the past and note their bearing upon progress and their relevance to the science of today.

The dawn of modern science occurred in 1898 when the discovery of radium and its radioactive properties was made by the Curies. The importance of this discovery can never be too greatly emphasized,
for it marks the actual conception and birth of the principles upon which today's science is founded. The untiring investigations of those great pioneers of modern science, Rutherford and Soddy, in the field of radioactivity soon caused them to announce the hypotheses of atomic disintegration and evolution of the elements. Although these theories were at first discredited and regarded in the same light as perpetual motion, the undeniable existence of enormous reservoirs of energy in the minute atom, as evidenced by radium, soon attracted the attention not only of scientific circles, but of the whole world. Discovery followed discovery. Research became busy with the momentous question whether artificial means could accelerate or retard the processes of spontaneous disintegration. Civilized nations became excited and expectant.

Vivid fiction, exploiting the imaginary results of the discovery of atomic disintegration, was widely read, and increased the credulity of the people.

It was about this period that the Great War occurred. Although the world disaster took a great toll of life, it proved to be an impetus to scientific advancement. At the close of the war, the United States found itself the creditor of almost the entire European continent, whose nations were on the verge of bankruptcy and revolution. Unrest was widespread. Crises between labor and capital were imminent. Numerous strikes occurred and Bolshevik uprisings in Russia threatened to undermine the governmental control and order. The air seemed charged with something that stifled all thought of resuming pre-war existence. Over all hung unconscious, vague dread, grasped in its entirety by only a few minds of scientific preëminence. Prophets and religious fanatics preached the end of the world and the arrival of the millenium. The world was ripe for some cataclysm that would overwhelm civilization and possibly sweep all life from the planet.

The world-wide spirit of unrest and discontent as the resultant aftermath of the recent war, or as one writer has termed it, the moral shell-shock from which the world is suffering, has very much affected the world of dentistry. The reaction of the dental profession has been a forcible realization of the necessity of the adoption of the methods of practice which will more nearly meet the increasing demands upon dentistry, and the most hopeful direction seems to be that of prevention.

For decades we have been endeavoring to impress upon the medical profession and the public the importance of the oral cavity as a factor of bodily health and disease, and to convince them of the latent potentialities for evil that the oral cavity harbors. The mouth has at last received full recognition as an important, if not the most important, organ in the body. It was not, however, until the radiograph came to be generally applied to dental practice that such
recognition came, and the impetus it has received, through the medical profession and the public, was so overwhelming at one time that it threatened calamity to the dental profession. Indeed, the time is so recent we have not entirely recovered our equilibrium.

From absolute disregard of the human mouth as a factor in bodily disease, to considering it the most potent factor in the causation of bodily ills, would seem a giant stride, but it is one that the medical profession can and did make with great ease. In fact the medical profession has been notoriously facile in its chameleon-like changes from one fad to another for many centuries. It is prolific in fads, which soon pass into oblivion, which they deserve and herein is the hope of the future in our present newly developed relationship to our mother profession. The medical profession, we feel, is unquestionably equal to the task of retracing its extreme radical steps toward elimination of all diseased dental conditions to a safe and sane ground. Indeed, we are happy to see that some of the leading medical men have already seen the dangerous extreme towards which they were tending and have called a halt, and are now in a mood to concede the claims of the more conservative element of dentistry. This is, and should be, for if the focal oral infection tide had continued to swell we should soon have become a toothless race. The physiologic function of the mouth and teeth as the first, and one of the most important, of the organs taking part in the process of digestion, seemed to be entirely disregarded and our path of vision to the ideal in dentistry seemed hopelessly obscured.

The opprobrium of such radicalism is not all upon the medical profession; some members of the dental profession have gone to as great extremes as the medical profession, and so we are still exhibiting hysterical symptoms of radicalism. One prominent English dentist went to the absurd extreme of extracting all of the teeth of one of his young children in the hope of avoiding all numerous evils which have been attributed to focal infection in the oral cavity.

As long ago as 1882, the well-known Dr. Welch, editor of the Items of Interest, in commenting on the tendency, likened the dental profession to Barnum’s elephant on a see-saw: “His anxiety to get to the extreme height of the plank makes him pass the center, when he finds himself suddenly brought to the ground. Though he often repeats his experiment, he is seldom content with the most elevated position attainable—the center.” However, it is an ill wind that blows no good, and the beneficial result of our most recent fetish has been to awaken the dental profession to the sins of commission and omission in the past and to arouse in all ranks the desire to improve the methods of practice continually, so that we may creditably perform the mission of dentistry: namely, to practice and preach
preventive dentistry, and to save teeth thereby rather than extract them.

Much of the radicalism above referred to has come from a misinterpretation of radiographic findings, and this valuable addition to our practice will eventually, we feel, prove to be one of the greatest advances made in many decades past. When we arrive at the point where we can properly interpret our findings, we do not believe they will point, as some think at present, inevitably to the removal of every affected tooth. Too much reliance is being placed upon the X-ray film and its interpretation as the final diagnosis of all cases. It will eventually prove an invaluable adjunct to dental practice, but it will be as a diagnostic aid to clinical manifestations.

The medical profession has challenged us to make the next greatest step in preventive medicine. We are taking that step, and the public is impatiently awaiting the result. We cannot make the step successfully, though, without the cooperative aid of the medical profession. Mayo says the trend of modern medicine and dentistry is bringing their fields more closely together. The recent war was undoubtedly the means to this desirable end, but more recently this cooperation in some quarters is more apparent than real.

Varied efforts from various directions are being made to solve the problem of caries. Research work in this field is encouraging, and we believe the most promising field of discovery in this line is in the diet. The character of the saliva undoubtedly has an important bearing on the prevalence of caries, but when the much-discussed question is better understood, it will very likely throw light on the caries causation.

At present, the greatest difficulty the profession has to deal with is lack of interest in research. The average dentist is so busily engaged in practice that he has little inclination in this direction, and for this the conditions under which he works are largely to blame. Dentistry is a profession that makes enormous demands on the nervous energy, and is becoming more difficult each year. The field is broadening, and has become so large that it is fast developing, by force of necessity, into specialized branches, and herein lies the hope for technical skill.

Since the dental field is broadening, preparations must be made to take some of the burdens and responsibilities from our shoulders, so we may spend more time on the skilled and better paying part of our profession, to enable us to devote more time to research. Some of these steps have already been commenced, but have not been developed and endorsed by the profession as much as they will be in the near future.

Our first step will be to educate the laboratory assistant. The average commercial laboratory is pictured to the dental student as an institution of the devil—and should be considered. Let those who
direct the educational progress of our profession apply the remedy. Our dental colleges have a definite and urgent duty to the profession—the duty of educating the laboratory assistant. There are a number of so-called schools of mechanical dentistry. In these so-called schools it appears that the instructor should first learn before attempting to teach. Perhaps there is already an organization among the dental colleges which could prescribe the kind and amount of education necessary to train the assistant in the quickest and most positive manner. If not, one should be organized. Every laboratory assistant need not know all branches of prosthetics. Instead of graduating men from a course of mechanical dentistry, we should issue certificates for each branch taught. It might be advisable to license competent workmen as a means of protecting ourselves against inferiority.

It is not for the practicing dentist to tell the colleges just when and how the courses shall be conducted, nor to prescribe the technic; but it might be suggested the colleges can get some very practical help with cooperation with the commercial laboratory men. This may seem like the lion and lamb lying down together, but the college professor will learn that the laboratory man is somewhat of a lamb, just as the laboratory man will learn that the college professor is not such a lion, after all. The antagonism of the past has been due to the fact that the antagonists have been neither lions nor lambs, but have more closely resembled a braying animal with large ears and a stubborn disposition.

The physician has ceased to roll his pills and peddle them from house to house. He recognizes the pharmacist and makes use of the bacteriological laboratory in which work is done by persons who do not possess M. D. degrees, but who, nevertheless, are capable of getting more accurate results with less expense than it is possible for him to do.

In just such a way should we recognize our next co-worker, the dental hygienist. Her cause is firmly endorsed by the most successful men in the dental profession.

Medical and dental sciences have developed far enough to prove that an under-developed child physically is usually under-developed mentally. The dental hygienist in the public schools not only can clean the children's mouths, but teach and help them form the habit early how to prevent decay. Only about 10 per cent of the population of the United States goes to the dentist regularly. This is an age of enlightenment, and education is being thrust upon everyone to a much greater extent than ever before. If this special course is required in all our public schools, as I predict it will be in a short time, there will be a great rush to the dentist and we will not be able to take care of them. Here is where our licensed and efficient hygienist will step in our offices and lift some of the responsibilities from us.
Nations have placed the crown upon her brow,
Have sworn allegiance and have kept their vow.
Have placed the scepter in her jeweled hand,
And made her ruler of her native land.

Poets, her charms and praises oft have sung,
When joy prevailed or sorrow sad hearts wrung.
Have pictured her the harp, whose joyous strains
Cheered fainting hearts and bade them hope again.

Science has wedded honor to her name,
And given to her deeds undying fame.
Has lauded her discoveries of truth
And crowned her visions of abiding youth.

Dentistry, too, will bear witness to her zeal.
Patient's interests to her tender heart appeal.
Has shown that she can win enlarged success
In hearts of a profession or scenes of painful distress.

The President: I will appoint the following a committee
to report on the Annual Essay: Dr. Weatherby, Dr. Betts,
Dr. Hair.

Dr. Squires: The Executive Committee has a few applica-
tions for membership, and I would like to ask that all those
who wish to join the Society will hand in their applications be-
tween now and the first meeting of the House of Delegates
tomorrow afternoon at four o'clock, so they may be read and
considered.

Now, I have asked Dr. Hunt of Asheville to give us an out-
line of the plan and the working of the districts, after which
Dr. Robey will announce the place of meeting for every section
immediately after adjournment here for organization.

Dr. Hunt, Asheville, N. C.: The State of North Carolina
is divided into five districts. The plan is that each district
shall meet at this time and elect delegates which shall form the
business organization of the North Carolina Dental Society;
and if you will notice your program you will see just what
counties are included in your particular district. I do not
know, but it seems to me that the best plan will be to call the
roll and let every man determine just to which district he be-
longs, and if you will have the meeting place announced so the
members of the different districts could meet at that particular place and at a particular time, you can get together and form a district dental society. The plan is that you will hold meetings at least once during the year and will elect officers and will elect delegates to represent you in the business meeting of the North Carolina Dental Society. Heretofore there has been some difficulty in securing a very large attendance at the business meeting proper. The men will come in and listen to the papers, and then when the little business is about to be attended to, they are not here. If you will just elect your delegates and let them attend to the business of the convention, they will probably gather at the right time, and I think provision has been made on the program as to when these delegate meetings will be held.

Now, there is one portion of the business which will be conducted in a general meeting, and that is the election of officers. It did not seem wise to expect the few men, perhaps thirty—I don’t remember just the number that are to be included as delegates from the districts—but it did not seem wise that these thirty or forty men should elect officers for this Society. So the election of officers will be a general session and everybody will have an opportunity to vote. So I would ask the Executive Committee if they will not announce at least five meeting places immediately after this general session adjourns.

The President: I will read for the benefit of those who may not be familiar with this article. (Reads Article 9 of the Constitution.)

A Member: Dr. Betts in his response tonight took occasion to refer to Dr. M. A. Bland, who is the only living charter member of the North Carolina Dental Society, and I wonder what Dr. Bland thought tonight as he looked over this audience of dentists. I count it an honor to have Dr. Bland with us and wish he would tell us a little bit about his first meeting.

Applause.

Dr. M. A. Bland: I appreciate that ever so much, but I beg that you will excuse me.

Colonel Kirkpatrick extends to the members of the Dental Society the privilege of using the rooms and offices of the Chamber of Commerce while they are in the city.
There being no further business, the meeting was adjourned to meet Wednesday morning, June 29, 9:30.

**WEDNESDAY MORNING, JUNE 29, 9:30 O'CLOCK**

The meeting was called to order by the President.

Dr. SMITHWICK: We are very fortunate in our speaker of the morning. The Government has used our young men for their services and in its effort to render them the service it feels due them, it has undertaken to restore their physical disabilities. There has been some confusion, much misunderstanding, and it is little understood by any of us who are undertaking to do it. I was in Atlanta in January, and asked Dr. Hardin then if he would not come to North Carolina at this meeting and try to make some explanations and get the matter clearly before us. He consented if he could secure the consent of the Department to come; having done that, he is with us to entertain us along the line of government dentistry, and more particularly this morning his address, I imagine, will deal with questions of ethics in the private practice. Dr. Hardin's address will be interesting and entertaining to us all. Dr. Hardin of the Public Health Service of Atlanta, Ga.

---

Dr. W. R. HARDIN, Chief Dental Section, U. S. P. H. Service, Atlanta, Ga.:

*Gentlemen:* Dr. Smithwick said he imagined something in regard to what my address at this hour would be. If he knows what it consists of, he knows more than I do. I have been trying for two weeks to formulate an address, but I am no closer to it, so far as any formal address is concerned, than I was when I started.

It occurs to me that an assemblage of dentists as you have here, if they are not already interested in everything that pertains to dentistry, any mastery of dentistry, any avenue in which the dental profession is interesting itself, they ought to be. I know that some of you are already engaged in this work on behalf of the Government. I hope that those of you who are not so engaged will be interested in anything I am about to bring to you in regard to what the Government is doing and why. The only address I have prepared is a few notes to keep me on the track.

You will observe that I am scared half to death; my knees have not trembled this way since I was married, and I never expected them to tremble the same way again, but here they are doing it. However, I do a little observing myself, so I see I am
in the hands of friends, and I will get over this in a few minutes and we will go along merrily.

I want to say in regard to the dental services rendered by the Government for ex-service men that I want to disabuse the minds of any who have the idea, that government treatment is a reward for service. The opinion seems to be prevalent that because a man was a member of the Military or Naval Service he is thereby entitled to certain government benefits. That isn't true. It is not in any sense a reward for services performed. That impression has become widespread, almost universally so in the minds of ex-service people and in the minds of the profession who have given any thought to it at all. It isn't the case. The thing the Government is trying to do is to repair the damages that resulted from military service. It realizes that in the vast majority of cases of men who have served in the military and naval service they did not receive any disability, but on the other hand, that they came out of the service in a better physical condition than they went into it. I think that is true in a majority of cases, and I think you who have observed will probably bear out such a statement. But there are a large number of men who have received some kind of physical disability, either resulting from their services or aggravated by that service, and it is those cases of disability so arising that the Government, through its Bureau of War Risk Insurance, stands ready to repair so far as possible.

There is another misconception in the minds of a great many, and that phrase, the "Bureau of War Risk Insurance," brings it to my mind, and that is that the carrying of insurance by an ex-service man has nothing to do with the treatment for disability. I think that idea is brought about by purely the phraseology. Some are prone to think that because the word "insurance" is used in connection with the Bureau that this medical and dental work has something to do with insurance. It hasn't a thing in the world to do with it. The Bureau of War Risk Insurance was originally organized to handle insurance matters. Afterwards there were a great many other things that had to be handled, and instead of organizing a new bureau for every particular matter that came up, they just turned it over to the bureau that was already organized. The Bureau of War Risk Insurance is therefore not only handling the insurance of ex-service people but it is handling all matters pertaining to their rehabilitation, their hospital treatment, their dental treatment and everything in connection with any government benefit that is coming to an ex-service person under the law. So I would like, if ever you hear the question arising as to whether or not the matter of government insurance enters into it at all, just to be able to correct that impression. It does not have anything to do with it.

I wanted, very particularly, to give you a general outline on
the kind of services from a physical standpoint that the Government, through the Bureau of War Risk Insurance, is trying to render, and why it is trying to render those services. There are about, in round numbers, four million ex-service people in this country. If the Government took the position that every ex-service person was entitled to the benefits that he asks for, it would only be necessary for us to go to the Adjutant General's office and get the muster rolls giving the name of the organization and the address of each of those four million people, and write them a letter, and say, "Come in and get what we have got for you," but it can't be done that way for the reason that, as I said a moment ago, only a comparatively small percentage had anything happen to them in the way of physical disability for which they can receive a benefit. Consequently, it is necessary for a man who feels that he is entitled to government benefits to file a claim for compensation.

The law provides that compensation will be paid for injuries received in or resulting from the military service; it provides that a certain amount will be paid monthly to a single man for a total disability, and that that compensation will be paid while that disability exists. Upon the correction of that disability the compensation ceases. The total amount allowable as compensation by law is $80 a month in the case of a single man. It is greater in the case of a married man and is still greater in the case of a married man with dependent children. But we will consider it on the basis of $80 a month compensation in the case of a single man. The first thing that is necessary for that man to do is to file a claim for compensation, and he bases that claim on his statement, his sworn statement, that he has received certain disabilities. Now, there is no way for the Government to ascertain whether he has actually received those disabilities or not, except to give him an examination. Consequently, on the receipt of his claim, properly filled out and properly attested before a notary public, accompanied by a copy of his discharge, which substantiates the fact he was in the military service and received total disability therefrom, he is invited to go to the examiner and undergo an examination to substantiate the statement that he has made in his claim. He complies with that request and receives this examination, and the examination is submitted to the proper government agency, which is the District Supervisor, the country having been divided into fourteen districts, each district in charge of what is known as a District Supervisor. On receipt by the Supervisor of the report from the medical or dental examiner, that examination is submitted to a referee. This referee is charged with the duty of deciding whether or not that man is entitled to compensation.

Now, the law provides that there is a minimum amount below which a man is not compensable. This minimum limit of compensability is 10%. In other words, if a man is entitled to com-
pensation at all, he must be entitled to at least 10% of the total amount allowed by law. If he is entitled in any degree, from 10% to 100%, for any length of time, from temporary disability to total permanent disability, he draws the compensation accordingly. For instance, if a man is found to be disabled and entitled to 50% compensation, he will draw $40 a month until the disability for which that compensation is allowed has been corrected. If it is correctible, he will continue to draw it as long as he lives. If it is not correctible, he will continue to draw it until the report of treatment shows the disability has been corrected, at which time the compensation ceases.

That compensation is payable from the time he is declared compensable, from the date the contract is made until the disability for which that compensation is allowed has been corrected. I speak now of dental disability particularly.

In the case of certain physical disability such as disability from gunshot wounds or other strictly war conditions, in a great many cases he will be found compensable from the time of discharge, and a great many claimants, much to their surprise and delight, find themselves in receipt of a check for several hundred dollars back compensation that they did not even know they were applying for.

Now, I spoke about the ratings to determine compensability being made by a referee. I want to narrow the thing down a little more to our own professional efforts. But I am going too fast. I spoke of the country being divided into fourteen districts; each district is charged with the duty of selecting and appointing dentists all over that district, where they will be most accessible to the homes of the claimants. It would not do to have just one central examining point, because there would be a vast number of men who for various reasons would have access to that point. Now, our district headquarters in the Fifth District, this one, is in Atlanta. We could not get an examination of very many of the claimants from western Tennessee and up here in North Carolina, they would not come. So we go to them. In order to get everybody who makes a claim examined, we appoint dentists wherever we can find them. The original theory was to appoint one in each county to take care of the claims arising in that county, and as near as we can do that we are still adhering to that rule, but it does not work always. There are some counties in which we have to have several, and there are counties in which we could not find anybody, sometimes because there is nobody there and sometimes because we could not find the right kind of man. We have now in this Fifth District six hundred dentists to whom the patient is referred for examination. We expect that examiner to make a detailed statement, on a blank that is furnished him for that purpose, of all the conditions that appear in that claimant's
mouth. We not only want to know the pathological conditions, but want to know all about those conditions that are normal at the time of the examination. So it is required that on examining a mouth, the dentist start in at tooth No. 1 and go to tooth No. 32 and makes a separate statement for each one of those thirty-two teeth, whether the teeth are in the mouth or not. If it is out, say it is out, and if it is there, say so. If there is anything abnormal about it, say so, and say what it is. In that way we get, as near as it is possible to do so, a picture of the oral condition of the man who is making the claim. As soon as that examination is correct—sometimes we wear them out sending them back to the dentist to get them made out right—after the thing is corrected, if it isn't completely worn out, we submit it to the referee who is appointed for the purpose of rendering a rating as to how much compensation that claimant is entitled to receive. He takes the examination chart and compares it with what is known as a table of dental rating. This table of dental rating consists of ten paragraphs, each paragraph stipulating as to some condition that must be present in the mouth of the claimant in order to entitle that claimant to at least 10% compensability. If there is a condition shown in that mouth which is covered by any other paragraph or any combination of paragraphs, the referee declares that man entitled to compensation. The claimant is then immediately notified that he was declared entitled to compensation on such and such a date in such and such an amount, whatever it was; usually in dental cases it is a 10% compensation, although some cases will rate as high as 50%, and a few as total disability cases; but the average amount of compensability in dental cases is 10%. Now, the man is entitled to treatment for the condition for which he is compensable; so the first thing to do is to ascertain whether he is entitled to any compensation, and having ascertained that fact he is automatically entitled to the treatment that will relieve that condition; and if the dental surgeon who examined his mouth has indicated treatment for that condition which complies with the regulations laid down by the Bureau in Washington, that treatment is authorized. If he has not done so, we work with him by degrees until he does get it according to the specifications laid down by the Government.

Now, we realize that it is a very difficult thing to practice dentistry by mail; if any of you don't realize that, you are welcome to my job a little while, and you will soon find that it is a very hard thing. We never see the patient, and yet we are compelled to render this service according to specifications. I am drawing somewhat on this difficulty of getting together, I may say, with the dental examiner at a distance because of this fact: I am hoping that quite a number of you gentlemen who are not now engaged in the Government's treatment of the ex-service people will be so engaged, and I want to tell you what you are up
against before that time. Our effort is now to do two or three things: the first thing is to secure the services on behalf of the Government of the best men in the profession. Unfortunately, there has been a great number of cases—I will not say all cases, that would not be true—but in a number of cases it has been impossible to secure the services of the dentists who measure up to the proper standard. We hope to be able to overcome that difficulty and secure the best men in the profession as the representatives of the bureau; but remember, we have not been able to secure the kind of men in those particular instances because they are busy men; a man who is a competent and expert man and has the right kind of a standing in his community is already busy, and he has said to us, "I don't want to fool with it; there is too much red tape about it"; and he is absolutely right. There was too much red tape about it and we could not help it, and we don't blame him. But now we have got the thing down very recently; in fact, we have hardly got it changed to our satisfaction yet, but are doing so. There will not be so much red tape about it and there will not be so great a delay, and I believe we are going to be able to secure the services of the representative men of the profession, and as a result of that a great many of our troubles will be over.

I don't know whether it will be interesting to you or not, but I want to say right here something about the manner in which this work has been handled in the past as compared with the way it is being handled now. I spoke a while ago about a referee to whom all cases were referred for a rating. That refree is in Washington. From each one of the fourteen districts a copy of every examination blank had to be made and must be forwarded to Washington, there to receive the ruling as to whether or not that patient was entitled to compensation. That had to be forwarded back to the district office and in turn turned over to the claimant. There were so many cases that we just simply swamped the Washington office to where they could not do anything. As an illustration of that, I will tell you that on the first day of May I had cases in Washington waiting to get a ruling that had been there since the 4th of last July, and there had been no ruling up to the first of May. About that time there was an order issued decentralizing the central office and placing this in the district office, and a referee was assigned to each district office to perform that duty. The result of that has been that where in the previous sixteen months that the office had been running, up to the first of May, Washington had given us a ruling in seven thousand cases, the work was decentralized and we commenced making ratings the first of May in our own office, and since that time, up until the 25th of June, handled five thousand cases. So there will not be so much delay in the future as there has been in the past, and the reason for that
delay was we had to send them to Washington, and they stayed there. The Fifth District's office not only handled the cases that came to it during those first two months, the current work, the last of which is being sent out this week, but they handled all the cases that Washington failed to rule on from July on, until the following May, because they were sent back to us in great bundles with no action taken and we had to take action on them. I am not intending to boost the work of my own office because the same thing happened in all the other fourteen districts; it is just the result of a change of system.

