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PROCEEDINGS

OF THE

North Carolina Dental Society

FORTIETH ANNUAL MEETING

HENDERSONVILLE, N. C.

June 24-27, 1914

REPORTED BY

Miss Minnie Lee Hoover, Asheboro

PUBLISHING COMMITTEE:

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The fortieth annual meeting of the North Carolina Dental Society was called to order on Wednesday evening, June 24, 1914, at 8:30 o'clock, by the President, Dr. C. F. Smithson, of Rocky Mount, N. C.

Prayer was offered by Rev. John M. Shive, of the Presbyterian Church.

After roll-call by the Secretary, Dr. C. F. Smithson, President, introduced Rev. R. N. Willeox to the Society, who delivered the address of welcome, as follows:

Mr. President, Gentlemen of the North Carolina Dental Association, Ladies and Others:

I want first of all before I welcome you to the city of Hendersonville to take you back a little bit into history. I am going to be very brief because that is what I was chosen for. I was not chosen to welcome you here because I was able to do so, but because I have a reputation of being somewhat brief and they thought you would like that which was very brief on a hot day like this.

I want to recall to you just for a few minutes the settling of this great Southland of ours. You will remember how a man by the name of Smith and others came to North Carolina and other parts of the South, how they found it a fertile country, a beautiful country, and then perhaps something you have not thought of, they found it also a somewhat hot country in the summer time; and after working at the soil for some time they found it very enervating and they couldn't keep it up, and so instead of waiting patiently to find out why the Almighty had put such fertile soil in such beautiful country, with a very hot climate, they tried to solve it in their own way, and sent across to Africa for the Ethiopian, and it seems to me that that great mistake of our forefathers is something we are reaping the result of now, and with all due respect to the ten per cent. of the Ethiopians in this country who are good, I think that the negro problem is one that we have got to wrestle with more and more in the future; and yet, if our forefathers had only waited and not made that mistake; had waited until the pirates from the coast, until
the murderers and the criminals of all sorts seeking refuge from the
vengeful hand of man, coming West and finding these glorious
mountains, with their cool recesses, splendid places to hide, and
they came here the first pioneers of the mountains. And then later
on, your sturdy Anglo-Saxon pioneer, never content with what he had,
always looking for something that was better, ever pressing west-
ward and coming westward had to pass through these mountains.
They came here, after going over chain after chain, and some of
them thought them all but endless; so they stopped here. Others,
enamored with their beauty and the glories of the climate, stayed
here of their own free will.

Now, gentlemen, you are an intelligent looking lot of men, and
it seems strange to me that with the intelligence written upon your
countenances, you have taken so long to find out Hendersonville, and
I hope that, having found it out, found out what we are, that it
won't be the last time we shall see you here. We welcome you here.
We are a small people. We are not a wealthy people. I might also
say with the Apostle, "Silver and gold have we none, but such as we
have we give unto you." We give unto you all that the Almighty has
given unto us: A beautiful climate, pure water, fine air, beautiful
country all around; and I hope that before you are many hours
older we shall have taken you out in the automobiles given for that
purpose and shown you something of the beauties of the country
surrounding you here. We want to give you such a welcome and
make you feel how heartily, how true, how glad we are to have such
a body of men as you are here (and perhaps even more, your better
halves), that you will want to come back again. That is our chief
object in inviting you. When we invited you here that you should
see these things as they are, it was indeed with the hope that you
should have cooler weather than we are having now.

We are glad to have you here. What we have, we give to you. It
is a great honor to us to have an association like yours. We realize
fully, completely, that you are not banded together for the purpose of
robbing the people; you are not banded together as a sort of trust
to keep up prices in the dental profession; you are not banded to-
gether as against the Sherman law; but that you are banded to-
gether for the noble purpose of protecting the public. That is why
we are glad to welcome you here. That is why we think so much of
you. We know that you are here to protect the public against the
impostor, against the unlearned charlatan in your practice; that
you will see to it that the people have only the best kind of service
that you have to render them, and that none of the improperly pre-
pared is going to practice upon the people; and therefore it is your
duty as you undoubtedly realize, always to show up the impostor,
to stand together for that purpose. Because you have that noble
purpose we are glad to welcome you here.