Now, the rating as to compensability having been made by the referee from a purely dental standpoint, let us assume that the man has been found not entitled to compensation, because he did not receive, as shown by his examination chart, sufficient disability to entitle him to compensation under the law. He may get dental treatment under one other condition: If he has suffered some other disability and is receiving compensation and treatment for that disability, and it is of such nature that it can be helped, and the cure of it can be promoted by the rendering of dental treatment, we are authorized to render that treatment. If a man is drawing compensation for the loss of a leg, we could not help him by fixing up his mouth; so that does not get him anywhere. If his case has been disallowed on its dental merits, even though he is drawing compensation for another disability, we could not help him by dental treatment and we could not render it; but if he is disallowed dental treatment and he is receiving government treatment for tuberculosis, rheumatism, heart lesions or anything the cure of which can be promoted by the rendering of dental treatment, his treatment will be authorized on the showing of those facts. We get those facts from the medical records which are available either in the office of the District Supervisor or at the head office in Washington. We are arranging now for all records of every case in a given district to be available at the district office. If he is found entitled, the search stops right there; if he is found not entitled, the search proceeds further into the medical records to see if there is anything else the matter with him which we can help. That will probably explain a number of cases that some of you have heard of, where one man got treatment and another did not, and you could not tell why.

The claimants are constantly writing in this question and making this statement, "I was in the service two years; I went to France; I ate hard tack"—which, by the way, he did not—"and I did this and so. My neighbor was in the army six weeks and he never got out of this country; he has been rendered dental treatment and mine has been disallowed. I feel like I am entitled to it." If it was a reward for services, I feel the same way about it; but one man has shown that he had a dental disability which came under
one paragraph of the table of dental ratings laid down by Congress, and the other man did not, and that is all there is to it.

You will probably be interested in a little statement of how extensive this work is becoming. I am not going to burden you with statistics at all, but one or two will probably be of some interest. Since the organization of the Fifth District office in Atlanta, comprising the States of North and South Carolina, Tennessee, Georgia and Florida, we have made 11,000 examinations. There are 355,000 ex-service people in this district. The office has been running eighteen months and at the present rate of applications, if all of the 355,000 applying for dental treatment, file claims, I fear it will be about forty years before we get the last examination made. Out of that 11,000 examinations made we have authorized treatment in the case of 3,726. You can see about what the percentage of claims allowed is to the number of claims filed.

The average cost—now here is something that will interest the dentists—the average cost of each case authorized for treatment is $92. The Government is spending some money for this thing. The Government is spending a great deal of money that is wasted, and it is the fault of the dental examiners. I want you gentlemen who are not dental examiners to please befriend me, because if I make another statement like that I am afraid the ones who are will get after me. We are wasting a great deal of money by indicating treatment that is not justified. I have known dental examiners who have had, I will say, five years practice in a small town—none of them in North Carolina—who never in the course of all their experience have had a case amounting to $100 as private practitioners, and they never think of sending in a blank to indicate treatment in an amount less than $250 or $275. Either they are doing their private patients a grave injustice in failing to do as much work as their mouth needs, or they are doing the Government a grave injustice in recommending more than the Government patient needs. I will leave that with you to decide, which is which; I do not know. That is where part of the money is going, but I feel safe in saying that most of it is expended in a proper and legitimate manner. We are trying to eliminate every possible cause of illegitimate expenses, and I think we are improving conditions right along. We will improve them more if, as I said just a moment ago, we can secure the services of the representative men of the profession.

We have a great many different kinds of claims filed; a great many different kinds of statements made, and it causes endless correspondence to get those claims accurate and acceptable to the Bureau; and then we have a great many complaints arising both from the claimants and from the dental examiners. We have endless complaints arising from other agencies that are not government agencies but are trying to help the thing along. The American
Legion, of which I am proud to be a member, tried its best to help things along and it very frequently succeeds in obstructing the progress rather than helping. The Red Cross tries to do the same thing, and in a great number of cases handled by these agencies they succeeded in bringing to our attention cases that should be so brought in, and in a number of other instances they write us letters calling our attention to things we have handled, filed away and forgotten about. So that is part of our routine work—handling that correspondence.

We have some things that amuse us once in a great while. Usually in our office we are in a very bad humor because the sunshiny things don't happen often enough to offset the tedious things. But I want to tell you one little thing which happened not long ago, which will give us a laugh for some days to come, I think. We received a claim authorizing examination. It went through, was found entitled to compensation, the work was authorized in the amount of $54. We did not hear anything more of it for some time, and if I remember rightly, we wrote a follow-up letter asking the claimant if he had ever reported to receive this work. At all events, we got a letter from him saying that his personal affairs were so that he could not go to the dentist, who was some distance away, in order to receive this work, but that his father was so he could go, and would we let him go and get the work done. He said, "I don't know whether the Government will permit this or not, but the old man needs some dental work and he needs it worse than I do, and if you can let my father go and get this $54 worth of work done, do so; if you can't, please send me a check for the amount."

Now, there is another phase of the work—I am afraid I have gone into some tedious details—as to after getting it done, how to get anybody paid for it. Of course, no dentist is particularly interested in that; but as a matter of general information, I may say that having completed the work he is authorized to do, he records it on the blank page of the same chart he originally made out, for the reason that it may be checked up against what he was authorized to do, and in spite of anything I can do, about 300 out of the 600 dentists persist in making out separate bills and government vouchers, and they make them out sometimes on their private bill and letter heads and mail them from every point of the compass to Washington. The only way we can possibly get paid, as I have said, is to indicate the work done on the blank page of the chart on which the work is authorized, send it to me, I check it, and if it is as authorized, I approve it and send it to Washington and that is the last I hear of it. I don't pay any bills; all I do is to authorize and approve the payment of bills. Whatever my office approves, Washington pays, and then if later on it turns up in the auditor's office, which it sometimes does, about ten months or a year after-
wards, that there is any difficulty, any dereliction shown, any
difference between the items of the amount authorized and items
of the amount paid, or any difference in the total, I get a letter
from the auditor's office saying, "We have overpaid Dr. So-and-so
in such and such a case $4.00;"—whatever it was—"please send
a check payable to the Treasurer of the United States for this
amount." I have to either forward that check or get it from the
dentist who did the work, and endorse it and forward it. Now,
that entails a good deal of work in seeing that those things are
correct before they go to Washington, and will explain why a
great many of them are sent back to the dentists for correction.
If he has done any work he was not authorized to do, it is our
business to run a line through it and mark it off. So we try to
get complete instructions into the minds of the men who are
doing this work, and we try to find those men into whose mind it
will not be so difficult to get those instructions so that we will not
have any trouble when it gets into the office of the auditor.

Now, there is another phase of this government dentistry, gentle-
men, which I think is more important than the work we are doing
right now. That is important, in all conscience; but the principal
effect is going to be found in what I conceive to be two ways.
we are trying, through the specifications of the character of work to
be performed, to raise the standard of dental services. Now, you
who attend dental conventions will not concede that our specifi-
cations are much of a raise. I concede in the practice of men who
are in the habit of attending meetings of this kind there is not
much of a raise; but I am talking about the man who never goes
to a convention, the man who is still content to travel along in
the same old rut; and unfortunately we are forced to use the services
of a great many of those men because he is there where we need
him and there is nobody else there. Now we are trying to raise
the standards of dental service rendered, and I think there
is going to be a benefit to the man who is doing it; unques-
tionably, it will be a benefit to the man for whom it is done, if
done the way it is authorized. The chief benefit to be derived is
to the general public. This matter of the Government interesting
itself and providing dental and medical treatment, especially dental
treatment, for such a large number of men (some of them are
found in every little hamlet and every little community), is spread-
ing the gospel of good modern dentistry and its value to the health
of the general economy in a way which could not have been done
in fifty years through any other agency. People are realizing that
if the United States Government conceives that dental treatment
is of enough importance to spend the amount of money on it it is
spending, there must be something to it; and it is the greatest
advertisement dentistry has ever received. People who never had
any instructions in regard to the value of a healthy mouth are
now, through the Government agencies, receiving that instruction, receiving the treatment; and they are receiving that instruction, even though their case has been disallowed, because the very fact that a man applies for dental treatment shows he values it. shows he has read somewhere that it will be of benefit to him if he gets it and the lesson has been brought home.

I don't know, gentlemen, whether I have succeeded in making the talk of any interest to you or not. I have done my best. I am no public speaker whatever, as you have discovered. I may have left out the very thing you would be most interested in knowing. If there is any phase of this matter of dentistry in its relation to the ex-service person, I wish you would put it in the form of a question, and I will do my best to answer it.

A Member: What about the prices?

Dr. Hardin: Our prices up until the 15th of June in this district were entirely inadequate. About the middle of April I was ordered to Washington for a conference, with others who were ordered there for the same purpose, and was instructed to prepare a revised fee list. The Chief of the Bureau said: "You are the men who are out in the field doing this work and you ought to be the ones who are best qualified to say what an adequate and proper fee is; now, you fellows get around this table here and spend just as much time as you feel like to make a revised list of fees, submit it to me, and I will submit it to the Secretary and Treasurer for his approval." We spent two days at it and we worked awfully hard on the list. On the 8th day of June I received a revised fee list with only one little minor change in it, just as we fixed it. The revised fee list we conceive to be valuable for two reasons—in paying the dental examiner a more nearly adequate fee for his services and in making it worth while for him to indicate a different class of treatment to that which was being indicated before that time. To illustrate that: Up until the time this change in the fee list took place, from a financial standpoint, it was worth more to the dental examiner to indicate bridge work wherever he could because he got more money for it. Bridge work is not always the best thing. I think that the dental profession generally will bear us out in our position that we do too much bridge work and that we ought to get back to the old days when we made the right kind of partial plates for the restoration of
the teeth. So we made our fee lists that Dr. So-and-so would indicate a plate rather than bridge work, if he is guided by his financial interests at all; and if he is not, and is guided entirely by the benefit to the patient's mouth, he will indicate it anyway. The fee list now, I think, as near as we could arrange it, is a fair general average based on the fees received for similar work. That list was not the opinion of men from given districts, but there was a representative there from each one of those districts and everyone put in his views and we got an opinion from the whole country.

A Member: How many cases of Rigg's disease have you on file as being cured?

Dr. Hardin: None.

A Member: As I understand it, these men get no service from the Government because of their military or naval service. Is that right?

Dr. Hardin: Yes. Any disability received in service or aggravated by service, the dental examiner is required to sign his name to a statement on the examination blank as follows: "I hereby certify that it is my professional opinion that the conditions shown on this chart for which treatment is indicated were caused or aggravated by the military service."

A Member: What happens when there isn't much the matter with the mouth, only a diseased mouth condition?

Dr. Hardin: The doctor makes a statement that the diseased conditions shown as a result of the oral conditions would be there even though the man had not been in military service, and the statement of the examiner is that it is his professional opinion that they resulted from or were aggravated by his military service. If it is not the conscientious opinion of the doctor that he can sign that certificate, he is at liberty to change it until he can sign it. He can put in the word "not."

The President: I am sure you all enjoyed Dr. Hardin's address. Is there any other question any of you would like to ask him in regard to this subject?

Dr. Wheeler: I just want to express my hearty appreciation for his discourse of this subject. It has been a delightful entertainment and I thoroughly appreciate everything he said to us, and I wish he had said twice as much.
Dr. Smithwick: Several of us dental examiners are anxious to see that the young men get the service they are entitled to have, and to aid Dr. Hardin in getting the work done. To that end and with that purpose in view, I am going to make a motion that all of the dental examiners meet this afternoon at the time the State Society is holding their district meeting, which is 4 o'clock. I move that all dental examiners meet promptly at 4 o'clock in this hall.

Dr. Fleming: I want to call the attention of the members of this Society to the wonderful display of dental equipment. We haven't had anything in the last fifteen years that compares with the exhibits of the men who have come to this meeting. I have just wanted to express the appreciation of the Society to those exhibitors for the beautiful exhibits, and to ask the cooperation of the Society in observing their hours set for the showing of those exhibits. They don't hold their exhibit rooms open while the Society is in session and I ask you to conform to their hours. I do want the exhibitors to know we appreciate their beautiful display.

Dr. Robey announces the meeting places of the different districts.

Secretary reads communications.

Dr. J. H. Judd, President North Carolina Dental Society,
Charlotte, N. C.

I deeply regret that duty compels me to have to forego the pleasure of being with you today. I am wishing for you the best meeting in the history of our Society. Please convey my warmest greetings and best wishes to all.

Fraternally,

W. T. Martin.

Dr. J. H. Judd, North Carolina Dental Society,
Charlotte, N. C.

On account of illness will not be able to attend meeting. Best wishes to you and all the boys.

E. R. Warren.

Dr. J. S. Hoffman,
Charlotte, N. C.

Impossible to come as planned; sincere regret; letter follows.

Donald Morrison.
H. O. Lineberger, Sec. North Carolina Dental Society, Hotel Selwyn, Charlotte, N. C.

The American Fair Trade League sends cordial greetings and warmly appreciates cooperation of North Carolina Dental Society in cause of honest merchandising as embodied in Stephens-Kelly Standard Price Bill. We are gaining steadily by public education, but victory can only be won by continuance of earnest individual work.

Edmond A. Whittier,
Secretary-Treasurer American Fair Trade League.

Dr. H. O. Lineberger, Secretary North Carolina Dental Society,
Selwyn Hotel, Charlotte, N. C.

My dear Dr. Lineberger:

Your letter of the 20th instant greeted me upon my return from temporary duty in attendance at the annual meeting of the National Dental Trade Association at Hot Springs. I noticed with great pleasure your manifest intention to courteously modify your program to meet the requirements of my short visit. For this expression of courtesy, I desire to assure you of my very great appreciation.

I am now constrained to report additional bad news relative to my anticipated visit. The instructions accompanying my orders to Carlisle make it necessary for me to report there on the 30th instant, and this, of course, will oblige me most reluctantly to cancel my engagement to appear before your society at this meeting. To say I regret it exceedingly is but putting it mildly, as I have been anticipating with great pleasure the opportunity to visit with you good fellows of that society and address you along lines which I believe would have been of mutual interest and benefit. I had expected to voice an appreciation of the splendid response made by the profession of your State to the Nation's call during the stress of the great emergency, wherein a large number of North Carolina dentists cast their lot with the military service and were enrolled in the Dental Corps, with a record of almost 50% of their number serving gloriously in France and helping to "put it over" in 1918, and assisted very materially in writing in gilded letters the fair name of American Dentistry on the war-worn maps of Europe. I hoped to tell you of what the Dental Corps of the Army is doing for the advancement of Military Dentistry; of its decisive stand, as an integral corps of the great Medical Department of the Army, for preparedness; of its splendid program now under way of perfecting higher attainments in Military Dentistry, wherein we believe the corner stone of progress and the hope of civilization is based upon the great fundamental of education; of our success in organizing units of Reserve Officers' Training Corps in the several Class "A" Dental
Schools of the country, wherein it is made possible for the dental student to acquire progressive knowledge in military science and tactics during his four years schooling, and upon graduation to receive in addition to his diploma a certificate entitling him to appointment and commission in the Reserve Corps of the United States Army; of our plans to make this method the source of our annual replacement in the Reserve Corps, through which we will receive specially educated young men who are thus prepared to take their respective places within the military establishment when the next great call to meet the nation's emergency is made in defense of our country's sacred honor.

I had also hoped to tell you of our success in sending specially selected dental officers of the army to post-graduate schools for higher education in the specialties of dentistry; also the tentative plans for the establishment of the Army Dental School, commencing with January 2, 1922, at which institution we will carry on post-graduate instruction for the older members of the corps, in order to brush them up at regular intervals and at the same time take care of the incoming young men and give them adequate instruction in which to develop them into military dental surgeons. It would have been a source of pride to have explained in detail the admirable work now being carried on at the Army Medical Field Service School at Carlisle, wherein 50% of the student body are under-graduates in dentistry undergoing field service training as their summer instruction in the Reserve Officers' Training Corps courses.

This great pleasure being denied me at this time only fills me with hope for the future, that I may some other time have the opportunity of appearing before you and becoming better acquainted with that class of professional brethren that constitute the membership of your society, and I may say incidentally that I hope to have opportunity of coming in direct contact with you representative citizens of that great State that I may participate and enjoy some of the far-famed Southern hospitality for which you are famous; and I may say facetiously your fame in this respect has been broadcast throughout the world through the reputed remarks of one of your former governors, wherein he made some pertinent suggestions to the governor of South Carolina and conveyed impressions that in those days appealed to all red-blooded Americans. However, since the nation has come to an agreement—during the absence of some two million American patriots—and slipped one over on us, making this glorious country an arid desert, I have little doubts but what your far-famed Southern hospitality will take expressions in other directions equally as efficacious, although less stimulating and wet.

Please extend to your membership my great regret at not having the pleasure of a handshake and a little talk with each of them and let them be assured of my abiding interest in the welfare of dentistry within that commonwealth.
Proceedings North Carolina Dental Society

With highest personal regards and great appreciation for the courtesy extended me, I am

Yours sincerely and fraternally,
Robert T. Oliver,
Colonel, Dental Corps U. S. A.

WHAT SERVICE SHOULD WE EXPECT FROM SYNTHETIC PORCELAIN

Read by Dr. J. C. Watkins, Winston-Salem, N. C.

By Dr. W. L. Davies, Mulford, Del.

Is Synthetic Porcelain a restoration in a tooth, or a powder and a liquid?
Perhaps too many of us think only of Synthetic Porcelain as we buy it, rather than as we use it.
Synthetic Porcelain is not a powder and a liquid. The liquid alone is not Synthetic Porcelain; the powder alone cannot make a restoration.
Let us think of Synthetic Porcelain, for the purpose of our study tonight, not as a powder and a liquid but as a dental restoration.
When we open a box of Synthetic Porcelain let us realize that we have a material only partially manufactured. We must combine this powder and liquid under proper and definite conditions in order to produce a restoration that will simulate the natural appearance of the tooth, and permanently restore its function.
The character of our Synthetic Porcelain restoration depends perhaps as much upon our skill in mixing and inserting as upon the technical skill with which the powder and liquid have been manufactured.

Manufacture

But before we take up the study of technic let us learn something of manufacture.
Synthetic Porcelain is not merely a combination of ready-made chemicals obtained from manufactures of so-called "pure chemicals." Its manufacture begins with the making of pure chemicals from raw materials. These chemicals are all prepared in the Caulk Laboratories. Even the purest chemicals that can be bought—chemicals marked C. P. or U. S. P. by the most prominent chemical manufacturing houses—are not pure enough to use in the production of Synthetic Porcelain. And this degree of strict purity is not by any means a useless refinement. Without this strict purity we could not have the permanent, clean, unfading shades and the enduring resistance to oral fluids, both of which are such important factors in successful dentistry. Supreme purity of all constituent materials must therefore be understood as of vital importance to us: but we may for the present purposes accept that fact without elaborating upon details of manufacture.
This practical importance of purity may easily be demonstrated by examination of the untinted powder known as shade one. This shade produces an absolutely pure white, translucent mix. If this untinted shade should be of even slightly inferior purity, it would come out not pure white, but oyster white, or even darker.

You have undoubtedly observed that shade number one of ordinary silicates, intended to be pure white, is often not white, but contaminated with yellow or gray. Even the slightest impurity in the basic powder makes pure whiteness impossible, and any shade other than pure white makes natural blending of colors impossible all through the whole range of shades. Impurities may also cause defects in the appearance, strength and permanence of the restoration.

The name Synthetic Porcelain was adopted because it denotes the fact that this material is built up as a result of synthesis from elementary compounds. The resulting production is a chemical porcelain.

Chemistry

The chemistry of Synthetic Porcelain is extremely complicated. Neither the powder nor the liquid are simple compounds, and when the powder and liquid are combined the chemistry becomes still more complicated. To discuss chemistry in detail would take us, for this reason, too far from our subject; that phase of the subject may better be left to the professional chemist. We, as dentists, are more interested in the nature of the powder and liquid of Synthetic Porcelain and in the main chemical reactions which take place in our part of the manufacturing process, on the slab.

The power of Synthetic Porcelain is basically a silicate of aluminum and calcium. Other compounds are present, known as modifiers, which are added for their physical effect rather than for their chemical effect.

Next to oxygen, silicon is by far the most abundant element in the earth’s crust. It is not found in the free state but always occurs as silica, SiO₂, or as silica in combination with various basic oxides—that is to say, silicates. The purest natural form of silica is quartz, or rock crystal, which forms beautiful transparent and colorless six-sided prisms, terminated by six-sided pyramids. These crystals have great hardness; they scratch glass almost as readily as the diamond does.

Silica is present in the shining outer sheath of stems, grasses, cereals, and in the joints of the bamboo. Many natural waters, such as the geysers of Iceland, contain large amounts of dissolved silica. Pure water has no solvent action on silica in its natural form. To make silica soluble it must be fused with an alkali such as sodium carbonate, which converts it into a silicate. When silica is fused with sodium carbonate and lime it makes glass; sometimes other substances, such as lead oxide, are added.
The solution obtained by dissolving sodium silicate in water is known as soluble glass, or water glass, familiar to us as liquid silex. When this solution is treated with an acid the silicic acid is precipitated in the form of metasilicic acid, \( H_2SiO_3 \). This compound is simply Silica, \( SiO_2 \), and water, \( H_2O \). Other forms of silicic acid are also known; for instance, ortho-silicic acid, which is \( H_4SiO_4 \) formed with one molecule of Silica, \( SiO_2 \), and two molecules of water, \( 2H_2O \).

The silicates form by far the greatest number of minerals and they are derived from various poly-silicic acids, which are compounds of Silica, \( SiO_2 \), and water, \( H_2O \), in different proportions.

The chemical formula for natural silicate minerals are as a rule much more complex than we might believe. Manufactured silicates, such as glass and porcelain, do not have a definite chemical formula.

The liquid Synthetic Porcelain consists chiefly of hydrated alumino-phosphoric acid, which is skillfully balanced so as to form (in combination with the powder) a neutral translucent mass. By the term “hydrated alumino-phosphoric acid” we mean phosphoric acid in which the hydrogen has been replaced by the element aluminum, and to which the proper amount of water has been added for hydration.

We have already learned that Synthetic Porcelain is a chemical porcelain built up from elementary compounds. It has the major properties of baked porcelain, with which we are all familiar. There is, however, a very important difference between baked porcelain and Synthetic Porcelain. Ordinary baked porcelain is made by fusing together impure compounds of the same general order as those that are used in Synthetic Porcelain; namely clay (or kaolin) and feldspar, sometimes with other additions, such as quartz, bohemian glass and flint glass. Clay or kaolin is a silicate of alumina; feldspar is a silicate of aluminum and potassium; quartz is silica; bohemian glass is a silicate of potash and lime; and flint glass is a silicate of potash, soda and lead.

These materials when fused together at a high temperature produce baked porcelain, a material that varies widely in chemical composition, but which has more or less uniform physical properties, such as translucency, hardness and insolubility.

Synthetic Porcelain, on the other hand, is a chemical porcelain. The powder and liquid sets through chemical interaction, when combined either at room temperature or at mouth temperature. In other words, the liquid of Synthetic Porcelain acts as a flux and takes the place of the heat which fuses the baked porcelain. The liquid also brings about the hardening of the mass by chemical interaction, and the resulting product thus has substantially the same characteristics as baked porcelain—translucency, hardness and insolubility.
We should remember that the powder of Synthetic Porcelain is not merely a mixture of basic compounds, such as silicon dioxide, aluminum oxide, and calcium oxide with other chemicals. The product made by fusing these elementary compounds at high temperature is cast while molten into plates, and cooled. In this state it has the appearance of translucent opal glass. (Exhibits specimens.) Note the remarkable translucency and density.

This glasslike porcelain is then crushed, ground and separated by rather complicated processes which continue for several weeks.

Perfect filtration of the liquid is one of the essential processes of manufacture. Look through any bottle of Synthetic liquid—you cannot detect even the slightest trace of suspended matter. Not only is the liquid itself most carefully balanced and purified, but the very glass of the bottles is made from a special formula developed by the Caulk research departments, so that there can be no chemical reaction between the bottle and its contents.

Early Silicates

Several dental cements of the silicate type were in limited use before Synthetic Porcelain was introduced. We can see now that this early period was really a time of experimentation; the manufacturers were experimenting in their factories and we of the dental profession also experimented in our patients’ mouths. This lack of definite knowledge resulted in a combination of defects which for a long period restricted any general use of silicates. We can see now that the introduction of Synthetic Porcelain, about twelve years ago, brought about something of a revolution in dental filling materials. The manufacturers of Synthetic Porcelain not only gave us a material which had been studied and tested in a thoroughly scientific manner, but they also gave us an equally definite and scientific technique for its use. The result is that at the present time we not only have succeeded with simple restorations such as fillings, but we are confidently proceeding through a wider range of new uses.