I am glad indeed to be here; to be able to welcome you, poor as the
welcome is that I am able to give you. I can almost feel like that little girl that perhaps you have often heard of, who, after due consideration and deep thought, once said to her mother, "Mother, what day of the week was it on which I was born?" "Why," she said, "It was Wednesday, my dear." The child replied, "Mother, how lucky that was; that is your At Home day; so you were there." So that is our At Home day, whenever you come. We want you to feel that this is our At Home day. You can go down to any store on Main Street and you can buy all the soda water you want; you can buy all the cigars you want; you can buy anything in this town, just so you pay for it.

Gentlemen, what more can I say except to show you that the welcome I bring is not hot air; it is not intended to be hot air; it is real, it is hearty and true. I know the people of this town; I know they are just as shy and bashful as I am. I know that their hearts are true. There are no better, hospitable men in the Southland of ours than the mountaineer. He is always willing to give you the best he has, and the ladies of the town, as well as the men, hold their arms open to receive you; and, believe me, the latchstring of Hendersonville is hanging on the outside. We want to make it pleasant for you. All we ask is your co-operation that we may be able to do so.

The response to the address of welcome was delivered by Dr. D. L. James, of Greenville, N. C., as follows:

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

This is indeed a very embarrassing position to me, and I assure you my position tonight is not an enviable one. Dr. A. H. Fleming was to have responded to this address. I did not know until a minute or two ago that Dr. Fleming was not in the house, until the President so informed me, and told me that he would call upon me. I have since that time prayed as earnestly for his arrival as Wellington prayed for Blucher on the fated field of Waterloo, but my Blucher has not arrived. Therefore I stand abashed, especially not being prepared for such a welcome as that; though we expected a hearty welcome from your city of Hendersonville in this beautiful land of the sky; and I assure you, Mr. Wilcox, that we are indeed glad to be with you. The pleasure is ours. We are always glad to come to Western North Carolina, and we feel at home anywhere in this grand old state of ours. We have met before, not in your town but in Asheville, a little ways above. We thoroughly enjoyed our meeting and we hope and expect to enjoy this one here with you, and you in welcoming us here tonight, have surely welcomed a set of men who are doing as much today for the elevation of our people, for the bene-
fit of our people, I might say, as any other profession under the sun. I do not even except the time-honored medical fraternity; and without having any speech to make, I accept your welcome again as heartily as I can. I know no better way to close this speech than to give you the famous toast to North Carolina:

"Here's to the land of the Long Leaf Pine,  
The Summer Land, where the sun doth shine;  
Where the weak grow strong and the strong grow great—Here's to 'Down Home' the 'Old North State.'

"Here's to the land of the cotton blooms white,  
Where the scuppernong perfumes the breeze at night,  
Where soft Southern moss and jessamine mate,  
'Neath the murmering pines of the 'Old North State.'

"Here's to the land where the galax grows,  
Where the rhododendron roseate glows;  
Where soars Mount Mitchell's summit great,  
In the 'Land of the Sky' in the 'Old North State.'

"Here's to the land where maidens are fairest,  
Where friends are the truest, and cold hearts are rarest;  
The near land, the dear land, whatever our fate,  
The best land, the best land, the 'Old North State.'"

A second response to the address of welcome was delivered by Dr. A. H. Fleming, of Louisburg, as follows:

Mr. President, Ladies and Gentlemen:

I am sorry that I did not hear the welcome extended us by the beautiful little city of Hendersonville. I have never been here before, but I have often heard a great many stories of this beautiful mountain country; but you really have come to it to appreciate it. I have heard a great many times that it was the poorest country on earth. Down East where we came from the land is so rich that there are only a few things we can plant. For instance, you can't raise pumpkins or cymlins; the vines grow so fast it rubs all the blooms off. But I understand it is not true up here.