Technic

Technic for Synthetic Porcelain differs from the technic for any other material whatsoever. This is so because Synthetic Porcelain itself is different from any other material. Synthetic Porcelain technic is not difficult, but requires merely that we adhere to a few general principles. In order to make this clear, we shall now give a descriptive outline of a practical case, following the modern methods of procedure, which are based upon wide clinical experience.

First we must note the accessories that are needed. These can all be most serviceably obtained in the Synthetic Cabinet, which is not merely a convenience, but a genuine necessity. It serves to hold the complete outfit always clean and ready for use. Stellite instruments for placing; Stellite spatula for mixing; celluloid
Ideal Mixing Conditions

Keep a plate-glass slab and Stellite spatula exclusively for mixing Synthetic Porcelain. An opalite slab, being opaque white, does not permit us to make correct blends with the lighter shades of Synthetic. Keep the slab absolutely clean, and observe its temperature. Synthetic Porcelain can be used successfully within a rather wide temperature range. The suggestions that the manufacturers make regarding cooling and warming the slab must not be construed as rigid rules, but rather as indications of the best method of obtaining ideal mixing conditions.

Successful restorations can be made with Synthetic at all normal temperatures, but mixing conditions are ideal when the slab is between sixty-five and seventy degrees Fahrenheit. If the slab is too cool we are apt to mix too much powder in proportion to the quantity of liquid. The mix will then be, to that extent, unbalanced, and setting will be too slow. If, on the contrary, the slab should be too warm, say about one hundred degrees Fahrenheit, then we will not be able to mix in enough powder to make a proper balance, and setting will be too rapid.

When we cool the slab we must be careful not to chill it down to the dew point, so that moisture will condense on it. Never mix on a moist slab. After the slab has been washed and adjusted to the proper temperature, then dry it and apply alcohol to remove smears, grease or organic deposits from the surface. Cleanliness is the first requisite for good work.

Spatulas

The spatula must be of Stellite or agate. Never use steel (or so-called "Stainless Steel"), or bone, ivory, or tantalum, because any metal spatula, other than Stellite, will discolor the mix. Bone or ivory spatulas are readily abraded by the Synthetic powder, and microscopic semi-organic grindings of the bone or ivory become incorporated in the mix, interfering with its strength, translucency, and color. Tantalum spatulas are also prohibited because they are too soft; they discolor the mix.

Stellite is the only kind of metal spatula that does not discolor the Synthetic powder and which does not become abraded. The Stellite spatula is strong, bright as silver, and especially designed for use with Synthetic Porcelain.

Blending the Shades

Select the desired shade before isolating the tooth, or teeth, from saliva. A dry tooth is opaque. If we match a dry tooth our filling will be too light. First try to select the shade by means of the
Caulk Synthetic shade guide, which duplicates many tooth shades precisely. To match all other shades, and especially the difficult shades that require blending of two or more powders, use the Caulk Shade Charts. Use your regular tooth shade guide just as you would use it if you were selecting a porcelain crown, a facing, or a vulcanite tooth. You may use either the incisal half or the cervical portion of these shade guide teeth. When you have found the right shade, then consult the Caulk Shade Chart, which corresponds to your shade guide. These charts are made for use with the Twentieth Century, S. S. White, Consolidated, Justi, and Ash Shade Guides. It is well to remember, however, that on these charts there are two blending formulas for each single specimen on the tooth shade guide. One formula, in black figures, corresponds to the incisal half of the shade guide teeth. The other formula, in colored figures, surrounded by a circle, corresponds to the cervical portion. This method gives us twice as many blends as there are specimens on the shade guides. But we must be careful to remember that the terms “cervical” and “incisal” have nothing to do with the position of our cavity. We may, if we wish, match the cervical third of the natural tooth with the incisal half of the shade guide tooth. The blending formula on the chart then reproduces that portion of the shade guide tooth which we have selected. We need not go into details on this point—we can study the shade charts later, during the discussion.

**Cavity Preparation**

A perfect filling requires a well prepared cavity.

Isolate the tooth from moisture by using rubber dam. If rubber dam is not used, then wipe the gum tissue dry with grain alcohol and apply two coats of Cavity Lining to prevent seepage. Place cotton rolls or napkins under the lip; adjust Hare Mouth-Prop and saliva ejector.

Make all cavities retentive, with square margins. Never bevel the margins as in cavity preparation for gold fillings. Remove all overhanging thin walls.

If, while a new filling is being inserted, there are any older Synthetic fillings within the area which will be kept dry these older fillings must be protected against desiccation. Coat them with Cavity Lining. The tooth must be dry. Remove the decay, and also the stained dentin. If this is possible without injury to the pulp. Sterilize the cavity thoroughly—antennors with colorless germicides. Do not use essential oils. A solution of thymol in alcohol is a splendid medium. If the cavity is deep, use Caulk Pulp Preserver, a preparation which contains thymol and pure zinc oxide, especially free from arsenic. This preparation is an efficient germicide and analgesic, and forms a protective resistant wall over the pulp, preventing pressure. Many pulps are injured because the dentin
yields while the filling is being packed into place. Pulp protection wherever possible is a fixed requirement of modern dentistry.

Dry all shallow cavities with alcohol and warm air, and apply two thin coats of Caulk Cavity Lining to its floors and walls. Do not use cotton pledgets to carry lining to the cavity. Cotton absorbs too much fluid, so that shallow cavities are often flooded and margins covered.

If the margins should be so covered, allow the Cavity Lining to dry and then go over these margins with chisels, or smooth stones, to prevent faulty adaptation of the Synthetic Porcelain restoration. A better way to coat the cavity interior is to bend a small loop on the end of a smooth broach. This loop carries a small globule of lining which can be applied to almost any cavity with ease, and still leave the margins untouched.

Never dip anything into the bottle. Tip the bottle over and back. This deposits lining upon end of the cork. Take your supply from the cork; never from the bottle. This prevents dried accumulations on the cork and neck of the bottle.

**The Mix**

Having selected the shade, we are now ready for the mix. Assemble slab, Stellite spatula, Synthetic Porcelain, plastic instruments of Stellite, tantalum or agate; celluloid strips or matrices, cocoa butter and cavity lining. Have everything clean and ready.

Never expose either the powder or the liquid on the slab until you are all ready to mix them at once. Place the desired amount of powder on the right side of slab and then stopper the bottle. Agitate the liquid with the dropper, place three small drops on the left of the slab, return the dropper to the bottle, and twist the cap to seat it securely. This is very important, because if the cap is loose, water will evaporate out of the liquid, and you will begin to wonder why your fillings set too slowly. Always protect the liquid against contamination and evaporation, both in the bottle and on the slab.

Begin the mix by drawing the first portion of powder (half of the total quantity) into the liquid. Begin to spatulate immediately. Do not merely stir with the end of the spatula, but hold it nearly flat on the slab and spatulate with a circular movement. After this first portion of powder is thoroughly incorporated, add successively smaller portions until the mix reaches correct consistency. Scrape up the whole mass and place it back on the slab again. Do this several times, and spatulate thoroughly so as to make the mix homogeneous—all of the same texture or consistency throughout the mass.

Proper consistency can be judged by spreading the mix across the slab with the spatula. In this plastic state the mix does not spread smoothly under the spatula. It breaks into soft, curling ruffles as
the spatula moves over it, and the surface glaze is just disappearing. It resembles a thick putty. Moreover, when you pat the mix with the spatula, and raise the spatula slowly, the mix rises a little and then breaks short. It does not string out.

The time of mixing is vitally important. Never take over a minute and a half to arrive at proper consistency. Over-spatulation causes slow settling and results in a weak disintegrating filling. A good plan is to make a few experimental mixes, timing them with your watch; in that way you can become proficient in making a mix of standard consistency within the minute and a half. Ordinarily, the working time available for filling and contouring is one minute. Temperature and humidity may cause slight variation in working time.

Take a small quantity of the mix, cover the cavity floor and walls thoroughly. Then add sufficient of the mass to fill the cavity slightly to excess, working the material towards and against the margins.

When the celluloid strip, or matrix, is indicated, fit it into position, fill the cavity and then draw the strip around the filling. Hold it firmly for three minutes. Never burnish over the strip; burnishing interferes with crystallization and sometimes causes a line of demarcation. Cocoa butter applied to the strip is not necessary. As soon as the filling has set initially, release the pressure and the strip will spring away from surface of filling. Coat the filling immediately with cocoa butter that has been melted on a warm instrument.

The immediate application of varnish should be avoided because the surface of the filling may be dehydrated. The evaporation of the solvent causes a cooling of the surface sufficient to cause condensation moisture. The cocoa butter is used to prevent the loss of water from the surface of the filling and to prevent moisture from coming in contact with it.

Do not attempt to remove the excess Synthetic or to finish the filling before ten minutes have elapsed. Do not use chisels or cutting instruments to remove the excess; damaged margins are sure to result. Use fine stones, disks and strips, well lubricated with cocoa butter. The cocoa butter prevents heat generation by friction, which would cause bleaching of the filling and a roughening of the surface. When finishing must be completed at the same sitting, always work toward the filling. This is just the reverse of the practice for gold fillings. After final contouring and finishing has been done with finest cuttlefish disks, a beautiful polish can be obtained by using Caulk Dental Polish applied with hard felt wheels. Use just a trace of the polish. Overloading the wheel or disk makes polishing slower rather than faster. If the filling is not to be finished at once, but at a subsequent sitting, coat it with cocoa butter, as advised a moment ago. Then wait ten minutes, remove excess butter with a dry pledget of cotton, and coat the filling with cavity lining. Never
neglect to use cocoa butter on abrasives even though the filling is to be finished subsequently. Isolation from moisture, however, is not necessary when finishing is to be done at a later sitting.

**New Uses**

Synthetic Porcelain is used at the present time not only for fillings in certain restricted cavities, but also for combination gold inlay and Synthetic fillings, window inlays, open-face crowns, Synthetic Facings, Synthetic Jacket Crowns, and for tip and corner restorations.

**Combination Inlay**

The combination gold inlay and Synthetic filling is indicated where an incisal angle is very thin and occlusion close, together with marked attrition, so that any porcelain would need reinforcement.

Prepare the cavity as for a gold inlay. Make a wax impression, carve it, and then cut away the labial surface deep enough to form a simple cavity or recess. Make the casting with any of the casting golds or clasp gold alloys. These resist flow and abrasion much better than pure gold.

After the inlay is cast and cleaned, make undercuts, with small inverted cone burrs, for proper retention of the Synthetic Porcelain. Then carefully finish and polish the inlay, and cement it to place.

The gold backing will make Synthetic Porcelain appear a little more yellow than it really is. Therefore make your blended color a little more bluish gray than the exact match.

**Window Inlays**

In the case of Synthetic window inlays, the procedure is the same as for the combination inlay, except that the lingual face of the inlay requires an opening or window to be cut through, of whatever size may be indicated. This window effect gives us full translucency and permits accurate matching of the tooth. It also serves to increase the anchorage, or retention for Synthetic.

**Open Face Crowns**

Open Face Crowns are indicated where an all gold crown would be too conspicuous. Make the gold crown complete, then cut away the labial surface and cement the crown to place. Remove the excess cement and make undercuts all around the opening of depth sufficient for good anchorage. When necessary, reinforce the incisal tip of the crown with solder. Use a Synthetic Facing Form to mold and condense the labial contour.

**Synthetic Facings**

Synthetic Facings to replace broken porcelain pin facings on bridges, or richmond crowns, can be made by molding Synthetic Porcelain with Facing Forms.
Facings that are durable and of beautiful appearance can be made easily within fifteen minutes. Select a Facing Form as nearly as possible of the correct size and cut it from the strip, leaving a little tab or handle on the incisal angle long enough to facilitate handling.

If only one pin remains in the bridge backing, scarify the backing surface with a right-angle chisel or a wheel burr; for better retention. If the backing has a reinforced incisal tip, undercut it with a small inverted cone burr. If the pins are missing, replace them with two gold screws (Steele's) or with the Jackson tee screw.

Remove all pieces of broken facing, clean the surface of the backing with alcohol, place a cotton roll under the lip, wipe the gum with a pledge of cotton saturated with alcohol, and coat it with two applications of Caulk Cavity Lining.

Fill the Facing Form with Synthetic Porcelain of proper shade and press it to place with your finger. Hold it with firm pressure for four minutes and allow the excess to squeeze out where it will. After four minutes remove the strip and coat the Synthetic Facing with cocoa butter. Wait ten minutes and then dress the facing to proper contour and occlusion. You will usually find that very little contouring is necessary. Finally coat the facing with cavity lining, and dismiss the patient.

**Synthetic as a Cement for Jacket Crowns**

When using Synthetic to cement baked porcelain jacket crowns, deflect the gingival tissues from the neck of the tooth with gutta percha, and wipe the gum dry with a cotton pledge saturated with alcohol. Then apply two coats of cavity lining to prevent seepage, place a cotton roll under the lip and adjust a Hare Mouth Prop (anterior), which aids in keeping the cotton roll in position, holds the mouth wide open, reflects light into the mouth and leaves both hands of the operator free. Make a mix of the proper shade, to a consistency slightly thinner than rich cream, and cement the crown in the usual way.

**Synthetic Jacket Crowns**

Use of Synthetic Porcelain is being rapidly extended to include large contour restorations, and the technique for manipulating large masses for full crowns and large contours has led to the development of the Caulk Crown Forms. These are celluloid shells, transparent and flexible, yet sufficiently strong to resist considerable tension without tearing or distorting, and they now constitute a valuable adjunct to good practice.

Use of the Crown Form is very simple.

Preparation of the tooth for a Synthetic Jacket Crown differs but little from that for the ordinary baked porcelain Jacket Crown.
Instead of obliterating the cavities, use them for retention. Remove all labial and interproximal enamel to slightly below the gum line, if decay has progressed to that extent. If the enamel of the cervical third of the tooth has not been affected it need not be removed. In other words, in the preparation of the tooth remember that two features are demanded, a definite "shoulder" and an "abutment." The well-prepared shoulder is a firm seat, giving additional strength to the Synthetic Porcelain and maintaining the surface alignment with the root.

Cut the shoulder at a slightly acute angle from the cervical margin. Leave no thin edges. The abutment should be planed or dressed down to the depths of the shoulder, with a gradual taper toward the incisal, about two-thirds of the length of the crown. Round off the incisal corners. This preparation is applicable to posteriors as well as to anteriors; it offers the greatest support to Synthetic and permits the strongest construction of the crown.

If the abutment is perfectly smooth, cut slight grooves at right angles across the anterior surface. This gives better anchorage. Preserve the pulp whenever possible. When the tooth is alive, apply two coats of cavity lining to prevent possible irritation.

Select a Crown Form as much as possible like the tooth to be restored. The flexibility of the celluloid allows considerable latitude in adjustment. If general dimensions are correct, but if the tooth-end is too large, slit the Form a trifle; then lap and seal it with Caulk Solvent, which will dissolve the celluloid strip and weld the lap firmly. If the Form is too small, cut as before, place the Form on the abutment, and bridge the open space with a small piece of celluloid strip, coated with Solvent. Then trim the Crown Form for desired length and gum contour.

Puncture both incisal corners of the Form with a smooth broach or explorer. These holes act as air-vents, preventing pockets and flaws in the crown. To insure perfect cleanliness wipe out the interior of the Form with a cotton pledget that has been dipped lightly into alcohol.

Dry the gum tissue with a pledget of cotton, saturated with alcohol, and apply two coats of cavity lining, which will prevent seepage. Place a cotton roll under the lip and keep the mouth open by means of a Hare Mouth Prop.

Mix the Synthetic to the shade selected. Consistency should be slightly thinner than for fillings. Fill the Crown Form full; work the Synthetic well down into the incisal corners. Remove the mouth prop, press the Crown firmly to place and have the patient close immediately, so that the incisal-lingual contact will be well established.

Hold this contact for five minutes until the initial crystallization has taken place. In the meantime smooth the form down with
your finger, sliding it once over the labial wall, from incisal to gingival. Then use a thin plastic instrument to adapt the Form perfectly on the proximal surfaces, pressing it to place with one or two firm wiping strokes from the incisal to the cervical. Don’t burnish.

Excess Synthetic Porcelain will squeeze out from under the Form at both incisal punctures. This excess serves as an indicator by which the initial set can be determined. When this excess is hard enough to snap off with a clean fracture, then open the mouth, replace the prop, coat all excess with cocoa butter, and wait ten minutes. Then trim off all excess, and apply cavity lining wherever the excess has been removed.

The patient is now ready for dismissal. Instruct the patient to be cautious, not to bite down upon the restoration with undue force for at least one hour. The Form need not be removed for several days, and it should be left on, if possible, for not less than twenty-four hours. When you want to remove it simply slit it on the lingual surface and peel it off.

Finally, the contouring and polishing should be done. Cervical margins can be quickly and correctly finished with a Caulk Amalgam Instrument, L, which is a specially designed file. Lubricate it well with cocoa butter. If the enamel-like gloss of the Synthetic is marred by finishing, it can be quickly restored by using Caulk Dental Polish with hard felt wheels—only a trace of polish is necessary.

**Tips and Corners**

The technique for tip and corner restoration is very similar to that described for Synthetic Jacket Crowns, except that we cannot use a complete Crown Form. The tapering neck of the Form will not go over the bulbous incisal third of the tooth. The Form must cover the incisal angle completely, and come well over the cavity margins. Make an air vent corresponding with the position of the cavity.

It is extremely difficult at times to secure good incisal anchorage for corners and tips. Clasp metal, or gold-coated tungsten wire, make the most suitable metals for pin or post anchorage for Synthetic Porcelain. Nickel, platinoid, or similar base-metals cannot be used without danger of discoloring the restoration. Several inches of twenty to twenty-two gauge wire can be threaded for the entire length and small sections cut off as required. Eighteen gauge, or sixteen, may be used in devitalized teeth where the pulp chamber and canal can be made use of, but larger posts are not suitable. Because of their bulk they weaken the restoration rather than strengthen it.

Anchor the pins into sound dentin, in such position as will afford greatest strength and least injury to the tooth and pulp. Cut the
wire long enough so that the protruding end will be firmly imbedded in the filling. These small pins do not interfere with the translucency of Synthetic Porcelain, but care should be exercised in their placement. See that they are covered over thick enough to prevent chipping, and so they will not shadow through.

**Ready for Discussion**

Now that we have outlined the properties, manipulation and uses of Synthetic Porcelain, it will perhaps be instructive to devote a short time to general discussion, so that we may better familiarize ourselves with the principal points brought out in this paper. Working with a standardized technique is not only easier, but more satisfying to ourselves as well as to our patients.

**Dr. Judd:** Just to rest us, let us rise and sing “Carolina.”

**Dr. Hardin:** I am mighty glad to hear that song. I never heard it or heard of it before. I have something to carry back to the people of Missouri. We haven’t a song; but we are going to get one if I have anything to do with it. We Missourians have to be shown, and you have shown me a song is the thing to have.

Seriously, I wish to bring you the greetings of the Missouri State Dental Association and to say that as a member of that Association I am extremely happy to be with you in your State meeting.

**Dr. Squires:** I would like to propose Dr. Hardin’s name for election to honorary membership to our Society.

Motion seconded and carried.

**THE HALL METHOD OF PLATE WORK**

**Dr. T. A. Wilkins, Gastonia, N. C.**

*Mr. President, Fellow-Members of the North Carolina Dental Society, Ladies and Gentlemen:*

In my clinic this afternoon I shall endeavor to explain to you the technique in the construction of a full denture by the Hall Method. This morning I am going to take up what I consider the most important requisites in the construction of dentures. I am not going into details in regard to the examination of the tissues of the mouth and the mouth preparation, for Dr. Patterson explained that very thoroughly at our last meeting.

I believe that the secret of the Hall Method lies in the simplicity of the methods that go to build each step in the foundation of this work. When we hear of the results of plate work, we anticipate something marvelous, perhaps some secret
discovered that has never been heard of. But such is not the case. The results, though not all that we could wish, are a well-merited reward for the life work of those men who perfected this system.

The first step, and the most important, in the construction of this work is getting the impression. I shall confine my remarks mostly to the lower denture; for this method enables us to get just as satisfactory results from the lower as from the upper. I have been giving this work special attention for the past five years. The only deviation I make from Drs. House, Tinch, and Paterson is the first step in getting my tray for this impression.

I take an impression the old way, using S. S. White impression tray compound with an ordinary tray; run a model of plaster of Paris; and, by hastening the setting of this, I can get my tray from the model as soon by trimming down this impression as they do. The reason I do this is on account of the condyles. This model enables me to study the condyles better. In making my tray over this model I trim my model farther back than the condyles, and I let my tray reach farther back than need be. Then by warming this tray that extends over the condyles, one side at a time, using an alcohol lamp with mouth blowpipe, I place this tray in the mouth, holding it with one hand, and with the index finger of the other hand I press this compound closely around the condyles, chill and remove.

I rewarm this around the condyles, and replace it in the mouth. Now I cause the patient to do the moulding around these condyles by having him protrude his tongue as far as possible. This may be done repeatedly until you are satisfied that the muscles all have free action. We keep these condyles chilled. This enables us to place the tray in exact position in the mouth, while we are shaping the periphery of the tray in conformity to the muscles and tissues of the mouth, which is done by warming the tray, as I stated before, with an alcohol lamp and mouth blowpipe. Place the tray in the mouth and hold it firmly with one hand; with the other hand catch the cheek and lips, pull them up, down, outward, and give them all the motions that they are subject to. Repeat this until you have a tray so closely adapted that there is suction, and then you will find little difficulty in removing the tray.

Now, in taking your impression you should know your impression plaster and insert this in the mouth just before it reaches its moulding stage. Then, as when fitting your tray, have your patient protrude his tongue. This moulds the impression plaster to a close and comfortable adaptation around the condyles.

To remove the impression, place your fingers on the outside of the cheek just below the tray, and push upward, or catch the cheek and pull upward to loosen the impression. Then catch it anteriorly, raise it a little, and push backward past the condyles, which frees it. Raise one side and then you can remove it without fracture.
So much for the impression for the lower plate. Now, the upper is much easier. Still we should be just as careful in getting our upper impression and use the nature of the case in getting our periphery of the denture that we are inserting to restore the lost parts.

I could write pages on this one step of this work, but there are several other steps just as important—getting the oclusal of the jaws, selection of the teeth, setting the teeth up, the things to take into consideration when you try them in, placing them back on the Hall articulator when finished, and grinding natural wear into them.

After we have our impression, we should run our models in artificial stone in order to get a model that is hard enough to preserve the periphery of our impression and carry this to the finished plate without danger of fracture. Then if we get our bite plates off of permanent model, we have nearly as good a fit in them as we have in the finished plate.

Next we build our wax on these bite plates to the fullness that we want our teeth, and we also get the length of our upper teeth with tight fitting bite-in plates. Let the patient go through all the movements of mastication at the same time we are judging our lip-line and the fullness of the teeth. We trim our wax accordingly. When we know that we have the proper occlusal, we take a warm spatula and seal them together in the mouth. Then, when we place them on the articulator, it is an easy matter to set them up properly.

You will find in this method of plate work that each step is a prerequisite to the one that follows, and that when you get your permanent models, and your bite trays from this, you are enabled to perfect bite or occlusal of the jaws that you can get in no other way. This at the same time gives you the fullness and the length of the teeth. Now, it matters not what articulator you use. Any straight line articulator will do. I use the Hall. After I set my teeth up, I use carborundum and glycerine and grind a little wear into them before I try them in. When I have finished my plates, I have such a good articulation that it is not difficult to set them back on the articulator, where, by the use of carborundum and glycerine, I can grind a natural wear into them with the Hall articulator, and this is the only one I have ever seen where the teeth will occlude the same in the mouth as they did in the articulator.

There is no guess work in this. We know, and we see that every step is correct and that it can be proven correct. The greatest hindrance to the universal practice of this system of plate work is that it takes time and hard work. It seems that those who perfected this system tried to see just how much time they could put in on a plate. I am sure that I now put in ten hours to every one I put on a plate eight years ago. But there is some satisfaction
in being able to tell your patient that you can give him comfort and service in a plate.

The same rules of health apply to a misfit in a plate that apply to a bridge that is unsanitary. The physicians of today are condemning many bridges as unsanitary. In my opinion, many plates, though serviceable, should be thrown away, for they are breeders of germs and unsanitary, to say the least.

The same technique, especially in regard to impressions, models, and formation of cusps, etc., that apply to this system of plate work, I use in bridge work, partial plates, and removable bridge and plate work. I think that it is the only way a perfect impression can be had.

I use Alston’s artificial stone for models. This is manufactured by The Dental Manufacturing Company of New York. And for impressions I find the XX Clover Leaf Dental Plaster very fine. This is made by W. B. Wiggins and Sons.

The President: We have some distinguished guests with us, visiting men from out of the State, and I would like for Dr. Heatwo1d, Dr. Hughes and Dr. Patterson to come forward and let me present them to the Society.

Dr. Patterson, of Baltimore, Md.: I haven’t figured on saying anything special to you any more than that I was anxious to come here again and meet you all after meeting and making so many friends here last year. This is about the first meeting I have ever attended away from home that I haven’t had to work, so that I was not even figuring on having to say something to you, but thought I was going to be free from everything.

But I just want to say I am glad to be here, and I know so many here, it is a real pleasure to come.

I don’t know whether you want to know anything about prosetic dentistry. You know enough about it now. You have had my friend Dr. Wilkins to read a paper and you have heard all this before. I just want to say in connection with prosetic work that it is advancing rapidly, just as rapidly, I believe, as any other branch of our profession. And prosetic dentistry today, as all of you know, is entirely different from what we have practiced in years gone by. You will see that at every dental convention; some one with the newer ideas, with the ideas that are producing results, that are making better teeth for the people than we have ever made them before. You
have to get these newer ideas and you have to give your patients better service, so far as plate work is concerned; they are going to demand it; they know it can be done and they are going where they can get it. Now, it is up to us to get new ideas and learn how to do these things; there is a possibility and you can do it, you can do it as well as some others. I have proof of that through the instruction of the student. We not only have them, but all institutions have students who can actually make this better prothetic work and get the same results as I do. So if a student can learn it with his limited knowledge, you, with your wonderful lot of experience and appreciation of what a set of teeth means, can very much easier learn how to do it. I will, of course, leave the interpretation of prothetic dentistry to your clinician; he will take care of that. I just want to say I am glad to meet you all again, and I expect to have a good time with you for the next two days.

The President: I see a man here, a man who is making good and has made good, and I want to present him to you—Dr. Russell. Dr. Russell is now connected with the University of Maryland, and did great service abroad.

Dr. Russell: Fellow members of the North Carolina Dental Association and visitors, it is quite unexpected to be called upon to say something to you at this time. I am sure your President is quite mistaken as to my services abroad, although I can claim that I am connected with the University of Maryland at this time; but my experience was all on this side. I did not get to go over, although I wanted to go with the boys. They kept me here for reconstruction work, called me to Fort McHenry, and some of you will remember the clinic I gave in Asheville showing the services we had attempted to give the unfortunate fellows who returned. There is nothing for me to say here. You have some distinguished men here, who have spoken to you, and I want to say I am glad to be with you; I have enjoyed being with you. I have been here three days and I hope to be with you on future occasions, although I am not practicing in the State at this time.

The President: We would like to hear from Dr. Hughes.

Dr. Hughes: I tried to get Dr. Heatwold to come first, because for me to be presented to the North Carolina Society
is like unto presenting a babe to its father, because I came from North Carolina and I am just as much a Tar Heel as any of you. I know the majority of you by your first names, and it is one of the most pleasant occasions every year of my life to come back to the North Carolina Dental Society and grasp you by the hand. Not only are you my close personal friends, but I always, in speaking of the North Carolina Dental Society, quote Dr. Frank Foster in saying the personnel of the North Carolina Dental Society is one of the highest of any Association he ever attended, and I agree with him thoroughly, even though you are my friends.

I wish to say again it is always a pleasure for me to be with you, and any service I may be able to render, don't hesitate to call on me. I will be only too glad to respond.

Dr. Heatwold: Mr. President and members of the Association, I think it not well for me to attempt to make any extensive remarks at this time because if I were to say the wrong thing or take a false step, maybe you would not come out to hear my paper tomorrow morning. So I propose to leave my applause for tomorrow morning. I am going to speak to you then. I am here because I wanted to come, and I am also here because of the very flattering inducements which your chairman of the Executive Committee offered me, and that was to say that the North Carolina Association felt that their meetings were not complete without me. Now, who could turn a proposition like that down? I could not.

There being no further business, the meeting was adjourned.

WEDNESDAY AFTERNOON, JUNE 29, 2:30 O'CLOCK

Clinics—Table.
Synthetic Porcelain—Dr. W. L. Davies, Milford, Del.
Hall Method of Plate Work—Dr. T. A. Wilkins, Gastonia, N. C.
Cast Porcelain Restorations—Dr. R. M. Olive, Fayetteville, N. C.

MEETING OF THE HOUSE OF DELEGATES

The meeting was called to order by the President, Dr. Judd.
Roll call of the House of Delegates.

DENTAL SOCIETY DISTRICTS OF NORTH CAROLINA

First District

Officers:
Dr. R. E. Ware, President, Shelby; Dr. W. F. Bell, Vice-President, Asheville; Dr. E. L. Edwards, Secretary & Treasurer, Morganton.

Delegates:
Dr. Joseph Fulton, Asheville; Dr. D. E. McConnell, Gastonia; Dr. W. B. Ramsey, Hickory; Dr. C. A. Pless, Canton; Dr. C. D. Baird, Franklin.

Counties of First District:
Ashe, Avery, Buncombe, Burke, Caldwell, Catawba, Cherokee, Clay, Cleveland, Gaston, Graham, Haywood, Henderson, Jackson, Lincoln, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga, Yancey.

Second District

Officers:
Dr. W. M. Robey, President, Charlotte; Dr. B. C. Taylor, Vice-President, Landis; Dr. E. G. Click, Treasurer, Elkin; Dr. J. D. Carlton, Secretary, Salisbury.

Delegates:
Dr. J. C. Watkins, Winston-Salem; Dr. J. S. Hoffman, Charlotte; Dr. J. E. Banner, Mt. Airy; Dr. W. C. Taylor, Salisbury; Dr. R. P. Anderson, Mocksville; Dr. Joe Davis, Concord; Dr. C. R. Hutchinson, Walnut Cove.

Counties of Second District:
Alleghany, Alexander, Cabarrus, Davidson, Davie, Forsyth, Iredell, Mecklenburg, Rowan, Stokes, Surry, Union, Wilkes, Yadkin.

Third District

Officers:
Dr. J. H. Hurdle, President, Mebane; Dr. Chas. I. Miller, Secretary & Treasurer, Richfield.

Delegates:
Dr. E. A. Branch, Norwood; Dr. J. H. Swain, Ashboro; Dr. J. H. Ellerby, Hamlet; Dr. E. E. Richardson, Leaksville; Dr. C. T. Lipscomb, Greensboro.

Counties of Third District:
Alamance, Anson, Caswell, Chatham, Durham, Guilford, Hoke, Montgomery, Moore, Orange, Person, Randolph, Richmond, Rockingham, Scotland, Stanly.

Fourth District

Officers:
Dr. D. L. Pridgen, President, Fayetteville; Dr. J. F. Coltrane, Secretary & Treasurer, Zebulon.
Delegates:
Dr. Wilburt Jackson, Clinton; Dr. R. T. Allen, Lumberton; Dr. J. S. Finch, Oxford; Dr. W. N. Walters, Warrenton; Dr. F. W. McCracken, Sanford.

Counties of Fourth District:

FIFTH DISTRICT

Officers:
Dr. R. Weathersbee, President, Wilmington; Dr. C. A. Bone, Secretary & Treasurer, Rocky Mount.

Delegates:
Dr. L. R. Gorham, Rockingham; Dr. E. J. Griffin, Edenton; Dr. L. J. Meredith, Wilmington; Dr. W. T. McMillan, Goldsboro.

Counties of Fifth District.

The President: Gentlemen, this is a new thing with us, and there is nothing special for this meeting except to hear some communications and to attend to such other matters as may come up, and to hear the names of the new members.

The Chairman of the Executive Committee reads applications of new members, some for membership and some for restorations.

Dr. Squires: If any man here knows any reason why these men should not be members of this Society, I wish he would please report to the Executive Committee before their names are recorded.

The Secretary reads a letter from the National Dental Association in regard to a resolution, "Standardization of Hospital Staffs."

Dear Doctor:
The House of Delegates, upon the unanimous recommendation of the section on "Oral Surgery and Anesthesia," passed the following resolution and appointed our committee to bring this matter before the superintendents of hospitals, the American Medical Association and every state society:

Resolved, That in the standardization of hospitals the personnel of the staff should include a competent dentist whose duties should include consultation with the attending physician and aid in diagnosis by locating the source of focal infection in the mouth. And be it

Chicago, Ill., February 5, 1921.
Resolved. That such dental member of the hospital staff should insist on thorough use of the X-ray for locating diseased teeth and pyorrhea pockets, and that he should be trained in the correct interpretation of dental radiographs and that the interpretation of such radiographs be made preferably by the dental member of the staff; and that such dental member should supervise the instruction to nurses in the preparation of patients' mouths for operations and in the general oral hygiene for patients; and that he take care of any dental operations; and that a dental engine and other necessary instruments and apparatus for emergency operations of all kinds be provided.

Be it further resolved, That it is the sense of this Association that the suggestions made and the policy outlined in these preambles and resolutions be adopted as the future policy of the Association; and that it be earnestly requested that hospital staffs be so constituted that the fullest cooperation may be had between the physicians and dentists in the diagnosis and treatment of cases.

The House of Delegates upon the recommendation of our committee passed our report which you will find enclosed. This will give you specific information. More copies will be sent upon request.

Your enthusiastic cooperation is necessary for success.

Very truly yours,

ARTHUR E. SMITH, Chairman,
127 N. Dearborn St.,
Chicago, Ill.

To the House of Delegates of the National Dental Association:

The committee to formulate a definite policy for carrying out the resolution regarding the placing of dentists upon all hospital staffs submitted the following report. This report was adopted:

1. That the committee send a letter to each state dental society, accompanied by a copy of the resolutions adopted by the House of Delegates.

2. The secretary of each state dental society to transmit the resolutions and instructions to its executive council for early action. These resolutions and their action to be read at the first meeting of their state society.

3. Upon favorable action of the executive council, the resolutions and instructions to be transmitted to each component society in the State.

4. The resolutions and instructions to be presented at the first meeting of the component society held thereafter. The president of each component society to appoint a committee whose duties are to personally present the matter before the executive board and the superintendent of each hospital in its district, and to present to him an exact copy of the resolutions passed by the National Dental Association.
5. The dentist for each hospital to be recommended by the component society and his appointment to be determined by his experience and ability to cooperate with the attending physician.

6. A copy of these resolutions to be sent to the American Medical Association with a recommendation that it be presented to the House of Delegates for their consideration. A copy of these resolutions to be published in the journal of the American Medical Association.

7. These resolutions and action taken by the committee to be published in the Journal of the National Dental Association and copies to be sent to the editors of other dental journals with the request that they be published.

8. The secretary of each State society is requested to report to the chairman of this committee not later than thirty days previous to the annual meeting of the National Dental Association, (1) as to cooperation in progress of hospital boards, and (2) the number of appointments made, so that this committee can report in full to the House of Delegates.

Respectfully submitted,
ARTHUR E. SMITH, Chairman, Chicago, Ill.
WM. H. G. LOGAN, Chicago, Ill.
C. EDMUND KELLS, New Orleans, La.
C. R. LAWRENCE, Enid, Okla.

Moved, seconded and carried and so ordered that this be left to the delegates to take whatever action they see fit and vote on it as they see fit at Milwaukee.

The Secretary reads a letter in regard to "Reciprocity."

ST. LOUIS, MAY 23, 1921.

DEAR DOCTOR:
The circular recently issued with the caption, "An Appeal for Interstate Reciprocity in the Dental Profession, not having been as clearly understood in some localities as was intended, it is deemed advisable to issue this supplementary explanation for the purpose of making clear any points in the previous circular that may have appeared to be obscure to the recipient.

The plan of interstate reciprocity is based on the principle that, where service has been rendered to the profession by an ethical member, that service should be recognized by the profession, and this plan can be inaugurated by a mutual agreement between State boards to recognize practical experience and professional reputation as a basis for interchange of license instead of subjecting a worthy member of the profession to a test of digital skill in constructing a bridge or inserting a filling, etc., which is designated by some states as a practical examination, while other states require also a theoretical examination, written or oral.

An applicant for interchange of license under the Interstate
Reciprocity agreement should have credentials providing for the following qualifications:

1. A minimum of five years continuous practice in the State.
2. Three years membership in a local and State Society.
3. Indorsements of qualifications 1 and 2 from the following persons:
   a. The president of the local Society.
   b. The president of The State Society.
   c. The members of the state board.

The endorsements must certify to the applicant’s professional reputation and moral character, and may give any other information relative to professional activity.

The applicant will forward the credentials to the dental officials of the state to which he desires to transfer, who will verify the authenticity of the credentials, and, if in their judgment the applicant is deserving of professional courtesy, will then issue a license on payment of the usual fee without an examination. This arrangement will prevent advertisers and charlatans from participating in the benefits offered by the reciprocity plan.

Ethical members of the profession who are not now affiliated with dental societies will have an additional incentive to join their local and state societies, and hereby be entitled to the protection offered by interstate reciprocity in case of a future contingency which may arise in their professional career.

This movement for interstate reciprocity is also in accord with the objects of the National Dental Association, and may serve as a basis for developing a more perfect system of protection.

State societies that have held their annual meetings should appoint an uninstructed delegate to the meeting of the National Dental Association, which will be held in Milwaukee, Wis., August 15 to 19 in order that he may be able to report to the society which he represents his recommendation for future action on this movement.

Respectfully submitted,

Dr. F. C. Rodgers,
309 Wall Bldg., St. Louis, Mo.
Secretary-Treasurer St. Louis Dental Society.

A Member: Was there any length of time as having taken the examination, or any one who had passed the State Board could reciprocate?

The Secretary: There are stipulations in there. I think it says five years.

A Member: Let’s have the restrictions read before we pass on it.

The Secretary reads the restrictions.

A Member: I don’t see, with those restrictions, where any
one could slip by. I don't think they could slip by the North Carolina Board. Our Society over at Fayetteville endorsed it unanimously and we instructed the Delegates here to ask the State Society to do the same thing. I am going to make a motion that we endorse this resolution.

Dr. Fulton: I second the motion.

Dr. Fleming: I don't know quite where I stand on that resolution. I have been a member of the North Carolina Board three years and in that time we have had a right many to apply for reciprocity license, coming to us from different States. I remember one striking case, and if this statewide law goes through, that fellow would have had licenses in five States.

The Legislature a few years ago made the law so broad that at any time the State Board saw fit, they could adopt reciprocity with any other State they saw fit; but it is such a far-reaching question that the State Dental Examining Board decided it would never enter into that relation with any other State unless ordered to do so by its Society, and that is where the situation stands now. We found when we turned this man I have referred to down that he came from a State that only required a diploma from the dental college in that State. If restrictions can be put around it so those men should be eliminated, I certainly would be heartily in favor of it. It looks hard to have a man coming from another State to knuckle down to the tedious grind of the theoretical examination, but the State has always used discretion where a man comes properly recommended from another State. So I don't quite know where I stand. But if the Society wants it, I believe the North Carolina Board will go as far as it is able to carry out your wishes.

Dr. Weatherby: While I think we will be protected very well under the restrictions you read there, I believe if we adopt this resolution we will be just a little bit over-anxious. If we should desire, we can adopt this some other time, but if we adopt it now, we can't withdraw it very easily, and it strikes me that we would be better off in the long run to wait until after half of the States or two-thirds of the States in the Union have adopted it; then we can see whether the States adopting
it are the most progressive States, and we can get in line with them, because I think our standard is about as high as the average State and if we adopt it—we have certain parts of this State that are very attractive and more attractive than some other States—and it will reasonably follow that at certain seasons of the year we are liable to have a good many tourist dentists, just like they have in Florida. Florida will be crowded to death in the winter and North Carolina in the summer. So it strikes me that we ought to do a little thinking along this line.

Dr. McConnell: As I understand it, the North Carolina Board of Dental Examiners is controlled entirely by the law of the State of North Carolina passed by the State Legislature. Now, it is true they grant us the privilege of electing the members of that Board of Examiners, but our Legislature is not going to pass any law for us. We simply go on record as favoring reciprocity under these conditions as laid down in these resolutions. It doesn't mean by that we can go immediately and put anything on the statute books that isn't already there. As I understand Dr. Fleming, the Examining Board already has the right of reciprocity by the law of the Legislature of North Carolina. They can be instructed to carry that out any time they see fit when the other States have passed similar laws or something of that kind; but in my mind there is no need that we pass a resolution, because of the fact that the North Carolina Legislature passes the law that controls the Examining Board. We can resolve, but we can't pass legislative matters. As far as the extent of our resolution goes, it merely recommends to the National Dental Association, looking forward to reciprocity some day in the future, and it does not affect the law of the State of North Carolina in the least.

Dr. Squires: It seems to me that it would be wise for us to instruct our delegates on this question to vote in the National as upon their judgment would be wise. It is a question that is coming up before the National Association this time and of course, if the majority vote for it, it is going to be put through, whether we instruct our men to vote for it or not; and if we are not in favor of it and after our men get there and see how
the question is discussed, how the States are standing, and after looking into this matter thoroughly, we had just as well be in with the representatives of the National Dental Association in passing it as to be sitting in the back seat and having it passed over us. So I make a motion, if it is in order, that we instruct our delegates to vote on this question as in their judgment they think best, as they see fit. I make that amendment to the motion if the gentlemen will accept it.

The amendment is accepted.

Dr. Weatherby: We may instruct our delegates to vote according to their best judgment, but the National Dental Association cannot, I believe, compel this State to accept reciprocity. They have no governing power over this State. We are a member of the National Association, but the National Association is not a member of the State Society, and so they have no governing power over this organization, and if we adopt this law, at least one hundred or two hundred men that have tried this Board for years and years and have license in other States will have to be given a license, and they will flock right down into this State, every one of them.

Dr. Lipscomb: I don't know that I am voicing the sentiments of this Association, but I am speaking from a personal standpoint, and I am in favor of instructing the delegates in the National Convention to vote against reciprocity for this term.

Dr. McCracken: It seems to me—with the restrictions put upon the individual—he would have first to be a member of the local society three years, five years in the State Society—and we would not get any bums in this State and we would not send out any bums from this State. I don't think we could fear from that standpoint in the least. I am of the opinion with Dr. Squires that our representatives in the National ought to be able to fall in line. We would not want to stand off by ourselves, and I believe Dr. Squires' amendment to the motion should be put before the house. I think that is the proper thing to do.

Dr. Walters: Dr. Fleming has put the thing pretty nearly correct. This State already has the power to reciprocate if it wants to. Now you must remember there are States in
this Union of ours that haven't any such dental laws as we have. There are very little restrictions thrown around the practitioner in some of the other States, and fellows from those States who are not ethical dentists could very easily meet all the requirements, and it appears to me, as the matter stands, we had better let it rest until later on, until we see what other States are going to do first.

Dr. Ramsey: This is not a new subject to me. It is a subject that has been before the Society more or less for years and I have always been opposed to it. I don't think any State has higher standards than North Carolina. I think we should move conservatively in this matter, because when we take this step we may regret it, and certainly we don't want to turn our business over into the hands of somebody else who is not necessarily better. Now that is where I stand, and I think we ought to be very careful what we do. It is a serious matter.

Dr. Betts: In view of the fact that we are somewhat divided in our sentiments here, and in view of the fact we feel we might possibly be doing an unwise thing in letting down the bars, so to say, I move you, sir, that we lay this matter upon the table to be taken up some other time.

Dr. Betts's motion was seconded and carried.

The Secretary reads a letter from the United States Fidelity & Guaranty Company in regard to insurance.

Dr. Fleming: It seems to me it would be best for us at the present time to continue our insurance just as we have. It might be well to appoint a committee to investigate and report at next year's meeting in regard to this matter as to whether it is best for us to keep our present insurance for another year, but in the meantime, I think it is well to continue our present plan.

Motion seconded, carried and so ordered.

There being no further business the meeting of the House of Delegates was adjourned.

WEDNESDAY EVENING, JUNE 29, 8 O'CLOCK.

Syphilis of the Mouth—Dr. J. A. Elliott, Crowel Clinic, Charlotte, N. C. Lecture illustrated with lantern slides. (Paper not received.)
Mouth Surgery: Cases, Pathology and Treatment. By Dr. Guy R. Harrison, Richmond, Va. Lecture illustrated with lantern slides. (Paper not received.)

Report of the Prosecuting Committee, by Dr. F. L. Hunt, Asheville, N. C., Chairman.

June 23, 1921.

Dr. F. L. Hunt, Secretary N. C. State Board of Dental Examiners,
Asheville, N. C.

Dear Doctor:

I have to advise that in the experience which I have gained by representing you and the State Board of Dental Examiners as private prosecutor in actions involving a violation of dental laws of this State, that one of the most obvious defects in your dental laws is that portion of Sec. 6639 of the Consolidated Statutes of North Carolina which provides as follows: "And nothing herein shall prevent anyone from extracting teeth." The wording above mentioned permits anyone to extract teeth whether a fee is collected or not, and I feel sure that the obvious intention and purpose of the ones drafting the above mentioned section was to permit anyone to extract teeth so long as a charge for the same was not made or collected.

I have observed in several different counties which I have been in recently, by consulting with various dentists and witnesses whom I have had subpoenaed to testify in cases for violation of the dental laws, that there are a great many licensed physicians, some licensed pharmacists and a great many drug clerks who keep one pair of forceps in their medicine kit or drug store, and by various methods of advertisement and notices that they will extract teeth for one-half the price as that charged by licensed dentists, and various complaints have been made of the persons above mentioned making partial extraction, leaving the roots and a portion of the tooth in the person's mouth, which I am sure later caused a great amount of trouble, and as a matter of fact have been told so by dentists who have complained of the aforesaid practices.

It appears to me that if you could have the Legislature, preferably at the prospective extraordinary or special session, to amend Section 6639 by inserting after the word "teeth" in the last line of said section, the following, "Where no charge for extracting is made or collected."

If the passage of the amendment set forth above could be secured I feel confident it would be of immense benefit to the members of the dental profession where this practice occurs and at the same time a great protection to the general public.

Very respectfully,
Geo. Pennell.
June 23, 1921.

Dr. F. L. Hunt, Secretary N. C. State Board of Dental Examiners, Asheville, N. C.

In Re: Barratts College of Dentistry of North Carolina.

Dear Doctor:

In reply to your request for information on the above mentioned school or college of dentistry, as per request of Dr. Albert Warren, 119 Cromwell Road, So. Kensington, S. M. London, England, I have to advise that we have carefully investigated the record of incorporation in the Secretary of State's office in Raleigh, N. C. and we are unable to find any certificate of incorporation granted to any school or college by this name within the State of North Carolina and that investigation in the office of the Superintendent of Public Instruction for the State of North Carolina shows no record of an institution by this name ever having complied with the State law in regard to filing reports of their activities within this State.

We are making additional investigation in the city of Charlotte, N. C., where this school is supposed to operate, and immediately upon receipt of this information we will communicate with you.

Very respectfully,
Sale & Pennell,
By Geo. Pennell.

June 18, 1921.

Dr. F. L. Hunt, Secretary State Board of Dental Examiners, Asheville, N. C.

Dear Sir: Acting under instructions from you to issue warrants and prosecute any and all violators of the dental laws in Western North Carolina which come to our attention and those reported to us by you, we have to advise that within the last thirty days and up to this date we have secured the following convictions:

W. C. Ridenhour, Catawba County; conviction, one case; E. M. Madron, Avery County; conviction in three cases, with five others pending and with suspended judgment in one case; prayer for judgment continued and not to be prayed if the defendant remains out of the State of North Carolina; W. M. McLuke, Burke County; convicted in one case.

We also have warrant issued for one H. L. Pyatt, which case has not been set for trial due to the fact that service of the warrant has not been had on the defendant.

We have several other prosecutions in contemplation, just as soon as sufficient evidence can be secured to secure an indictment on charge of violating the dental laws.

Very respectfully,
Sale & Pennell,
By Geo. Pennell.
ELECTION OF OFFICERS

President—Dr. W. M. Robey, Charlotte, N. C.
President-Elect—Dr. S. Robert Horton, Raleigh, N. C.
Vice-President—Dr. John J. Battle, Rocky Mount, N. C.
Secretary—Dr. H. O. Lineberger, Raleigh, N. C.
Essayist—Dr. Browning Lewis Crump, Laurinburg, N. C.
Treasurer—Dr. R. M. Morrow, Burlington, N. C.