I heard a story once. There was a gentleman—I think he lived at Rocky Mount—had come up in the western part of North Carolina and walked out in the country. All the farmers were very poor; as was the land also, and it looked like a perfect picture of poverty to him. He walked out and saw a little boy chopping corn—little corn about knee high, tassling. He walked up and said, "Son, this is mighty poor land up here." "Yes, sir," it is mighty poor land."
"You all don't make very much." "No, sir, we don't make nothing at all hardly." "People all mighty poor, too, ain't they?" The man said it just raised all the mountain indignation in the little boy and he raised up and turning to him, says, "We ain't so poor as you might think; we don't own this land."

A man has to come here and see the beautiful land and country to appreciate how pretty it is. I thought when they told these wonderful tales of Hendersonville that they were exaggerated—like the fellow who went abroad and came back and was asked to make a little descriptive toast at a banquet, and a friend went to him and said, "You know you are given to exaggeration; now don't overdo the thing; just tell the people what you saw, and let it go at that. I will tell you what I will do, he said; I will sit right behind you when you go to make this toast and if you exaggerate too much I will touch your foot and that is a signal to cut it down." The fellow arose and said, "Ladies and gentlemen, I have just returned from a trip abroad; I visited Berlin, the most beautiful city in the world; everything is done on the biggest scale; thousands of trains every minute; they have a building there, ladies and gentlemen, that is 955 feet high, 466 feet long—" The fellow says "Cut it down"—"and six inches wide."

I have often thought when they tell these weird tales of Hendersonville that somebody ought to be behind and cut it down. But I had the pleasure of driving from Spartanburg yesterday, and I do not think it needs cutting down at all. This is a beautiful country and we are glad to be here. The dentists today occupy a different position and live and act and move in a different sphere from what they did even ten years ago. I can remember the first dental convention I ever attended. It was so entirely different. The meetings today are greatly educational, and it is with regret that I say that these meetings are only held for dentists. The dentists are the greatest educators of the people, and it is a big question how to reach them in a proper way. There are so many things that dentists know that people ought to know, that there is no way, no proper mouthpiece through which to reach them; and I for one am sure that I voice the sentiment of this association in welcoming the people of Hendersonville to every one of our meetings.

I thank you.
First Vice President R. O. Apple being called to the chair, the President's address was read, as follows:

PRESIDENT'S ADDRESS.

DR. C. F. SMITHSON, ROCKY MOUNT, N. C.

Mr. President, Members of North Carolina Dental Society, Ladies and Gentlemen:

As your presiding officer for the past year, I desire to make a few observations on the work that has come into my hands during that time, and also call attention to matters confronting our Society and the profession at large in the future.

In an effort to faithfully discharge the duties and obligations placed upon me through my election to the honorable position of President of the North Carolina Dental Society, I have labored continuously and diligently to maintain the records established by my predecessors in office. How well I have succeeded in this matter must be left to your fair minded judgment and gracious forbearance.

I venture, however, to call your special attention to the excellence of the program provided for this meeting. It is with no small degree of pride and satisfaction that I am able to report so attractive an array of clinics and papers for our edification and mutual helpfulness. Such results were accomplished, as those of you who have had experience in such matters must know, only by and through the persistent efforts of those associated with me in the work of your Society. The ready and willing response of members of our Society, and those coming from other States to serve us at this time, has been most gratifying, and their effort should receive our highest appreciation.

Organized dentistry has done much in the past to advance the cause of the profession and place it on the firm basis on which it rests today. Local, State and National bodies, through concerted efforts, have blazed the way for higher ideals, better teaching of those entering our ranks, and the establishment of a code of professional ethics. A retrospect of conditions twenty years ago will suffice to show the progress made during the past two decades, and much of this advancement can be attributed directly or indirectly to the work of organized dental bodies.

Whilst the past shows a wonderful, if not a phenomenal advancement, during recent years in matters touching dentistry, I am of the opinion and make bold the prediction that we are just beginning to realize the breadth and scope of our possibilities.

Just at this period in our history the profession of dentistry and the enlarged possibilities in this special field of science are already visibly apparent, so much so that it is not unreasonable to claim for
our profession opportunities equal to, if not surpassing, those of any other special calling.