Members of examining Board: Dr. J. Martin Fleming, Raleigh, N. C., Dr. Fred L. Hunt, Asheville, N. C.

Delegates to National: Dr. J. C. Watkins, Delegate; Dr. F. L. Hunt, Delegate; Dr. R. M. Morrow, Alternate; Dr. J. H. Judd, Alternate.

Wrightsville Beach was chosen as next place of meeting.

No further business. Society adjourned.

THURSDAY MORNING, JUNE 30, 9:30 O'CLOCK

PROFESSIONAL ECONOMICS

By T. O. Heatwole, M.D., D.D.S.,
Dean, University of Maryland School of Dentistry.

The term "Economics" was originally restricted in its application by early writers on the subject to tariff, taxation and general financial problems. In later years it has been developed and made sufficiently inclusive to embrace many and varying phases of human effort until at the present time we find general economics subdivided according to specialized activities, under the following definite headings: Political economics, industrial and commercial economics (frequently referred to under the term of efficiency), social economics, domestic economics, and to these we are proposing to add professional economics. To each and all of the above named subdivisions, or departments of economics, special study and experience in the application of scientific and proven lines of procedure are demanded in order to justify one's claim to special knowledge on the subject and insure a reasonable degree of recognition and attention to his teachings.

For example, the statesman, if he is to attain to the highest possibilities in line with his calling, must devote a lifetime to the study of some phase of government, and be able to evolve, promulgate, and apply sound principles and policies which will readily fit into the general scheme of the government at the period of his active participation in its affairs. The sociologist finds special interest and satisfaction in delving into the subject of indigency in society, and attempts to establish logical reasons for the same, and, through recommendations and an appeal to the thrifty element in society,
seeks to alleviate the sufferings of the needy poor without working a harmful effect on the recipient of charity, or permit of an imposition on society itself. These same principles apply in all departments of economics and very naturally play an important part in the success or failure to measure up to the needs of the times.

With the foregoing as a background, let us proceed with a discussion of our special subject, "Professional Economics." In this undertaking it will be necessary to accept certain general statements in lieu of actual definite facts around which to build a treatise of the subject assigned for study.

Rather recent propaganda carried on by recognized professional publications under the title of "Dentistry for the other 90 per cent" leaves an inference that only ten per cent of our population are regularly getting dental service at this time. Whether or not actual statistics exist to prove such conditions is not known to the writer, nor is it regarded as being necessary and essential for our present purpose, since this data can be obtained through another and rather reliable source, as follows: Through a recorded statistical study of some years standing it is shown that 400 patients annually is the maximum number for whom a busy man can render dental service. If, then, the busy and skillful operator cannot serve more than 400 individual patients during any one year, the less dexterous and less occupied men in the profession would possibly bring the general average to 250 patients each per year. By multiplying the general average of patients (250) by number of dentists in this country (44,000), the result obtained will be 11,000,000 patients or ten per cent of a total population of 110,000,000. Granting that the maximum figure adopted (400) is correct, and assuming that every man in the profession was working at the highest rate of speed and at full capacity, not more than 16 per cent of our present population could possibly be served with our present full professional force. This clearly indicates an economic weakness which should not be overlooked.

The public is rapidly being educated to the urgent needs for dental service in the interest of general health. Of the many channels through which this instruction is being disseminated, probably the most potent and directly convincing effects are coming through the medical profession.

The following recent statement made by Dr. Leslie L. Lumsden, of the U. S. Public Health Service in an address made on June 8th, 1921, to the American Medical Association at its annual meeting held in Boston, is a very significant example of the recognition now being accorded us by the medical profession.

"The conclusion is inescapable," he said, "that the treatment of diseased teeth, the removal of diseased tonsils and adenoids, the rendering of prenatal care, the diagnosis and treatment of tuberculosis and the correction of certain other physical defects are, whether performed in the private office or in the public health clinic, for the pre-
vention of disease and the promotion of health and, therefore, may properly be regarded as service of a public health nature."

Industrial, educational and governmental interests, the latter through army and navy channels, have all added materially to spreading the gospel of oral hygiene.

In addition to the growing sentiment all along the line favorable to wider reaches in dentistry, the Chicago Dental Society, at its meeting held in January, 1921, promulgated a movement in the interest of preventive dentistry, which contemplates the care of the mouths of the children of the first and second grades in the Chicago schools. As recorded in the March issue of Dental Facts, the watchword of the movement is "Keep the ball rolling." Dr. M. M. Printz, Secretary, says: "And this army (the 5,000 dentists in attendance), agreed to a man that the way to check the prevalence of bad mouths and devastating infections that result from them among American men and women is to begin working upon the little men and women—the children. The adult's teeth can be repaired, restored and replaced, but no adult will have the sort of a mouth he should have unless the care of the teeth begins when young. If we cannot reach him then, we at least can reach him when he enters school."

Dr. Dan U. Cameron, of the society's public service committee says: "This movement is one of the biggest humanitarian things this country has ever seen set in motion, and has gathered a momentum during the last three days that must not be lost."

In the above quotations we have a theoretically exact fact set forth, and the plan by which it is proposed to remedy known conditions is ideal, and the results predicted are surely plausible and worthy of the greatest credence. Despite the altruistic principle on which the proposition is founded, and the perfectly patent effects to be attained by a whole-hearted support of the project, it may, nevertheless, be of some practical benefit to apply the economist's principles to the scheme as presented by this group of live and progressive men. In other words, to make an analytic survey of the whole field, and then set up against our findings the forces available through which it is proposed to accomplish such desirable ends. By such study we may the better grasp our problems and be enabled to approach them from an intelligent and hopeful aspect, rather than to allow ourselves to be led into disappointing, if not retroactively injurious policies.

National educators tell us that there are in this country today something like 20,000,000 school children in the primary grades, and about half of these (10,000,000) are in the first three grades. By a liberal elimination of those in the third grade, and the few in the first and second grades who may be cared for by the family dentist, it is reasonable to assume that at least 4,000,000 would remain to be cared for by a universal application of the Chicago plan.
Keeping in mind the fact that these little folk are being introduced to a new, and, perhaps, painful, or, at least, unpleasant experience, and also assuming that the work of prophylaxis and restoration is to be thorough in every respect, it is doubtful if the operator will be able to exceed the limit as to the number of patients yearly served set for the man in general practice. Granting that one man might properly care for 500 children annually, it would require 8,000 dentists to cover the whole field. The idea may be to have at least a portion of the needed service done by hygienists, but, at the present time, they are not available in sufficient number to appreciably change the situation. By a limitation of this work to the children of the first and second grades, much will be lost in the way of educational advantage, and permanent results on the children, if turned adrift at this stage and no provision made by which they may continue to avail themselves of the beneficial service.

In order to intelligently meet this phase of the problem and be able to take care of the remaining grade children, the numbers decreasing greatly in each advance above the second grade, possibly another army of 8,000 dentists would be required to handle the work. The Chicago plan for preventive dentistry, as proposed, must of necessity be regarded as developmental in character, and can only be successfully met by numerical additions to an already overworked profession.

The difficulty presented through an evident lack of sufficient numbers to cope with the situation, as presented by the Chicago society, it is not the only one which we shall be called upon to solve. The children of the indigent poor are presumably to be given first consideration. From an economic standpoint, the state might expect to gain most through any health conservation policy which would tend to prevent the poor from becoming public charges in hospital, asylum, or almshouse. This proposed dental service to the needy poor must necessarily come to them as a gratuity. Ways and means must be provided whereby financial aid may be secured to meet the needs. By applying the Chicago scheme universally to the whole country, the sum total of financial needs will prove staggering. Briefly summarized, they may be made to appear as follows:

Basing the needs for equipment on the number of dentists regarded as being necessary to treat the mouths of the children in the first two grades of the public schools (8,000 dentists), and figuring the cost of each outfit at $1,500, we get a total of $12,000,000. Add this to a minimum salary of, say, $2,000 per annum for each of the 8,000 dentists required, and this will total $16,000,000. By an addition of equipment and salary totals, we get a grand total of $28,000,000 needed as a possible outlay to make a beginning in the proposed new venture into health conservation and preventive dentistry. The above estimates do not include cost of housing or office accommodations, which would increase the total costs considerably. This
is unquestionably a big order, and only through a positive demonstration of beneficial returns to humanity can it be made to justify itself and give promise of hope of putting it into effect.

Many systemic diseases are attributed by physician and dentist alike to oral infections as being the primary cause. Various forms of rheumatisms, certain heart lesions, neuritis, eye, kidney, liver and lung lesions, sinus infection and general septicemia, make up a partial list of diseases which may be properly regarded as possible of minimizing to some extent through a thorough application of general dental service to the masses. This list does not include the grave and unfortunate condition of insanity, which some physicians today are claiming is being successfully treated by mouth hygienic measures. If such treatment cures even a small percentage of these cases, it would seem to be a wise, humane and economically sound policy to apply preventive means in the eradication and prevention of the conditions responsible for the malady, and, by so doing, spare the individual the humiliation which attaches to those so unfortunate as to suffer from mental aberrations.

A source of available funds with which to undertake this work must be discovered—a full and complete study of our needs, and the great good possible of accomplishment through an expanded dental service to mankind definitely set out and made the basis for an appeal to governments, both Federal and State, for aid in the work.

The following is presented for the purpose of showing what is being done by the Federal Government for the eradication and prevention of diseases of animals during the year 1920.

Sheep and Cattle........................ $525,000.00
Tuberculosis.............................. 1,500,000.00
Hog Cholera............................. 641,045.00
Cattle Tick.............................. 741,980.00
Dourine................................. 88,800.00

Total...................................$3,496,825.00

The above named Federal appropriation was supplemented by State, county, corporation and individuals by liberal amounts. The exact totals of these are not available to the writer, and time did not permit their accumulation, but, it is reasonable to assume, that the aggregated sum so provided will equal, if not exceed, the $3,496,825.00 of Federal appropriations, making in round numbers a total expenditure by Federal and State governments, etc., for animal health and conservation range between $7,000,000.00 and $10,000,000.00. No sane individual will question the economical value of protecting animal life, but its importance can in no sense be placed above the need for doing the same thing for human beings.

Again the Federal and State governments expend each year vast sums of money for the purpose of inspecting and guaranteeing to the people that the food offered for consumption shall be pure, free
FILLING PULP CANALS BY DIFFUSION
DOTS ON OPENING CANALS
IONIZATION WITH CHURCHILL'S TINCTURE OF IODIN

By HARRY B. JOHNSON, D. D. S., Atlanta, Ga.

I am thankful that a paper of this kind is no longer necessary to stress the importance of filling the main or trunk canal. It is still important, however, to stress the importance of filling the accessory
canals, for each of these smaller canals, if unfilled, constitutes as
great a menace to the health of the tooth and the patient as the
trunk canal.

It is a fact that the very great majority of tooth roots have more
than one canal and foramen, and it is my opinion that failure to
fill these accessory canals and seal their foramina has been the
cause of failure of those teeth which the X-ray shows perfectly (?)
filled; but you say that it is impossible to fill these with any
degree of certainty. You don't know where they are—the X-ray
doesn't show them, and how can we fill a canal when you don't
even know if it is there or not? By the old Chloro-Percha method
I grant you it is impossible, but by the improved methods I contend
that it is not only possible but easy to fill any number of accessory
canals of any shape, size or direction, whether you know they are
there or not. I will endeavor to prove this by X-rays of fillings
made in the mouth, and slides of decalcified teeth filled out of the
mouth.

Before going into this part of the paper, however, let us get
straight on some of the principles upon which we cannot rely for
accomplishing this purpose. The oldest method upon which we have
pinned our faith and been totally disappointed, is that involving
force. It is a physical impossibility to fill these minute canaliculi
by force without exerting such a great amount that it would split
the tooth. This method assures us too of too great an excess of filling
material beyond the foramen.

Next, Dr. Callahan brought out his method which we might say
involves persuasion. This is the most effective method evolved up
to date for filling the trunk canal, but it is entirely futile for the
accessory canals, except with certain modifications, which will
be outlined later.

Next, Dr. Howe, of Boston, brought out his method of filling
them by capillary attraction, but by a long series of experiments I
finally succeeded in proving what any one should know after a
moment's thought—that capillary attraction does not exist in the
root canal of a tooth in the mouth. The smallest ends of the capil-
laries are closed by the periapical tissues, and it is a well known
fact that when the end of a capillary is sealed even by placing there-
in the most minute quantity of water, or other substance, the entire
attractive force of the capillary is neutralized. I do not contend
that Dr. Howe's solutions do not penetrate the canals, canali-
culi and tubuli, but they do not do it by capillary attraction, but
rather by diffusion.

How may we render these minute canaliculi receptive to our
filling materials? By man-made methods, or by utilizing the forces
of nature? Man's chief function here on earth is to discover and
utilize the laws created by Him who created us. "Laws of Nature,"
so called, is but one division of God's laws, and the most successful
practitioner of the healing and restorative arts is the one who can
most fully utilize the forces created by God in nature. *Nature has stored away in each pulp canal a force exactly sufficient to fill it perfectly if we can perfectly utilize that force.* This force is known as "The laws of diffusion of liquids," which is in effect that two or more liquids capable of being mixed will when placed together effect a spontaneous exchange of molecules, even in defiance of the law of gravity, until each has become perfectly diffused throughout the other.

How may we best utilize this law in the filling of pulp canals? I do not know the best way—that is yet to be found, I think, but I do know one way which has in my hands given remarkable results. This is by certain additions and modifications to the Callahan Method, which will give in the hands of a skilled operator results which we have not heretofore considered possible.

Briefly stated, the Callahan Method consists of the use of dilute sulphuric acid as a decalcifying medium to assist in opening the canals, followed by a saturate solution of sodium bicarbonate, causing a rapid effervescence which effectively clears out all debris. The acid is also a powerful though superficial germicide. After dehydration the canal is flooded with a solution of chloroform and fiddle bow resin in the proportion of twelve grains of resin to three fluid drams of chloroform. A pint of pure base gutta percha, only slightly smaller in diameter, but longer than the canal, is then selected, passed into the canal and caused to dissolve in the chloroform by a rapid though delicate pumping or stirring motion. We will now take up this technique at the first step after the tooth has been prepared for treatment, and to follow it through, step by step, in the proper sequence. The first and most important thing is to cleanse as thoroughly as possible the trunk and accessory canals of all organic material, and leave them clear so that they can be properly and perfectly filled in the last step of this technique.

**Sulphuric Acid as a Cleansing Agent**

For this purpose 30 to 40 per cent aqueous solution of the chemically pure acid is used. This softens the wall of the canal by a process of decalcification so as to permit easy and fairly rapid enlargement of its caliber by ensetting with various instruments. The most valuable factor in the use of the acid, however, is that it may safely be sealed in the canal, thereby giving it time to diffuse through accessory canals which cannot be reached with any instrument and can be treated only by grace of the law of diffusion of liquids. It must always be borne in mind that our only real problem is to fill these accessory canals and seal their foramina. By diffusion, the sulphuric will penetrate these more safely than any other chemical now at our disposal. It is far from being as effective in dissolving the organic content of these canaliculi, as we would like, but so far the prime factor of safety to the patient has prevented
the sealing in of any more effective solvent; for bear in mind that these canaliculi can be reached only by diffusion, which requires time. The organic matter in the canals and canaliculi is attacked to a marked degree, caused to yield up its water, shrink and release its hold upon the tube wall. The effervescence caused by the addition of soda will then break it up and remove it cleanly from the larger canals and to a considerable extent from the smaller canaliculi. But although the organic matter is not perfectly removed from these, part of that remaining is forced out of the foramina into the tissues where it is promptly digested and the remainder encapsulated in the filling.

The advantages of the dilute sulphuric acid then appear to be as follows: (1) It permits of the rapid and perfect cleaning and enlarging of the main canal. (2) Its marked affinity for water causes its diffusion through all the accessory canals where its well known oxidizing properties have a burning or charring effect upon the dead tissue. (3) the addition of soda produces such a violent effervescence that not only this debris but frequently even broken instrument points will be forced out by it. (4) Last but by no means least, it may be safely sealed in the tooth, which will allow ample time for this diffusion through all canals and canaliculi, enlarging them by a self-limiting decalcification and cleaning and sterilizing by oxidation.

What about the possibility of pumping some of this sulphuric acid through the foramen? With reasonable care this result would be the very great exception; for bear in mind that any liquid you place in the canal does not go ahead of the instrument, but follows it (40 per cent sulphuric acid is a heavy liquid), and you are much more liable to get a laceration of the periapical tissue from your instrument point than an irritation from the acid. In a root having a large foramen, you have only slight need for the acid, and it, like any other similar agent, must be cautiously and sparingly used in this type canal. It should not and need not be sealed in a canal of this kind.

**Technique and Instrumentation**

After the canal has been freed of pulp tissue, or old filling, the crown of the tooth is coated with cavity varnish, sandarac, or chloro-resin, the pulp chamber flooded with 40 per cent acid and the canal entered with a fine or extra fine Kerr pulp canal file. This is gently passed in until it hangs. It is then given about one-eighth twist, held in that position, and withdrawn. This is repeated, pumping the acid in thoroughly until the instrument and acid have penetrated to about the apical third or has gone as far as it will easily go. The next smaller sized file is then used and the opening and pumping continued slightly farther. Measuring wires may be used at this point if desired. No instrument larger than the finest smooth
broach, or pathfinder, should ever be passed through the foramen if it can be avoided. In the majority of cases it is easy to tell when you are about to enter the foramen, as there is a slight constriction just short of the actual opening. The acid should be thoroughly pumped to this point and neither acid nor instrument carried any farther. It is difficult to coax the acid to this point and there is small danger of getting it any farther, except, of course, in the very large canals. The acid is neutralized at frequent intervals, removing the debris, and just before sealing the cavity and dismissing the patient, fresh acid is pumped into the canal, and the surplus absorbed out of the pulp chamber, a pellet of sterile cotton placed in, and the cavity sealed with hot temporary stopping without pressure. This may be left in for any length of time that may be desired or necessary, as the acid is self-limiting in its action, and, due to the alkalinity of the lime salts of the dentin, does not remain active for more than two or three hours.

If the canal in which you are working is not perfectly straight and your Kerr file hangs at some point, or suddenly fails to penetrate farther, remove it from the canal, and with your radiograph as a guide, bend the point of the file slightly, reintroduce it into the canal, and probe for the opening into the remainder of the canal. The very great majority of canals can be freely and easily opened if we can bend our file to approximate the curve in the canal. Force plays no part in the opening of a pulp canal—it must be done by "persuasion."

Let us study for a few moments just what the acid does while it is in the canal and how it does it. In a pulpless tooth all of the canals and canaliculi are as a rule filled with decomposed organic matter in aqueous solution. That can be removed from the main canal by absorption, but it cannot be removed from the fine accessory canals. When the main canal is flooded with acid then the law of diffusion of liquids comes to our help, and as the 60 per cent of water contained in the acid solution is not sufficient to satisfy the acid, it takes up more water from whatever source it can gather it. Sealed in the tooth, its only available supply is contained in the accessory canals and to some extent in the tubuli. It can gather but little from the tubuli, however, because of the wall of calcium sulphate which it quickly builds up around itself and which prevents its further penetration. It must, therefore, act upon the watery content of the accessory canal, which it promptly does. The water in these canals is drawn into the acid and the acid flows back into the canals. In other words, sufficient of the water and the acid change places to produce a balancing of the solution. Does any of this acid diffuse into tissues beyond the foramen? Not unless the apical tissue has been broken down and replaced with cystic fluid. Its action in coagulating albumen will not permit it to actually enter living tissue. There again it is self-limit-
ing. It must have a fluid medium and finding such in the accessory canals, it follows them to the ends, oxidizes and breaks up the dead tissues contained in them, and destroys the bacteria. In treating the canal it is not possible to ascertain where these accessory canals are, their number nor direction; but if they are present (and we are told by excellent authorities that they always are) the acid will find them.

Subsequent application of fresh acid followed by the soda will result in the complete removal of all organic material from all of these canals excepting those exceedingly small and quite longer than the average.

**Filling the Canaliculi by Diffusion**

When we have finished with our acid and neutralized it for the last time, our canaliculi are filled with water, holding many chemical compounds in solution. The water effectively bars the entrance of chloro-resin solution, so we must substitute something else for this water, something which has affinity for chloroform. Alcohol is ideal for this purpose. The main canal is then flooded with 95 per cent alcohol, which is thoroughly pumped and churned into it. By diffusion this substitutes for the water in the canaliculi, filling them with lower grade alcohol. Ample time must be allowed for this, for if the canaliculi contain less than 85 per cent alcohol, the chloro-resin will not diffuse through them. This usually requires from two to three minutes. All of the alcohol which can be removed with absorbent points is then taken out and the pulp chamber and canal flooded with chloro-resin. *No pulp canal driers or hot air must be used at this stage,* for we wish the canaliculi to remain filled with alcohol. The chloroform diffuses perfectly and fairly rapidly into the alcohol, and inasmuch as the resin is in perfect solution in the chloroform, wherever the chloroform goes the resin goes. *Time is required here also.* It is not a “slam-bang” process. Allow from three to five minutes here, pumping in fresh chloro-resin as the chloroform is soaked up by the tubuli and canaliculi or passes off by evaporation. Toward the end of this period, when the solution in the canal begins to get rather heavy, add pure chloroform as needed to keep it sufficiently thin to dissolve the gutta-percha point.

When this third substitution or diffusion is complete, a gutta-percha point of suitable size and shape is then passed into the canal and dissolved by either a pumping or stirring movement, which movement you use is governed by the size of the foramen. With a normal, small foramen, a pumping movement is best; with a large foramen this would force too much chloro-percha through, therefore a stirring movement is used.

Just how beautifully the gutta percha will diffuse through the
chloroform is shown by the illustrations of decalcified teeth and the radiographs of teeth filled in the mouth.

We are told, and correctly I think, that chloro-percha in hardening shrinks from the periphery. In other words, it releases the walls of its container. And we are also told that chloro-resin-percha in hardening shrinks from the center, or clings to the wall of its container by virtue of the strong adhesion of the resin and the fact that tiny threads of this material actually enter the tubuli. An excellent way to assist this central shrinkage and peripheral adhesion is as follows: After the filling has been sufficiently condensed with the canal pluggers, select a very small plugger, and by passing it down through the center of the filling for at least half the length of the canal entirely break up all central cohesion.

The pulp chamber should then be quickly filled with cement so as to prevent external evaporation of the chloroform, for if the chloroform is permitted to evaporate externally, even the above precaution will not prevent peripheral shrinkage.

Nothing has been said so far about the effectiveness of the resin in filling the tubuli. Chloroform is one of the most penetrating liquids we have, and it not only quickly penetrates the tubuli but the inter-prismatic spaces between the enamel rods as well. This can be easily proved. Dehydrate an extracted tooth, allowing it to dry out or by a protracted immersion in alcohol or acetone, soak it for several hours in a rather heavy chloro-resin solution, then try to break the enamel with a chisel or by grinding with a coarse stone. An old tooth which has been dried out for years, and the enamel of which is as brittle as glass, can be made as tough as a fresh tooth in a very few hours by this simple process. This is an excellent way to treat your technic teeth so as to prevent the chipping off of the enamel while you are preparing them for various uses and also to prevent their cracking and checking in after years.

Of course if this solution will carry sufficient resin into the inter-prismatic spaces to have this effect on old, dried-out teeth, there can be no argument about it carrying sufficient resin into the infinitely larger tubuli to effectually obliterate them and encapsulate in its dense, solid substance any bacteria they contain. Even granting (as some contend) that the resin is not a germicide or antiseptic, a bacterium encapsulated in it must remain inert until it dies of old age.

**PART II**

**A DEFINITE TREATMENT OF PERIAPICAL INFECTION**

For several years I have consistently used ionization immediately before filling the canals of all infected teeth, and even the old zinc chloride has given some remarkable results. But for the past year I have been using a solution of iodine for this purpose which has given results far exceeding anything I have ever been able to get.
before. This solution is simply the old time Churchill’s tincture of iodine. It is highly electrolytic and has a high iodine content—19 per cent. I now have records of over 100 cases of periapical abscesses with sinus (or fistula), and in every case, save three, the formation of pus ceased immediately after fifteen minutes ionization with this solution. In the great majority of these cases the canals were cleaned out, ionized, and filled at the first sitting, and in no case except the three mentioned was there any after soreness or discomfort to the patient.

Case 1.—Girl, age thirteen; right lower first molar; abundant flow of pus from both roots persisting for over three months in spite of treatment by several good dentists. Could not be sealed for more than an hour. Ionization with zinc chloride gave no results.

Treatment.—Pus removed with dioxygen, Churchill’s tincture of iodine pumped into the canals, zinc point placed in each canal and all of them ionized at the same time. Current on for fifteen minutes, giving one-half milliamperes for each canal or a total of one and one-half milliamperes. The pulp canals were then filled immediately by the modified Callahan method. The following day when the patient returned, she reported that there had been absolutely no pain and the tooth perfectly comfortable at all times and capable of mastication.

Case 2.—Boy, age fourteen. History showed an acute abscess four months previously on left lower first molar. No treatment given at that time. Copious flow of thin, light yellow pus. Treatment and result identical with case No. 1.

Case 14.—(Cited because it is the worst case of this type I have ever treated.)—Woman, age about twenty-five; upper right bicuspid, very ugly sinus of five months standing, on the buccal gum. Treatment same as other two cases quoted, except, as this tooth has only two canals, it was given a total of only one milliamper. Twenty-four hours later the sinus was entirely closed, only a white cicatrix remaining. No after pain or soreness. (Most of the sinuses close in twenty-four hours.)

Case 39.—Boy, age eighteen; upper right first molar; condition exceptionally foul; small quantity of pus of the heavy, viscid type. Treatment the same as previous cases. Patient returned in afternoon of the same day, suffering acutely. Tooth was extracted, and in the mesiobuccal socket was found a large opening in the antral floor. (Radiograph is often deceptive in regard to this.)

Case 41.—Lower right bicuspid; putrescent. Treatment as above. Result: Entire relief of pain and no after soreness whatever.

Up to this date a total of over 100 cases have been treated as outlined above, and in all but three of that number the flow of pus and formation of gas have been stopped successfully, leaving the tooth entirely comfortable and immediately serviceable.
Now before closing, let me state what I believe will eventually be the perfect pulp canal filling. It will be made by some solutions which depend absolutely upon diffusion for carrying them throughout the tooth structure and avoiding the necessity for even the slight force which is used in pumping the gutta-percha point after the Callahan method. It is my dream that some day some dental chemist may devise a method and solutions which, when carried into the canals and canaliculi by the simple force of diffusion, may then be converted into a non-irritating, non-shrinking, non-absorbent, insoluble, and adhesive solid. May the day of this discovery be not far distant, and you are all invited and urged to get in this race with me and see if you cannot beat me to the tape.

---

**MEMORIALS**

**DR. RUSSELL GRAHAM SHERRILL**

1882—1921

**BY DR. H. O. LINEBERGER**

The North Carolina Dental Society each year at some time during its sessions, arrests from its regular business routine to do honor to those who yesterday were with us in person and spirit, but who today are only with us in the spirit.

As we tread the paths of life we are thrown in contact with men of many types; some we remember, and others we can’t forget. Some we can describe, still others are so near and dear to us that words and phrases will not transmit to the world their true relationship to us.

A man of high ideals, lofty purpose, unswerving devotion to friends, and staunch loyalty to home, church and state was Dr. Russell Graham Sherrill.

Russell Graham Sherrill was born at Newton, N. C., February 11, 1882, the fifth son of the late Captain and Mrs. Miles O. Sherrill. After completing his elementary education and high school courses, he entered Lenoir College, Hickory, N. C., and later took up his studies at the A. & M. College, Raleigh, N. C. Before completing his course at this institution, he decided to make dentistry his life work, and in the fall of 1901 he entered the Louisville College of Dentistry, graduated with honors from that institution in the close of 1904. He was a member of the Sigma Nu (Academic) and the Psi Omega (Dental) fraternities.

After graduating he located in Raleigh, associating himself with Dr. J. D. Whitaker in the practice of dentistry. This partnership remained until Dr. Whitaker severed his relations to specialize in eye, ear, nose and throat.

On June 11, 1907, Dr. Sherrill was married to Miss Margie
Ferrall, of Raleigh, who, with three children, Margaret, John, and Russell Jr., are left to mourn the great loss.  
As long as Dr. Sherrill's health permitted he was an active member of this Society, serving in the capacity of president of their organization in 1912-1913. Finding his health failing, he gave up his practice for three years, spending his time at Ft. Bayard, N. M., in an effort to regain it. For a while after he returned to Raleigh in 1917 it seemed that all was well, but in the spring of 1918 he found that he was not able to continue his practice, so he gave it up permanently and with his devoted family made his home in Tryon, in the mountains of his native State. It was there that he died January 21, 1921. His remains were brought to Raleigh for burial, and our friend now lies mourned but undisturbed in Oakwood Cemetery in the city he loved so dearly.

Following Resolution were offered by the Raleigh Dental Society.

Whereas our Heavenly Father in His Wisdom removed from among us one of our worthy and esteemed members, Dr. Russell Graham Sherrill, and whereas, the long intimate relations held with him in his faithful service to the dental profession, therefore:

Resolved, First. The wisdom and ability which he has exercised in the aid of our profession and by service, contributions, and counsel will be held in grateful remembrance.

Resolved, Second, That the removal of such a life from our midst leaves a vacancy and a shadow that will be realized by all the members and friends of the dental profession, and will prove a serious loss to the community and the public.

Resolved, Third, That with deep sympathy for the bereaved and ever devoted wife and children, we express our hope that even so great a love to us all may be overcome for good by Him who doeth all things well.

Resolved, Further, That a copy of these resolutions be filed with the Secretary of the Raleigh Dental Society, and also with the Secretary of the North Carolina Dental Society, and a copy forwarded to the bereaved family.

Dr. J. Martin Fleming,
Dr. H. O. Lineberger,
Dr. S. P. Norris,
Committee.

DR. D. W. PARROTT

By Dr. J. G. Pool

Dr. Dan W. Parrott was born in Lenoir County, near Kinston, in the year 1882. He attended the public schools and the high schools and the high school of Kinston, after which he went to the Southern
Dental College of Atlanta for the study of his chosen profession. In 1907 he graduated and received license to practice dentistry in North Carolina. Unlike so many professional men, he decided to locate in his home town. His desire was to “make good” with and among his home people and boyhood friends. This he soon accomplished, and he continued to practice in Kinston until 1920.

Dr. Dan, as he was known and called by his many friends, was blessed with a particularly sunny and most lovable disposition, as well as an unusual amount of patience. These, with many other admirable characteristics, are responsible for the large circle of friends he enjoyed. Everyone who entered his office received a hearty, friendly greeting, no matter what their station in life might be. His character, both socially and in business relations, was absolutely unquestionable. Not only was he cheerful and patient while the path of life was smooth, but even after he knew his life would soon be cut short, and his suffering from an incurable malady was almost unbearable, he still held to these virtues.

The direct cause of Dr. Parrott’s death, which occurred in May, 1921, was a malignant growth in the abdominal region. Every effort was made to restore health again, both by operations and radium treatment, but without permanent success.

About six weeks ago Dr. Parrott was married to Miss Leone Hines, daughter of Mr. and Mrs. W. T. Hines, of Kinston. This union was blessed by the birth of one child. The home life of our departed comrade was very beautiful; a devoted husband and father. He is survived by a widow and one daughter.

DR. A. M. DULA

BY DR. I. P. JETER

Dr. Arthur M. Dula was born in Marion, North Carolina, July 14, 1872. He received his elementary education at home and in private schools, later going to Weaverville College, from which he was graduated in 1891.

In 1902 he entered the University of Maryland, graduating in 1905. He began the practice of dentistry in Morganton in 1905. He married Miss Cora C. Stepp, of Black Mountain, and to this union were born two children, Evelyn, a young girl now in her teens, and Arthur, aged nine, who with his wife survive him. A few years ago he moved his family to Black Mountain. He kept his office in Morganton, but for the last year or two did but little practice, devoting his time to farming and other interests. Dr. Dula took an active interest in the welfare of the communities in which he lived. In 1915 he represented Burke County in the Legislature.

He died very suddenly on the morning of May 5 while on his way to his farm near Black Mountain. His funeral was conducted from the Presbyterian Church of Black Mountain and he was laid to rest in the beautiful cemetery nearby.
Dr. Dula was neither an enthusiast nor a fanatic, but careful and plodding, feeling his way with measured steps and a deliberation of judgment that characterized his every movement.

He was so retiring in disposition that he did not always pass for what he was worth. To those only with whom he came in daily contact, was the privilege reserved of breaking through the exterior, to find back of it the qualities of mind and heart, traits of character and disposition that make men honored wherever they are known.

"His life was gentle, and the elements so mixed in him, that Nature might stand up
And say to all the world, 'This was a man.'"

Dr. Wheeler reports for the committee appointed to report on the President’s Address.

REPORT OF PRESIDENT’S ADDRESS

We, your committee appointed to report on the President’s address, beg to submit the following:

We have carefully persued the address, and heartily endorse the same.

We especially commend for your consideration his recommendations in regard to the backing of oral hygiene in the public schools and also the procuring of the necessary legislation looking to the licensing of the dental hygenist.

Respectfully submitted,

J. H. Wheeler,
Whitfield Cobb,
Cyrus C. Keiger.

Moved, seconded and carried that the report of the committee be accepted.


Dr. J. C. Watkins, reporting for the Hygiene Committee:

We wish to congratulate the State Board of Health upon the wonderful work they are doing in this State; and we will not undertake to recapitulate their work because the State bulletins have made you familiar with it, but we are proud of the work done by Dr. Cooper and his associates.

Report of the Ethics Committee, by Dr. J. R. Edmundson, Wilson, N. C.

Dr. Fleming: I want to ask you if you did not think it was a good idea for a man who sees unethical advertising to report it to the Ethics Committee. That is, if I pick up a paper and see a man’s advertisement in the paper which I did
not think was ethical, something more than his card, it seems to me nothing but right that I should send that to the Ethics Committee, not preferring any specific charge against him, but advise them that his advertisement is beyond the pale of ethical practice, and if he discontinues it, well and good, but if he does not discontinue it, let's try that case.

Only a few days ago somebody left a newspaper in my office and one of the most glaring advertisements I have seen from a dentist in ten years was in that paper, and yet he is a member of this Society and present at the meeting. If I lived in the same town with him, I would prefer charges against him; but I think I ought to have enough interest in my Society to refer that to the Committee.

The President: I always did believe in repentance. If a man does something like that he doesn't mean to, oversteps the bounds of ethics, and his attention is called to it and he agrees to quit it, that is all right, but we should all be on the alert to keep the men in line.

Dr. Flemming: Just one other thing I want to say in that connection. Our new constitution and by-laws has no code of ethics printed with it, but our same code of ethics printed years ago is in operation now. We must not pick up our constitution and try to find the code of ethics in it; it is not there. But you can get a copy of the code of ethics from the Secretary of the Society.

REPORT OF THE EXECUTIVE COMMITTEE

The Executive Committee desires to thank the visiting dentists, Drs. Hardin, Heatwole, Harrison, Johnson and Patterson for their excellent papers and clinics and our home clinicians for contribution to the success of our meeting. We wish also to thank Dr. Elliot of the Crowell Clinic for his instructive paper on Syphilis of the Mouth.

In behalf of the Society we wish to extend our thanks to the management of the hotels for the excellent manner in which they cared for us and provided for our needs.

The thanks of the Society and the Examining Board is extended to the Charlotte dentists for their help and cooperation and for the use of their offices for the clinics of the students taking the examinations.

Charlotte's live and progressive newspapers have "covered" our
meetings in a most accurate, full and satisfactory manner, eliciting frequent remarks of high approval and appreciation from our members.

The Society appreciates the exhibits of the supply houses and others.

We feel that we have had a successful meeting through the efforts and cooperation of the officers and committees, and we trust that this same spirit of loyal support will characterize the meetings of our Society in the future.

R. M. Squires, Chairman,
J. S. Betts.

TREASURERS REPORT

Receipts.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance on hand last report</td>
<td>$1,416.98</td>
</tr>
<tr>
<td>Received for membership</td>
<td>55.00</td>
</tr>
<tr>
<td>Received for dues</td>
<td>1,917.56</td>
</tr>
<tr>
<td>Received for space at Wrightsville</td>
<td>107.00</td>
</tr>
<tr>
<td><strong>Total Receipts</strong></td>
<td><strong>$3,556.54</strong></td>
</tr>
</tbody>
</table>

Disbursements.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid expenses at Wrightsville</td>
<td>$ 376.45</td>
</tr>
<tr>
<td>Paid printing and postage</td>
<td>576.99</td>
</tr>
<tr>
<td>Paid National Dental Society</td>
<td>831.00</td>
</tr>
<tr>
<td>Paid Treasurer's bond</td>
<td>5.00</td>
</tr>
<tr>
<td>Paid membership fee returned</td>
<td>5.00</td>
</tr>
<tr>
<td>Paid badges and supplies</td>
<td>12.09</td>
</tr>
<tr>
<td>Paid Secretary's salary and expenses this year</td>
<td>152.34</td>
</tr>
<tr>
<td>Paid Treasurer's salary</td>
<td>100.00</td>
</tr>
<tr>
<td>Paid Secretary's salary last year</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Balance on hand</strong></td>
<td><strong>1,397.67</strong></td>
</tr>
<tr>
<td><strong>Total Disbursements</strong></td>
<td><strong>$3,556.54</strong></td>
</tr>
</tbody>
</table>

R. M. Morrow, Treasurer.

CHARLOTTE, N. C., June 29, 1921.

REPORT OF AUDITING COMMITTEE

CHARLOTTE, N. C. June 30, 1921.

We, the undersigned members of the Auditing Committee, submit the following report: We have audited the books of the Treasurer and find them correct.

Respectfully,

L. R. Gorham,  
L. T. Smith,  
Whitfield Cobb.
MEETING OF HOUSE OF DELEGATES

All applications for membership recommended by the Executive Committee passed second reading.

Without opposition they were elected.

Resignation of Dr. A. Y. Russell was read and accepted.

Dr. A. Y. Russell, Baltimore, Md., was elected to honorary membership of the Society.

Dr. Morrow: For some time we have been six months behind, or rather six months ahead, of the National Dental Association in our dues. Dues we collect in June are turned over to the National in January. The new by-laws adopted at our last meeting makes the dues due January 1, and if not paid by January 20 the member is suspended. For these reasons as well as others stated before there should be some change in our present system.

Dr. Hunt: In order that we may get the matter of collecting dues finally settled on a more uniform basis, I move, Mr. President, that all members who have paid dues at this meeting be considered as paid up and in good standing until January 1, 1923. After that date the Treasurer is to strictly adhere to Article Five of the By-laws.

Motion was seconded.

Without opposition the motion was adopted.

There being no further business the House of Delegates adjourned.

The Society was called to order at noon by the President.

Dr. Judd: I wish to take this opportunity to thank all those who have so diligently aided me during the past year in carrying on the work of this Society. I especially want to thank the dentists of Charlotte for the part they have played in making this the largest meeting we have ever held. I trust that the experience which we have had will give us an incentive, and aid us in carrying the work of the Society forward. I pledge my support to the incoming president and can assure him that he will find a willing hand and coöperative spirit in each and every member of this Society.

Installation of officers.

After the installation of the new officers, President Robey appointed the following committees:
Executive Committee—Dr. J. H. Wheeler, Chairman, Greensboro, N. C.; Dr. J. H. Judd, Fayetteville, N. C.; Dr. J. A. McClung, Winston-Salem, N. C.

Ethics Committee—Dr. J. R. Edmondson, Chairman, Wilson, N. C.; Dr. W. T. Martin, Benson, N. C.; Dr. W. B. Ramsey, Hickory, N. C.

Legislative Committee—Dr. F. L. Hunt, Chairman, Asheville, N. C.; Dr. J. M. Fleming, Raleigh, N. C.; Dr. E. J. Tucker, Roxboro, N. C.

Auditing Committee—Dr. Whitfield Cobb, Chairman, Winston-Salem, N. C.; Dr. P. C. Hull, Charlotte, N. C.; Dr. J. M. Holland, Statesville, N. C.

Oral Hygiene Committee—Dr. J. C. Watkins, Chairman, Winston-Salem, N. C.; Dr. J. C. Johnston, Raleigh, N. C.; Dr. C. C. Keiger, Charlotte, N. C.

Program Committee—Dr. H. L. Keith, Chairman, Wilmington, N. C.; Dr. R. M. Olive, Fayetteville, N. C.

Dr. Robey: Fellow members, this high honor, I assure you, came as a surprise to me, but with your support I am confident we can make this the best year this Society has ever had. Especially do I ask the close cooperation of those members I have just appointed on the various committees.

Is there any further business to come before the Society?

There being no further business I declare the Forty-seven Annual Meeting of the North Carolina Dental Society stands adjourned.

Next meeting Wrightsville Beach, N. C.
PRESIDENTS OF THE SOCIETY SINCE ITS ORGANIZATION

1875-6 ........................................ *B. F. Arrington
1876-7 ........................................ *V. E. Turner
1877-8 ........................................ *J. W. Hunter
1878-9 ........................................ *E. L. Hunter
1879-80 ........................................ *D. E. Everitt
1880-1 ........................................ *Isaiah Simpson
1881-2 ........................................ M. A. Bland
1882-3 ........................................ *J. F. Griffith
1883-4 ........................................ *W. H. Hoffman
1884-5 ........................................ J. H. Durham
1885-6 ........................................ J. E. Matthews
1886-7 ........................................ B. H. Douglas
1887-8 ........................................ *T. M. Hunter
1888-9 ........................................ *V. E. Turner
1889-90 ........................................ *S. P. Hilliard
1890-1 ........................................ H. C. Herring
1891-2 ........................................ C. L. Alexander
1892-3 ........................................ *F. S. Harris
1893-4 ........................................ *C. A. Rominger
1894-5 ........................................ H. D. Harper
1895-6 ........................................ R. H. Jones
1896-7 ........................................ J. E. Wyche
1897-8 ........................................ H. V. Horton
1898-9 ........................................ C. W. Banner
1899-1900 ..................................... A. C. Liverman
1900-1 ........................................ E. J. Tucker
1901-2 ........................................ J. S. Spurgeon
1902-3 ........................................ J. H. Benton
1903-4 ........................................ J. M. Fleming
1904-5 ........................................ W. B. Ramsay
1905-6 ........................................ J. S. Betts
1906-7 ........................................ J. R. Osborne
1907-8 ........................................ *D. L. James
1908-9 ........................................ *F. L. Hunt
1909-10 ........................................ J. C. Watkins
1910-11 ........................................ A. H. Fleming
1911-12 ........................................ P. E. Horton
1912-13 ........................................ *R. G. Sherrill
1913-14 ........................................ C. F. Smithson
1914-15 ........................................ J. A. Sinclair
1915-16 ........................................ I. H. Davis
1916-17 ........................................ R. O. Apple
1917-18 ........................................ R. M. Squires
1918-19 ........................................ J. N. Johnson

*Deceased
ROLL OF LIFE MEMBERS, BY VIRTUE OF HAVING PAID DUES FOR TWENTY-FIVE CONSECUTIVE YEARS

Alexander, C. L. — Charlotte, N. C.
Battle, J. J. — Rocky Mount, N. C.
Carr, I. N. — Durham, N. C.
Carroll, N. G. — Raleigh, N. C.
Conrad, W. J. — Winston-Salem, N. C.
Davis, I. H. — Oxford, N. C.
Horton, H. V. — Winston-Salem, N. C.
Horton, P. E. — Winston-Salem, N. C.
Jones, R. H. — Winston-Salem, N. C.
Little, J. B. — Newton, N. C.
Liverman, A. C. — Scotland Neck, N. C.
Lynch, William — Durham, N. C.
Mathews, J. E. — Wilmington, N. C.
Morrow, R. M. — Burlington, N. C.
Parker, J. M. — Asheville, N. C.
Patterson, G. B. — Fayetteville, N. C.
Ramsey, R. L. — Salisbury, N. C.
Ramsey, W. B. — Hickory, N. C.
Ross, T. T. — Nashville, N. C.
Rowe, W. W. — Greensboro, N. C.
Spurgeon, J. S. — Hillsboro, N. C.
White, L. — Statesboro, N. C.
Whitsett, G. W. — Greensboro, N. C.
Wyche, J. E. — Greensboro, N. C.

HONORARY MEMBERS

Adair, R. B. — Atlanta, Ga.
Adair, Robin — Atlanta, Ga.
Austin, J. L. — Chattanooga, Tenn.
Banner, C. W. — Greensboro, N. C.
Beadles, E. P. — Norfolk, Va.
Bland, M. A. — Charlotte, N. C.
Bland, C. A. — Charlotte, N. C.
Bogle, R. B. — Nashville, Tenn.
Bryan, N. L. — Newton Grove, N. C.
Byrnes, R. R. — Richmond, Va.
Callahan, P. E. — McRae, Ga.
Campbell, H. W. — Suffolk, Va.
Carroll, Delia Dixon — Raleigh, N. C.
Cason, W. L. — Athens, Ga.
<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chisholm, W. W.</td>
<td>Anderson, S. C.</td>
</tr>
<tr>
<td>Collins, Clara C.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Cooper, George M.</td>
<td>Raleigh, N. C.</td>
</tr>
<tr>
<td>Cowden, L. M.</td>
<td>Richmond, Va.</td>
</tr>
<tr>
<td>Crenshaw, Wm.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Cuthbertson, C. W.</td>
<td>Washington, D. C.</td>
</tr>
<tr>
<td>Dale, J. A.</td>
<td>Nashville, Tenn.</td>
</tr>
<tr>
<td>Eby, Jos. D.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Foster, S. W.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Goldberg, E. H.</td>
<td>Bennettsville, S. C.</td>
</tr>
<tr>
<td>Gorman, J. A.</td>
<td>New Orleans, La.</td>
</tr>
<tr>
<td>Harrison, G. R.</td>
<td>Richmond, Va.</td>
</tr>
<tr>
<td>Heatwole, T. O.</td>
<td>Baltimore, Md.</td>
</tr>
<tr>
<td>Hill, Thomas J.</td>
<td>Cleveland, Ohio</td>
</tr>
<tr>
<td>Hinman, Thomas P.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Howard, Clinton C.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Howe, P. R.</td>
<td>Boston, Mass.</td>
</tr>
<tr>
<td>Huff, M. D.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Hughes, C. N.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Kelsey, H. L.</td>
<td>Baltimore, Md.</td>
</tr>
<tr>
<td>Lambright, W. E.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>McCulloch, F. R.</td>
<td>Greensboro, N. C.</td>
</tr>
<tr>
<td>McGuire, Daisy</td>
<td>Sylva, N. C.</td>
</tr>
<tr>
<td>Milner, H. A.</td>
<td>Aiken, S. C.</td>
</tr>
<tr>
<td>Moore, S. W.</td>
<td>Baltimore, Md.</td>
</tr>
<tr>
<td>Netherlands, Frank</td>
<td>Asheville, N. C.</td>
</tr>
<tr>
<td>Nodine, Alonza M.</td>
<td>New York, N. Y.</td>
</tr>
<tr>
<td>Quattlebaum, E. G.</td>
<td>Columbia, S. C.</td>
</tr>
<tr>
<td>Ruhl, J. P.</td>
<td>New York, N. Y.</td>
</tr>
<tr>
<td>Russell, A. Y.</td>
<td>Baltimore, Md.</td>
</tr>
<tr>
<td>Rutledge, B.</td>
<td>Florence, S. C.</td>
</tr>
<tr>
<td>Silverman, S. L.</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>Simpson, R. L.</td>
<td>Richmond, Va.</td>
</tr>
<tr>
<td>Sherrill, R. G.</td>
<td>Tryon, N. C.</td>
</tr>
<tr>
<td>Smith, A. E.</td>
<td>Chicago, Ill.</td>
</tr>
<tr>
<td>Spratley, W. W.</td>
<td>Richmond, Va.</td>
</tr>
<tr>
<td>Stevenson, Albert H.</td>
<td>576 5th Ave., New York, N. Y.</td>
</tr>
<tr>
<td>Stewart, H. T.</td>
<td>New York, N. Y.</td>
</tr>
<tr>
<td>Strickland, A. C.</td>
<td>Anderson, S. C.</td>
</tr>
<tr>
<td>Teague, B. H.</td>
<td>Aiken, S. C.</td>
</tr>
<tr>
<td>Tench, R. W.</td>
<td>New York</td>
</tr>
</tbody>
</table>
Thompson, Webb .................................................. South Carolina
Tileston, H. B. .................................................. Louisville, Ky.
Turner, M. E. .................................................. Atlanta, Ga.
Visanska, S. A. .................................................. Atlanta, Ga.
Whitaker, J. D. .................................................. Indianapolis, Ind.
White, J. A. .................................................. Williamston, N. C.
Whitehead, C. A. .................................................. Scotland Neck, N. C.
Wooding, C. E. .................................................. Winston-Salem, N. C.

ROLL OF ACTIVE MEMBERS

Adams, A. J. .................................................. Durham, N. C.
Adams, M. G. .................................................. Scottsville, Va.
Aiken, J. L., Jr. .................................................. Brevard, N. C.
Alexander, C. L. .................................................. Charlotte, N. C.
Allen, R. T. .................................................. Lumberton, N. C.
Allen, T. I. .................................................. Charlotte, N. C.
Anderson, Fred .................................................. 717 Wachovia Bank Bldg., Winston-Salem, N. C.
Apple, R. O. .................................................. Winston-Salem, N. C.
Ashburn, T. F. .................................................. Liberty, N. C.
Aycock, B. L. .................................................. Princeton, N. C.
Bain, C. D. .................................................. Dunn, N. C.
Baird, C. D. .................................................. Franklin, N. C.
Baker, L. P. .................................................. Kings Mountain, N. C.
Ballou, N. T. .................................................. Richmond, Va.
Banks, C. H. .................................................. Louisburg, N. C.
Banner, J. E. .................................................. Mount Airy, N. C.
Barber, A. D. .................................................. Sanford, N. C.
Barnard, G. C. .................................................. Kannapolis, N. C.
Barker, O. C. .................................................. Asheville, N. C.
Battle, J. J. .................................................. Rocky Mount, N. C.
Beam, A. M. .................................................. Asheville, N. C.
Beam, A. P. .................................................. Asheville, N. C.
Bell, W. F. .................................................. Asheville, N. C.
Bell, V. E. .................................................. Raleigh, N. C.
Bender, O. J. .................................................. Pollocksville, N. C.
Benbow, L. W. .................................................. Winston-Salem, N. C.
Bennett, C. C. .................................................. Asheville, N. C.
Bennett, J. G. .................................................. Asheville, N. C.
Berryhill, A. W. .................................................. Charlotte, N. C.
Betts, J. S. .................................................. Greensboro, N. C.
Bingham, J. P. .................................................. Carthage, N. C.
Bingham, L. R. .................................................. Denton, N. C.
Bissett, M. D. .................................................. Middlesex, N. C.
Bivens, S. B. .................................................. Charlotte, N. C.
Blackburn, C. A. .................................................. Kernersville, N. C.
Blanchard, Dexter.............................................. Raleigh, N. C.
Bland, A. B......................................................... Wallace, N. C.
Bobbitt, S. L....................................................... Raleigh, N. C.
Bone, A. C......................................................... Rocky Mount, N. C.
Bolyes, A. V....................................................... Dallas, N. C.
Branch, E. A...................................................... Norwood, N. C.
Brooks, J. H....................................................... Burlington, N. C.
Bryan, Chas. H.................................................... Apex, N. C.
Bryan, J. K......................................................... Oxford, N. C.
Buie, L. E......................................................... Red Springs, N. C.
Bullard, T. P...................................................... Roseboro, N. C.
Bumgardner, E. G............................................... Casar, N. C.
Butler, J. R....................................................... Dunn, N. C.
Butler, S. E....................................................... Warsaw, N. C.
Campbell, T. A................................................... Fayetteville, N. C.
Carlton, J. D..................................................... Salisbury, N. C.
Carlton, J. W..................................................... Spencer, N. C.
Carr, Geo. A...................................................... New York, N. Y.
Carr, H. C......................................................... Durham, N. C.
Carr, I. N......................................................... Durham, N. C.
Carroll, N. G.................................................... Raleigh, N. C.
Carson, H. H..................................................... Hendersonville, N. C.
Carter, George K................................................. Kings Creek, N. C.
Casey, R. P....................................................... New Castle, N. C.
Cassevans, H. E................................................ Greensboro, N. C.
Chamberlain, C. H............................................. Yadkinville, N. C.
Chambers, E. O................................................ Asheville, N. C.
Chamberlain, E. H............................................. Rockingham, N. C.
Chanler, E. O................................................... Asheville, N. C.
Cheeks, J. M...................................................... Roxboro, N. C.
Choate, E. C.................................................... Cooleemee, N. C.
Clark, M. H. P.................................................. Wilmington, N. C.
Clayton, W. F.................................................. High Point, N. C.
Click, E. G...................................................... Elkin, N. C.
Cline, C. P.................................................... Monroe Bldg., Norfolk, Va.
Cobb, Whitfield.............................................. Winston-Salem, N. C.
Coble, L. G..................................................... Greensboro, N. C.
Coffey, L. M..................................................... Lincolnton, N. C.
Cole, R. S....................................................... Rockingham, N. C.
Coleman, F. H................................................... Wilmington, N. C.
Coltrane, J. F.................................................. Zebulon, N. C.
Cone, P. B....................................................... Williamson, N. C.
Conrad, W. J.................................................... Winston-Salem, N. C.
Cox, Ella B...................................................... Palmerville, N. C.
Crank, J. C..................................................... Roanoke Rapids, N. C.
Craver, A. W................................................... Boonville, N. C.
Crawford, D. H. ........................................ Marion, N. C.
Crews, R. W........................................ Thomasville, N. C.
Cripliver, W. ........................................ Lexington, N. C.
Cromartie, A. S....................................... Fayetteville, N. C.
Cromartie, H. R....................................... Raeford, N. C.
Croom, J. D........................................ Maxton, N. C.
Culler, O. E........................................ Rock Creek, N. C.
Current, W. Clyde................................ Statesville, N. C.
Dameron, L. L. * ................................ New Bern, N. C.
Daniel, H. C........................................ Salisbury, N. C.
Daniels, L. M........................................ Southern Pines, N. C.
Darden, P. I.......................................... Mount Olive, N. C.
Davis, F. W.......................................... West Asheville, N. C.
Davis, I. H.......................................... Oxford, N. C.
Davis, J. V.......................................... Concord, N. C.
Davis, Thomas F.................................. Camp Bragg, N. C.
Douglass, S. E..................................... Raleigh, N. C.
Dreher, J. H......................................... Wilmington, N. C.
Dupree, L. Justice................................ Lillington, N. C.
Edge, C. E.......................................... Rocky Mount, N. C.
Edmundson, J. R.................................. Wilson, N. C.
Edwards, A. C..................................... Lawndale, N. C.
Edwards, E. L...................................... Morganton, N. C.
Edwards, H. A....................................... Greensboro, N. C.
Edwards, J. R....................................... Fuquay Springs, N. C.
Edwards, L. M....................................... Durham, N. C.
Ehringhaus, E....................................... Hendersonville, N. C.
Ellerbee, J. H....................................... Rockingham, N. C.
Ellington, R. H.................................... Salisbury, N. C.
Evans, E. J.......................................... Asheville, N. C.
Evans, Geo. J....................................... Asheville, N. C.
Falls, P. R.......................................... Gastonia, N. C.
Farrell, R. M....................................... Pittsboro, N. C.
Faucette, J. W..................................... Asheville, N. C.
Fields, Paisley..................................... Wilson, N. C.
Finch, S. J........................................ Oxford, N. C.
Fisher, W. R........................................ Concord, N. C.
Fitzgerald, Paul................................... Greenville, N. C.
Fitzgerald, W. C................................... Albemarle, N. C.
Fleming, A. H...................................... Louisburg, N. C.
Fleming, J. Martin................................ Raleigh, N. C.
Foster, H. K......................................... Greensboro, N. C.
Foushee, L. M. Jr.,................................. Jonesboro, N. C.
Frink, B. L.......................................... Bladenboro, N. C.
Fulton, Joseph..................................... Asheville, N. C.

*Deceased
<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funderburk, Kemp</td>
<td>Monroe, N. C.</td>
</tr>
<tr>
<td>Frost, J. S.</td>
<td>Burlington, N. C.</td>
</tr>
<tr>
<td>Fuquay, C. G.</td>
<td>Coats, N. C.</td>
</tr>
<tr>
<td>Gallagher, R. T.</td>
<td>Washington, N. C.</td>
</tr>
<tr>
<td>Gardner, J. M.</td>
<td>Gibson, N. C.</td>
</tr>
<tr>
<td>Geddie, C. H.</td>
<td>Winston-Salem, N. C.</td>
</tr>
<tr>
<td>Gettys, J. H.</td>
<td>Forest City, N. C.</td>
</tr>
<tr>
<td>Gibbs, W. D.</td>
<td>Fayetteville, N. C.</td>
</tr>
<tr>
<td>Gibson, H. B.</td>
<td>Red Springs, N. C.</td>
</tr>
<tr>
<td>Gibson, J. L.</td>
<td>Laurinburg, N. C.</td>
</tr>
<tr>
<td>Glenn, C. F.</td>
<td>Asheville, N. C.</td>
</tr>
<tr>
<td>Gorham, L. R.</td>
<td>Rocky Mount, N. C.</td>
</tr>
<tr>
<td>Graham, C. A.</td>
<td>Burlington, N. C.</td>
</tr>
<tr>
<td>Graham, R. F.</td>
<td>Rowland, N. C.</td>
</tr>
<tr>
<td>Gregg, J. D.</td>
<td>Liberty, N. C.</td>
</tr>
<tr>
<td>Gregory, S. W.</td>
<td>Elizabeth City, N. C.</td>
</tr>
<tr>
<td>Griffin, E. J.</td>
<td>Edenton, N. C.</td>
</tr>
<tr>
<td>Hair, L. G.</td>
<td>Fayetteville, N. C.</td>
</tr>
<tr>
<td>Hall, B. F.</td>
<td>Asheville, N. C.</td>
</tr>
<tr>
<td>Hall, C. B.</td>
<td>Goldsboro, N. C.</td>
</tr>
<tr>
<td>Hamilton, E. S.</td>
<td>Charlotte, N. C.</td>
</tr>
<tr>
<td>Hamlin, J. J.</td>
<td>High Point, N. C.</td>
</tr>
<tr>
<td>Hargrove, T. A.</td>
<td>Wilmington, N. C.</td>
</tr>
<tr>
<td>Hargrove, M. L.</td>
<td>Wilmington, N. C.</td>
</tr>
<tr>
<td>Harrell, R. B.</td>
<td>Elkin, N. C.</td>
</tr>
<tr>
<td>Harrison, E. E. Jr.</td>
<td>Olin, N. C.</td>
</tr>
<tr>
<td>Hartsell, W. K.</td>
<td>Greensboro, N. C.</td>
</tr>
<tr>
<td>Hasty, Vance</td>
<td>Charlotte, N. C.</td>
</tr>
<tr>
<td>Haynes, F. K.</td>
<td>Statesville, N. C.</td>
</tr>
<tr>
<td>Henderson, H. C.</td>
<td>Charlotte, N. C.</td>
</tr>
<tr>
<td>Henderson, L. V.</td>
<td>Ashland, Va.</td>
</tr>
<tr>
<td>Herr, Geo. G.</td>
<td>Southern Pines, N. C.</td>
</tr>
<tr>
<td>Herring, G. F.</td>
<td>Mount Olive, N. C.</td>
</tr>
<tr>
<td>Hester, John N.</td>
<td>Reidville, N. C.</td>
</tr>
<tr>
<td>Hester, O. H.</td>
<td>Hickory, N. C.</td>
</tr>
<tr>
<td>Hicks, T. B.</td>
<td>Hickory, N. C.</td>
</tr>
<tr>
<td>Hicks, R. C.</td>
<td>Shelby, N. C.</td>
</tr>
<tr>
<td>High, D. P.</td>
<td>Wilmington, N. C.</td>
</tr>
<tr>
<td>Highsmith, C.</td>
<td>Gastonia, N. C.</td>
</tr>
<tr>
<td>Hoffman, J. S.</td>
<td>Charlotte, N. C.</td>
</tr>
<tr>
<td>Hoffman, M. E.</td>
<td>Asheville, N. C.</td>
</tr>
<tr>
<td>Holland, J. M.</td>
<td>Statesville, N. C.</td>
</tr>
<tr>
<td>Holland, N. T.</td>
<td>Smithfield, N. C.</td>
</tr>
<tr>
<td>Hollingsworth, W. M.</td>
<td>Mount Airy, N. C.</td>
</tr>
<tr>
<td>Hooks, Oscar</td>
<td>Wilson, N. C.</td>
</tr>
</tbody>
</table>
Hooper, Lyman, J.---------------------Asheville, N. C.
Horton, H. V.-------------------------Winston-Salem, N. C.
Horton, P. E.-------------------------Winston-Salem, N. C.
Horton, S. R.-------------------------Raleigh, N. C.
Houston, W. C.-----------------------Concord, N. C.
Howle, E. B.--------------------------Raleigh, N. C.
Hoyle, I. H.--------------------------Henderson, N. C.
Hughes, Jack, H.----------------------Canon, Ga.
Hull, P. C.---------------------------Charlotte, N. C.
Humphrey, L. M.-----------------------Greensboro, N. C.
Hunt, F. L.---------------------------Asheville, N. C.
Hunt, Jas. K.--------------------------Jonesboro, N. C.
Hunter, E. W.-------------------------Sanford, N. C.
Hurdle, J. H.--------------------------Mebane, N. C.
Hutchins, W. Y.-----------------------Marshall, N. C.
Hutchison, C. R.----------------------Walnut Cove, N. C.
Ihrie, J. H.--------------------------Wendell, N. C.
Jackson, Wilbert-----------------------Clinton, N. C.
Jarrett, Ralph F.----------------------Charlotte, N. C.
Jenkins, C. E.-------------------------Scotland Neck, N. C.
Jernigan, J. A.------------------------Dunn, N. C.
Jeter, I. P.---------------------------Morganton, N. C.
Johnson, B. McK.----------------------Wilmington, N. C.
Johnson, Floyd G.----------------------Lexington, N. C.
Johnson, J. C.-------------------------Raleigh N. C.
Johnson, J. N.-------------------------Goldsboro, N. C.
Jones, E. D.--------------------------West Jefferson, N. C.
Jones, P. E.--------------------------Farmville, N. C.
Jones, R. H.--------------------------Winston-Salem, N. C.
Jones, B. P.--------------------------Blackstone, Va.
Jones, W. F.--------------------------North Wilkesboro, N. C.
Jordan, H. W.-------------------------Monroe, N. C.
Joyner, O. L.--------------------------Kernersville, N. C.
Judd, J. H.---------------------------Fayetteville, N. C.
Keel, D. F.---------------------------Raleigh, N. C.
Keel, H. L.---------------------------Tarboro, N. C.
Keerans, James L.---------------------810 Com. Bank Bldg., Charlotte, N. C.
Keiger, C. C.--------------------------Charlotte, N. C.
Keith, H. L.--------------------------Wilmington, N. C.
Kibler, W. L.-------------------------187 S. Lyon St., Charlotte, N. C.
King, D. D.---------------------------Lumberton, N. C.
Lamons, Herbert J.---------------------Greensboro, N. C.
Lazenby, G. A.-------------------------Statesville, N. C.
Lennon, C. H.-------------------------Rowland, N. C.
Levy, Sam-----------------------------Charlotte, N. C.
Lewis, B. L.--------------------------Roseboro, N. C.
Proceedings North Carolina Dental Society

Lewis, O. Preston.......................................................... Rutherfordton, N. C.
Lewis, W. H.............................................................. Atkinson, N. C.
Lineberger, H. O.......................................................... Raleigh, N. C.
Liner, W. H.............................................................. Waynesville, N. C.
Lipscomb, C. T........................................................... Greensboro, N. C.
Little, R. A.............................................................. Asheville, N. C.
Liverman, A. C.*......................................................... Scotland Neck, N. C.
Lockhart, D. K........................................................... Durham, N. C.
Long, H. I................................................................. Graham, N. C.
Long, W. S............................................................... Graham, N. C.
Lynch, Wm............................................................... Chapel Hill, N. C.
McCullum, C. S.......................................................... Etowah, N. C.
McCullum, S. H.......................................................... Troy, N. C.
McClung, J. A............................................................ Winston-Salem, N. C.
McConnell, D. E.......................................................... Gastonia, N. C.
McCracken, F. W........................................................ Sanford, N. C.
McDearment, H. M. K.................................................... Raeford, N. C.
McDowell, C. H.......................................................... Waynesville, N. C.
McGuire, W. P............................................................ Sylva, N. C.
McIver, D. C............................................................. Maxton, N. C.
McKannah, I. H........................................................... Gastonia, N. C.
McKay, S. R.............................................................. Lumberton, N. C.
McKeown, L. E........................................................... Stanley, N. C.
McKannah, I. H........................................................... Gastonia, N. C.
McKenzie, J. H.......................................................... Brevard, N. C.
McMillan, E. A.......................................................... Hendersonville, N. C.
McMillan, M. T.......................................................... Goldsboro, N. C.
McPhail, I............................................................... Hamlet, N. C.
McRae, W. L............................................................. Elrod, N. C.
Maddux, N. P............................................................ Asheville, N. C.
Malone, R. W........................................................... Durham, N. C.
Mann, Ben D............................................................. Enfield, N. C.
Mann, I. M............................................................... Asheville, N. C.
Mann, L. H.............................................................. Washington, N. C.
Manning, M. P.......................................................... Robersonville, N. C.
Marler, J. G............................................................. Yadkinville, N. C.
Marshburn, J. A........................................................ New Bern, N. C.
Marten, W. T............................................................ Benson, N. C.
Massey, L. M........................................................... Zebulon, N. C.
Master, Guy H........................................................ Winston-Salem, N. C.
Melford, N. M.......................................................... Canton, N. C.
Mendenhall, F. C....................................................... Gibsonville, N. C.
Mercer, Wm. C........................................................ Durham, N. C.
Meredith, L. J.......................................................... Wilmington, N. C.
Miller, C. I............................................................. Richfield, N. C.

*Not practising.
Milliken, J. B.-----------------------------------Winston-Salem, N. C.
Minge, C. E.-----------------------------------Rocky Mount, N. C.
Mizell, D. B.-----------------------------------Windsor, N. C.
Moore, L. J.-----------------------------------St. Pauls, N. C.
Moore, O. L.-----------------------------------Lenoir, N. C.
Montgomery, J. B.--------------------------------Wilmington, N. C.
Montgomery, D. O.--------------------------------Statesville, N. C.
Morrow, R. M.-----------------------------------Burlington, N. C.
Morroson, B. R.-----------------------------------Wilmington, N. C.
Morse, Italy M.-----------------------------------Winston-Salem, N. C.
Morse, R.-----------------------------------East Bend, N. C.
Murphey, W. E.-----------------------------------Farmville, N. C.
Murphy, R. H.-----------------------------------Mebane, N. C.
Murray, Henry V.-----------------------------------Burlington, N. C.
Neal, J. M.-----------------------------------Salisbury, N. C.
Newton, Alex.-----------------------------------Forest City, N. C.
Nichols, R. T.-----------------------------------Rockingham, N. C.
Nisbit, Taylor P.-----------------------------------Ahemarle, N. C.
Nissen, Eva Carter*-----------------------------------Winston-Salem, N. C.
Nicholson, J. H.-----------------------------------Harmony, N. C.
Norris, C. P.-----------------------------------Durham, N. C.
Norris, S. P.-----------------------------------Raleigh, N. C.
Olive, R. M.-----------------------------------Fayetteville, N. C.
Olive, T. H.-----------------------------------Mount Gilead, N. C.
Osborne, J. R.-----------------------------------Shelby, N. C.
Osborne, Jas.-----------------------------------Shelby, N. C.
Owen, J. E.-----------------------------------Asheville, N. C.
Parker, J. M.-----------------------------------Asheville, N. C.
Parker, William-----------------------------------Elizabeth City, N. C.
Parker, Z. V.-----------------------------------New Bern, N. C.
Patterson, G. B.-----------------------------------Fayetteville, N. C.
Patterson, G. K.-----------------------------------Wilmington, N. C.
Patterson, R. M.-----------------------------------Shelby, N. C.
Pearson, P. L.-----------------------------------Raleigh, N. C.
Peeier, C. M.-----------------------------------Shelby, N. C.
Pegram, L. J.-----------------------------------Raleigh, N. C.
Perkinson, R. H.-----------------------------------Rocky Mount, N. C.
Perry, E. A.-----------------------------------Littleton, N. C.
Pharr, J. R.-----------------------------------Cheraw, S. C.
Pitts, H. C.-----------------------------------High Point, N. C.
Pitts, D. R.-----------------------------------High Point, N. C.
Pless, C. A.-----------------------------------Canton, N. C.
Poindeexter, C. C.-----------------------------------Greensboro, N. C.
Poole, J. G.-----------------------------------Kinston, N. C.
Poole, S. D.-----------------------------------La Grange, N. C.
Pope, E. F.-----------------------------------Goldsboro, N. C.

*Married.
<table>
<thead>
<tr>
<th>Name</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pratt, C. B.</td>
<td>Rocky Mount, N. C.</td>
</tr>
<tr>
<td>Presnell, O. L.</td>
<td>Ashboro, N. C.</td>
</tr>
<tr>
<td>Pridgen, D. Leroy</td>
<td>Fayetteville, N. C.</td>
</tr>
<tr>
<td>Ralph, W. T.</td>
<td>Belhaven, N. C.</td>
</tr>
<tr>
<td>Ramsey, R. L.</td>
<td>Salisbury, N. C.</td>
</tr>
<tr>
<td>Ramsey, W. B.</td>
<td>Hickory, N. C.</td>
</tr>
<tr>
<td>Ray, Ralph</td>
<td>Gastonia, N. C.</td>
</tr>
<tr>
<td>Rayner, W. C.</td>
<td>Newton, N. C.</td>
</tr>
<tr>
<td>Reade, A. P.</td>
<td>Durham, N. C.</td>
</tr>
<tr>
<td>Redfern, B. C.</td>
<td>Monroe, N. C.</td>
</tr>
<tr>
<td>Reece, J. F.</td>
<td>Hamptonville, N. C.</td>
</tr>
<tr>
<td>Regan, C. W.</td>
<td>Laurinburg, N. C.</td>
</tr>
<tr>
<td>Regan, J. D.</td>
<td>Lumberton, N. C.</td>
</tr>
<tr>
<td>Reynolds, R. L.</td>
<td>Lexington, N. C.</td>
</tr>
<tr>
<td>Richardson, E. E.</td>
<td>Leaksville, N. C.</td>
</tr>
<tr>
<td>Kiddick, C. R.</td>
<td>Ayden, N. C.</td>
</tr>
<tr>
<td>Robeson, J. A.</td>
<td>Council, N. C.</td>
</tr>
<tr>
<td>Robey, W. M.</td>
<td>Charlotte, N. C.</td>
</tr>
<tr>
<td>Robbins, C. L.</td>
<td>Lenon, N. C.</td>
</tr>
<tr>
<td>Ross, T. T.</td>
<td>Nashville, N. C.</td>
</tr>
<tr>
<td>Rouse, V. H.</td>
<td>Rose Hill, N. C.</td>
</tr>
<tr>
<td>Rowe, W. W.</td>
<td>Greensboro, N. C.</td>
</tr>
<tr>
<td>Scruggs, W. N.</td>
<td>Charlotte, N. C.</td>
</tr>
<tr>
<td>Schultz, A. M.</td>
<td>Greenville, N. C.</td>
</tr>
<tr>
<td>Schmucker, Ralph</td>
<td>Charlotte, N. C.</td>
</tr>
<tr>
<td>Scott, G. G.</td>
<td>Spray, N. C.</td>
</tr>
<tr>
<td>Self, I. R. Jr.</td>
<td>Lincoln, N. C.</td>
</tr>
<tr>
<td>Shackleford, E. W.</td>
<td>Durham, N. C.</td>
</tr>
<tr>
<td>Shamburger, B. B.</td>
<td>Troy, N. C.</td>
</tr>
<tr>
<td>Sikes, T. Edgar</td>
<td>502 Banner Bldg., Greensboro, N. C.</td>
</tr>
<tr>
<td>Sinclair, J. A.</td>
<td>Asheville, N. C.</td>
</tr>
<tr>
<td>Sinclair, P. D.</td>
<td>Marlot, N. C.</td>
</tr>
<tr>
<td>Sloan, C. S.</td>
<td>Wallace, N. C.</td>
</tr>
<tr>
<td>Smathers, Waxler</td>
<td>Asheville, N. C.</td>
</tr>
<tr>
<td>Smathers, J. H.</td>
<td>Waynesville, N. C.</td>
</tr>
<tr>
<td>Smith, L. T.</td>
<td>Reidsville, N. C.</td>
</tr>
<tr>
<td>Smith, W. T.</td>
<td>Wilmington, N. C.</td>
</tr>
<tr>
<td>Smith, E. L.</td>
<td>Raleigh, N. C.</td>
</tr>
<tr>
<td>Smithson, C. F.</td>
<td>Charlotte, N. C.</td>
</tr>
<tr>
<td>Smithson, Thos. W.</td>
<td>Rocky Mount, N. C.</td>
</tr>
<tr>
<td>Smithwick, D. T.</td>
<td>Louisburg, N. C.</td>
</tr>
<tr>
<td>Spence, E. P.</td>
<td>Greenville, N. C.</td>
</tr>
<tr>
<td>Spoon, R. E.</td>
<td>Burlington, N. C.</td>
</tr>
<tr>
<td>Spurgeon, J. S.</td>
<td>Hillsboro, N. C.</td>
</tr>
<tr>
<td>Squires, R. M.</td>
<td>Wake Forest, N. C.</td>
</tr>
<tr>
<td>Stanly, J. W.</td>
<td>Wilmington, N. C.</td>
</tr>
</tbody>
</table>
Steele, C. C. Rockingham, N. C.
Steelman, S. H. Yadkinville, N. C.
Stephens, R. W. Apex, N. C.
Strawn, S. H. Marshville, N. C.
Swain, John. Ashboro, N. C.
Tatum, E. W. Mount Olive, N. C.
Taylor, B. C. Landis, N. C.
Taylor, E. M. Siler City, N. C.
Taylor, Richard T. Pinehurst, N. C.
Taylor, W. C. Salisbury, N. C.
Teachey, O. A. Rose Hill, N. C.
Teague, C. H. Madison, N. C.
Thomas, C. A. Wilmington, N. C.
Thomasson, B. C. Bryson City, N. C.
Thompson, C. A. Wilson, N. C.
Tomlinson, F. N. Winston-Salem, N. C.
Tomlinson, R. L. Smithfield, N. C.
Thompson, Herndon. Hamlet, N. C.
Trivatte, L. P. Harmony, N. C.
Troutman, M. L. Kannapolis, N. C.
Troutman, P. W. Hickory, N. C.
Tucker, E. J. Roxboro, N. C.
Turlington, R. A. Wilson, N. C.
Turner, Joseph V. Wilson, N. C.
Tuttle, R. D. Stokesdale, N. C.
Underhill, J. M. Asheville, N. C.
Underwood, J. T. Wilson, N. C.
Underwood, R. L. Wilson, N. C.
Vanderlinden, W. H. Hendersonville, N. C.
Voids, C. U. Mooresville, N. C.
Waddell, M. A. Fair Bluff, N. C.
Waldrop, O. Stanley Kinston, N. C.
Waldroup, R. M. Jr. Bryson City, N. C.
Walters, H. N. Warrenton, N. C.
Waller, R. F. Virginia, Va.
Walters, D. A. Greensboro, N. C.
Ware, R. E. Shelby, N. C.
Warren, E. R. Goldsboro, N. C.
Watkins, J. C. Winston-Salem, N. C.
Watson, S. R. Henderson, N. C.
Waynick, G. E. Winston-Salem, N. C.
Weatherman, W. C. Statesville, N. C.
Weatherbee, R. Wilmington, N. C.
Wehunt, E. S. Cherryville, N. C.
Weeks, G. E. Tarboro, N. C.
Wells, J. S. Reidsville, N. C.
West, J. Frank Roanoke Rapids, N. C.
Proceedings North Carolina Dental Society

Wheeler, J. H.--------------------Greensboro, N. C.
Wheeler, C. M.--------------------Greensboro, N. C.
White, J. H.----------------------Elizabeth, City, N. C.
White, L.-------------------------Statesville, N. C.
Whitsett, G. W.-------------------Greensboro, N. C.
Wilkins, T. A.---------------------Gastonia, N. C.
Williams, Donald-------------------Tarboro, N. C.
Williams, E. S.---------------------Legal Bldg., Asheville, N. C.
Williamson, J. F.-------------------Wadesboro, N. C.
Williamson, H. L.-------------------Duke, N. C.
Williamson, T. P.-------------------Cerro Gordo, N. C.
Woody, L. W.-----------------------Toecane, N. C.
Wooten, C. H.----------------------Whiteville, N. C.
Wyche, E. J.------------------------Greensboro, N. C.
Yarborough, J. A.-------------------Wake Forest, N. C.
Yates, W. F.------------------------Chadbourne, N. C.
Yelverton, J. H.---------------------Wilson, N. C.
Yokeley, K. M.------------------------R. 5, Winston-Salem, N. C.
Young, T. L.------------------------Angier, N. C.
Young, J. A.------------------------Newton, N. C.
Young, W. D.------------------------Snow Hill, N. C.
Zachary, J. F.-----------------------Brevard, N. C.
Zimmerman, J. W.---------------------Salisbury, N. C.
CODE OF DENTAL ETHICS

ARTICLE I—Duties of the Profession to Patients.

Section 1. The Dentist should be ever ready to respond to the wants of his patients, and fully recognize the obligations involved in the discharge of his duties towards them. As they are in most cases unable to correctly estimate the character of his operations, his own sense of right must guarantee faithfulness in their performance. His manner should be firm, yet kind and sympathizing, so as to gain their respect and confidence; and even the simplest case committed to his care should receive that attention which is due to any operation performed on living, sensitive tissue.

Sec. 2. It is not to be expected that the patient will possess a very extended or a very accurate knowledge of professional matters. The Dentist should make due allowance for this, patiently explaining many things which may seem quite clear to himself, thus endeavoring to educate the public mind so that it will properly appreciate the beneficent effort of our profession. He should encourage no false hopes by promising success where, in the nature of the case, there is uncertainty.

Sec. 3. The Dentist should be temperate in all things, keeping both mind and body in the best possible health, that his patients may have the benefit of that clearness of judgment and skill which is their right.

ARTICLE II—Professional Characters.

Sec. 1. A member of the Dental profession is bound to maintain its honor, and to labor earnestly to extend its sphere of usefulness. He should avoid everything in language and conduct calculated to discredit or dishonor his profession, and should ever manifest a due respect for his brethren. The young should show special respect for their seniors, the aged special encouragement to their juniors.

Sec. 2. The person and office arrangement of the Dentist should indicate that he is a gentleman; and he should in all relations sustain a high moral character.

Sec. 3. It is unprofessional to resort to public advertisements, cards, hand-bills, posters, or signs, calling attention to "peculiar styles of work," lowness of prices, special modes of operating, or to claim superiority over neighboring practitioners, to publish reports of cases, or certificates in the public print, to go from house to house to solict and perform operations, to circulate or recommend nostrums, or to perform other similar acts.

Sec. 4. When consulted by the patient of another practitioner, the Dentist should guard against inquiries or hints disparaging to the family Dentist, or calculated to weaken the patient's confidence in him, and if the interests of the patient will not be endangered
thereby, the case should be temporarily treated and referred back to the family Dentist.

Sec. 5. Where general rules shall have been adopted by members of the profession practicing in the same localities in relation to fees, it is unprofessional and dishonorable to depart from these rules, except where variation or circumstances require it. It is ever to be regarded as unprofessional to warrant operations or work as an inducement to patronage.

ARTICLE III—Relative Duties of Dentists and Physicians.

Dental Surgery is a specialty in medical science. Physicians and Dentists should both bear this in mind. The Dentist is professionally limited to diseases of the dental organs and the mouth. With these he should be more familiar than the general practitioner is expected to be, and while he recognizes the superiority of the physician, in regard to disease of the general system, the latter is under equal obligations to respect the higher attainments of the Dentist in his specialty. Where this principle governs there can be no conflict or even diversity of professional interests.

ARTICLE IV—Mutual Duties of the Profession and the Public.

Dentists are frequently witnesses, and at the same time the best judges, of the impositions perpetrated by quacks. and it is their duty to enlighten and warn the public in regard to them. For this and the many other benefits conferred by the competent and honorable Dentist, the profession is entitled to the confidence and respect of the public, who should always discriminate in favor of the true man of science and integrity and against the empiric and impostor. The public has no time to tax the time and talents of the profession in examinations, prescriptions, or in any way, without proper remuneration.
LAW RELATING TO THE PRACTICE OF DENTISTRY

AN ACT in relation to the North Carolina State Board of Dental Examiners, and to regulating the practice of Dentistry in the State of North Carolina.

The General Assembly of North Carolina do enact:

Section 1. The North Carolina State Board of Dental Examiners, heretofore created for the examination of those desiring to obtain a license to engage in the practice of Dentistry in this State, shall consist of six members of the North Carolina Dental Society, to be elected by said Society at its annual meeting, who shall be commissioned by the Governor and shall hold office as follows: Two for one year, two for two years, and two for three years, and until their successors are elected, commissioned and qualified; Provided, that this section shall not be so construed as to vacate the office of any member of said Board as now constituted and now holding office thereon until the term of office so held shall have expired as now provided by law; Provided, further, that the Governor shall issue his commission to said members of said Board for the remainder of their terms. The said Board shall also have power to fill all vacancies for unexpired terms, the persons so elected to be commissioned by the Governor, and they shall be responsible to said North Carolina Dental Society and the Governor of North Carolina for their acts.

Sec. 2. That said Board shall have the power to make by-laws and necessary regulations for the proper fulfillment of their duties under this Act.

Sec. 3. The said Board of Dental Examiners shall elect one of its members president, and one secretary-treasurer, and shall have a common seal with the following inscription: "North Carolina State Board of Dental Examiners," and the said Board shall meet annually on Monday preceding the time and at the place of the meeting of the North Carolina Dental Society, and shall also meet, if application shall be made for examinations, during the month of January following said annual meeting, at a time and place to be selected by said Board, and may meet at such other times and places as the said North Carolina State Board of Dental Examiners, of any four members thereof, shall agree upon to conduct the examination of applicants and for the transaction of any other business that may come before it. Notice of said meetings shall be given by advertising for ten days in at least three newspapers published in this State.

Sec. 4. Four members of said Board shall constitute a quorum for the transaction of business, and should a quorum not be present on the day appointed for the meeting of said Board those present may adjourn from day to day until a quorum is present. The president and, in his absence, the secretary-treasurer of said Board shall have
power to administer oaths, issue subpoenas and send for persons and papers in any hearing, investigation, accusation or other matter coming before said board, and the sheriffs of the several counties or other officers authorized to serve processes shall serve any subpoena or other lawful order issued by the president or secretary-treasurer of said Board and shall receive for such service the fees provided by law for like service, to be paid out of any funds in the hands of said Board; and any person wilfully neglecting or refusing to obey any subpoena or lawful order of said Board shall be guilty of a misdemeanor and upon conviction thereof shall be fined or imprisoned at the discretion of the court.

Sec. 5. Said Board shall keep a record book in which shall be entered the names and proficiency of all persons to whom license may be granted under this Act, the license numbers, and the date of granting of such license and other matters of record, and the book so provided shall be deemed a book of records, and a transcript of any such entry therein, or a certificate that there is not entered therein the name, proficiency and license number, or date of granting such license of a person charged with a violation of the provisions of this Act, certified under the hands of the secretary-treasurer and the seal of the North Carolina State Board of Dental Examiners, shall be admitted as evidence in any court of this State when the same shall be otherwise competent.

Sec. 6. Such Board shall grant license to practice Dentistry to all applicants who are graduates of a reputable dental institution who shall undergo a satisfactory examination of proficiency in the knowledge and practice of Dentistry, and who shall receive a majority of votes of said Board upon such proficiency, which license shall be signed by the members of the Board conducting said examination, and shall bear the seal of the said North Carolina State Board of Dental Examiners.

Sec. 7. No person shall engage in the practice of Dentistry in this State, or attempt to do so after the ratification of this Act, without first having applied for and obtained a license for such purpose from the said North Carolina State Board of Dental Examiners, and having registered such license with the clerk of the Superior Court of each county in which he or she proposes to practice Dentistry. This provision applies to all persons, whether they have heretofore practiced Dentistry or not in this State, except such persons as have been heretofore duly licensed and registered or who were engaged in the practice of Dentistry in this State before the seventh day of March, one thousand eight hundred and seventy-nine, if on or before the twenty-fifth day of February, one thousand eight hundred and ninety, such person or persons filed verified statements with the secretary of the said Board of Dental Examiners, showing his name, residence, date of diploma or license, or date of commencing the practice of Dentistry.

Application shall be made to the said Board in writing for an
examination in the knowledge and practice of Dentistry, and for license. The applicant for examination and license must be of good moral character, at least twenty-one years of age at the time of making the application; and the application of each person must be accompanied by satisfactory evidence to said Board that the applicant so applying is a person of good character, has an English education, the standard of which shall be determined by the said Board of Dental Examiners, is a graduate of and has a diploma from a reputable dental college or institution, recognized as such by the said Board of Dental Examiners, or the dental department of a reputable university so recognized by the said Board of Dental Examiners of this State. Examinations must be both written and clinical, and of such a character as to thoroughly test the qualifications of the applicant to practice Dentistry, and the said Board may, in its discretion, refuse to grant license to any person found deficient in said examination or whom they may find guilty of cheating, deception or fraud during such examination, or whose English education is found to be defective by said Board. And the said Board of Examiners may refuse to grant a license to any person guilty of a crime involving moral turpitude, or gross immorality, who is addicted to the use of alcoholic liquors or narcotic drugs to such an extent as to render him unfit to practice Dentistry; and any license obtained through fraud or by any false representation shall be void ab initio and of no effect.

Sec. 8. Every person receiving a license to practice Dentistry in this State by or from the said State Board of Dental Examiners, as is provided in this Act, shall, before the beginning of the practice of Dentistry, cause said license to be registered in the office of the clerk of the Superior Court of each county in which such person desires to engage in the practice of Dentistry, by appearing before such clerk and filing his license, or duplicate thereof, showing that he has been examined as to his proficiency in the knowledge and practice of Dentistry, and has been licensed as herein provided; and the said clerk of the Superior Court of each county is authorized to receive a registration fee of fifty (50) cents for each registration, and shall keep a record of the same in a book provided by the county for such purpose.

Sec. 9. The license to practice Dentistry herein provided shall at all times be displayed in a conspicuous place in his or her office wherein he or she shall practice the profession of Dentistry, and he or she shall, whenever requested, exhibit such license to any of the members of said State Board of Dental Examiners or its authorized agent or attorney.

Sec. 10. In order to provide the means of carrying out and enforcing the provisions of this Act the said Board of Dental Examiners shall charge and collect from each person applying for an examination for license to practice Dentistry in this State an examination fee of twenty ($20) dollars, and in addition thereto a fee of one ($1) dollar.
for every annual certificate or license, or duplicate certificate or license, issued by said Board, and out of the funds coming into the possession of the said Board under the provisions of this Act the members of said board shall each receive as compensation a sum not exceeding ten ($10) dollars for each day actually engaged in the duties of the office (the amount of said compensation to be fixed by said Board), and all legitimate and necessary expenses incurred in attending meetings of the said Board; Provided, that the secretary-treasurer of the Board shall be allowed a reasonable salary, to be fixed by the Board, and actual necessary expenses incurred in the discharge of the duties of his office; all expenses herein provided for shall be paid out of the funds received by the said Board under the provisions of this Act; and no part of said expense shall be paid out of the State treasury. All moneys received in excess of said per diem and allowances and other expenses herein provided shall be held by the secretary-treasurer of said Board as a special fund for meeting the other legitimate expenses of said Board and for such use as the said Board may deem necessary in the enforcement of the provisions of this Act; and said Board by its secretary-treasurer shall make an annual report of its proceedings to the Governor on or before the twenty-fifth day of February in each year, showing all moneys received and disbursed by it pursuant to this Act; Provided, that any sum in excess of five hundred ($500) dollars remaining after meeting the per diem and other expenses hereinbefore mentioned shall be returned into the State Treasury to the use of the general school fund of the State.

Sec. 11. On or before the first day of January of each year every dentist engaged in the practice of Dentistry in this State shall transmit to the said secretary-treasurer of the said North Carolina State Board of Dental Examiners his signature and post office address, the number of his or her license, together with a fee of one ($1) dollar and receive therefor a renewal license. Any license or certificate granted by said Board, under or by virtue of this Act, shall automatically be cancelled and annulled if the holder thereof fails to secure the renewal herein provided for within a period of three months after the thirty-first day of December of each year: Provided, any license thus cancelled may be restored by the said Board upon the payment of five ($5) dollars if paid within one year after said cancellation; Provided that any legally practicing dentist in this State who retires from practice may receive license to resume the practice thereof upon application to said Board of Dental Examiners for such license upon payment of ten ($10) dollars.

Sec. 12. Any person filing or attempting to file as his own a diploma or license of another or forged affidavit of identification or qualification shall be deemed guilty of a crime and be punishable upon conviction thereof by imprisonment or fine or both in the discretion of the court.
Sec. 13. Any person shall be regarded as practicing Dentistry within the meaning of this Act, who shall diagnose or profess to diagnose, or treat or profess to treat, any of the diseases or lesions of the oral cavity, teeth, gums or maxillary bones, or shall prepare or fill cavities in human teeth, correct malposition of teeth, of jaws or apply artificial teeth as substitutes for natural teeth, or administer anaesthetics, general or local, or any other practice included in the curriculum of recognized dental institutions or colleges; Provided, that nothing in this Act shall be so construed as to forbid regular licensed physicians and surgeons from treating any diseases coming within the province of the practice of Medicine; Provided, that this Act shall not prevent anyone from extracting teeth.

Sec. 14. All duly licensed dentists of this State shall be exempt from service as jurors in any of the courts of this State.

Sec. 15. All licenses and certificates issued by said State Board of Dental Examiners shall bear a serial number, the full name of the applicant, the date of the issuance, the seal of the said Board, and be signed by the president and a majority of the members thereof, and be attested by its secretary.

Sec. 16. It shall be unlawful for any person or persons to practice or offer to practice Dentistry or Dental Surgery as herein defined under the name of any company, association or corporation, and every person practicing or offering to practice Dentistry or Dental Surgery under any other name than his or her own respective name shall be guilty of a misdemeanor.

Sec. 17. The said Board of Dental Examiners may in its discretion, issue a license to practice Dentistry without an examination other than clinical to a legal and ethical practitioner of Dentistry who removes into North Carolina from another State or Territory of the United States whose standard of requirements is equal to that of the State of North Carolina and in which he or she conducted a legal or ethical practice of Dentistry for at least five years next preceding his or her removal; Provided, such applicant shall present a certificate from the dental board or a like board of the State or Territory from which he or she removes, certifying that he or she is a legally competent and ethical dentist, and is of good moral character, and; Provided, that such certificate is presented to the said State Board of Dental Examiners within six months of the date of its issuance, and shall be recorded in the county or counties where such person proposes to practice as is provided by this Act, and; Provided, that the said board of such other State or Territory shall permit in like manner by law the recognition of licenses or certificates issued by the North Carolina State Board of Dental Examiners when presented to such other board by legal practitioners of Dentistry from this State, when he or she wishes to remove to or practice Dentistry in such other State or Territory.

Sec. 18. Any person who is a legal, ethical and competent practi-
tioner of Dentistry in this State and of good moral character and known to the North Carolina State Board of Dental Examiners as such, who shall desire to change his or her residence to another State or Territory or foreign country shall, upon application accompanied by a fee of five ($5) dollars to the said North Carolina State Board of Dental Examiners of this State, receive a special certificate over the signature of the president and attested by the secretary-treasurer of said Board, and bearing its seal, which shall attest the facts mentioned in this chapter, and give the date upon which he or she was presented with license.

Sec. 19. The fee for issuing a license to a legal practitioner from another State or Territory, as provided in this chapter, shall be twenty ($20) dollars, and a fee for issuing a certificate to a legal practitioner in this State desiring to remove therefrom, as provided in the preceding section, shall be five ($5) dollars. Said fees shall be paid in cash before the license or certificate shall be issued.

Sec. 20. Legally licensed druggists of this State may fill prescriptions of legally licensed dentists of this State for any drugs necessary for the practice of Dentistry.

Sec. 21. If any person shall practice or attempt to practice Dentistry in this State, except extracting teeth, without having first passed the examination and obtained a license and registered the same as is provided in this Act, or shall violate any of the provisions of this Act for which no specific penalty has been provided herein, he or she shall be guilty of a misdemeanor and upon conviction thereof shall be fined twenty-five ($25) dollars for the first offense; Provided, that if any person, having once been convicted of practicing Dentistry contrary to this Act, or contrary to the provisions of Section three thousand six hundred and forty-two of the Revival of North Carolina of one thousand nine hundred and five, shall practice or attempt to practice Dentistry in violation of the provisions of said Section three thousand six hundred and forty-two, or of the provisions of this Act, shall be guilty of a misdemeanor and upon conviction thereof, for the second offense and for each succeeding offense thereafter, shall be fined and imprisoned in the discretion of the court. That each act of Dentistry shall be deemed a separate offense and constitute a practice of Dentistry in the meaning of this Act; and each day that a person shall hold himself or herself out as practicing in any name except his or her own shall be deemed a separate offense. The opening of an office or dental parlor for the practice of Dentistry, or the practice of Dentistry without opening an office or parlor, or to announce to the public in any way a readiness to do any art or thing defined herein as being Dentistry shall be deemed to engage in the practice of Dentistry within the purview of this Act.

Sec. 22. Whenever it shall appear to the North Carolina State Board of Dental Examiners that any licensed dentist practicing in the State of North Carolina has been guilty of fraud, deceit or mis-
representation in obtaining license, or of gross immorality, or is an habitual user of intoxicants or drugs, rendering him unfit for the practice of Dentistry, or has been guilty of malpractice or is grossly ignorant or incompetent, or is guilty of willful negligence in the practice of Dentistry, or has been employing unlicensed persons to perform work which under this Act can only be legally done by persons holding a license to practice Dentistry in this State; or of practicing deceit or other fraud upon the public or individual patients in obtaining or attempting to obtain practice; or of false notice, advertisement, publication or circulation of false claims, or fraudulent, misleading statements of his art, skill or knowledge, or of his methods of treatment or practice or shall be guilty of any offense involving moral turpitude, they shall revoke the license of such person; an accusation may be filed with the secretary-treasurer of the North Carolina State Board of Examiners, charging any licensed dentist with the commission of any of the offenses herein enumerated, such accusation to be in writing, signed by the accuser and verified under oath.

Whenever such accusation is filed, the secretary-treasurer of the said North Carolina State Board of Dental Examiners shall set a day for hearing and shall transmit to the accused a true copy of all papers filed with him relating to such accusation, and shall notify in writing the accused that on the day fixed for hearing, which day shall not be less than ten days from the date of such notice, he may appear and show cause, if any, why his license to practice Dentistry in the State of North Carolina should not be revoked; and for the purpose of such hearing the said North Carolina State Board of Dental Examiners is hereby empowered to require by subpoena the attendance of witnesses, to administer oaths and hear testimony, either oral or documentary, for and against the accused.

And if, at such hearing of the accused, the North Carolina State Board of Dental Examiners shall be satisfied that the accused has been guilty of the offense charged in the accusation they shall thereupon, without further notice, revoke the license of the person so accused; Provided, the accused shall not be debarred the right of appeal to the superior courts.

Sec. 23. That all laws and clauses of laws in conflict with this Act are hereby repealed.

Section 3642 of the Revisal of 1905, referred to in Section 21 of the foregoing Act of Assembly, is in words as follows:

Dentistry, Practicing, Without License. "If any person shall practice dentistry, except extracting teeth, without having first passed the examination and obtained the certificate provided by law, he shall be guilty of a misdemeanor, and for the first offense shall be fined twenty-five dollars; for the second offense, and each succeeding offense, he shall be guilty of a misdemeanor and shall be fined and imprisoned, in the discretion of the court: Provided, any person
so convicted shall not be entitled to sue for or recover any fee or charge for dental service in any court, and any sum of money paid to a person so convicted for dental services rendered may be recovered by the person so paying the same, or his legal representative: Provided, further, no one applying for a license to practice Dentistry shall be denied such license on account of race, color or previous condition of servitude."

Sec. 24. That this Act shall be in force from and after its ratification.

In the General Assembly read three times and ratified this the 9th day of March, 1915.

E. L. Daughtridge,
President of the Senate.

T. C. Bowie,
Speaker of the House of Representatives.
RALEIGH, N. C.
COMMERCIAL PRINTING COMPANY
1922