We live at a time when the laity, through oral hygiene congresses and conventions, are becoming acquainted with the value of our services to mankind; when state and city authorities are beginning to recognize the economic value of our services to the future citizen; at a time when members of our profession are specializing in prophylaxis, oral surgery, orthodontia, crown and bridge work and analgesia; at a time when the dentist is taking his place alongside the medical interne in the hospitals of our country; at a time when the army and navy, important arms of our National Government, and our medical brethren generally, are giving recognition to our work; and at a time when the best skill and science of our day are being utilized in the manufacture of special materials, devices and equipment to facilitate us in our work.

To meet these opening opportunities and push forward the advance movement, strong men of special culture and learning must come forward in the future.

With this brief outline of the promising outlook of our profession, I desire to appeal to our membership for their continued loyal support of the Society, and also take this occasion to thank all those who have so nobly supported me in my efforts to make this a banner meeting.

The following committee was appointed by the First Vice President to report on the President’s address: Dr. D. L. James, Dr. I. H. Davis, Dr. A. H. Fleming.

Annual Essay, “A Brief Sketch of the Life of John Hunter,” by Dr. L. L. Dameron, of New Bern, was then read.

A BRIEF SKETCH OF THE LIFE OF JOHN HUNTER.

DR. L. L. DAMERON, NEW BERN, N. C.

In casting about for a subject upon which to write, I decided that it would not be out of place on an occasion like this to give a brief sketch of the life of John Hunter, who did more, perhaps, to enlarge the boundaries of dental knowledge than any other man has done.

He was born in Scotland on a small farm about eight miles from the city of Glasgow. The estate was called “Long Calderwood,” and was owned by his father. John was the youngest of a family of ten children. He was born in 1728 in the month of February, but the exact date is uncertain, as the record in the parish register gives the 13th as the day upon which he was born, but Hunter himself always claimed February the 14th as his birthday. His mother was from
the city of Glasgow, and her maiden name was Paul. Hunter was ten years of age when his father died, leaving him to the care of his mother, who did not control him, but allowed him to follow his own inclinations, so he spent his time in “country sports” instead of in the pursuit of knowledge. He drifted along in this fashion till he was seventeen years of age, when he went to engage with his brother-in-law in Glasgow in the business of cabinet-making. He did not remain at this occupation long, as they did not make a success of the business. At this time Hunter was undoubtedly influenced in his course by his brother William, ten years older than himself, who was meeting with a considerable measure of success in the practice of medicine. It was their father’s desire that William enter the ministry, but this did not accord with William’s inclination, so after spending five years in study at Glasgow University, he determined to study medicine. He completed his course at Edinburgh in 1741, and went at once to London, where he began his career as a practitioner and teacher.

In 1748, in the twentieth year of his age, John asked permission of his brother to join him, and offered his services as assistant in the dissecting room. His offer was accepted, and in September of that year he made the journey to London on horseback, and began work at once in the school of his brother. He manifested high degree of skill and dexterity in dissecting, and his work won much admiration and praise from his brother William. During the summer months of 1749 and 1750 he was at Chelsea Hospital, studying under Chelselden, the most noted surgeon of his time. Hunter was a good worker, but he was not careful in the selecting of his associates, and it was said of him that he “mixed much in the society of young men of his own standing, and joined in that sort of dissipation which men at his age, and freed from restraint, are but too apt to indulge in.” At the home of his brother the social surroundings were good, and the social contact was of an elevating character, and it was there no doubt that his ambition was aroused and his mental powers were stimulated into the activity that made him the noted investigator in odontology and comparative dental anatomy, and in other branches of medical science, that he afterward became.

In 1751 he became a pupil of Doctor Pott, who was a surgeon of recognized ability and fine reputation. He entered St. Mary’s Hall, Oxford, in 1753, but not being pleased with the conditions obtaining in that institution, he remained there but a short time. From 1754 to 1756 he was a pupil at St. George’s, and in May of the last named year he was appointed house surgeon. During the next few years Hunter was actively engaged in pushing forward his investigations in anatomy and pathology, but finding time, however, to engage in hot disputes and controversies with other investigators, including Pott, his former teacher, over priority of discoveries. He made a series of experiments in 1758 in an effort to determine whether or not
the veins possessed the power of absorption, finally reaching the conclusion that absorption was carried on by the lymphatics and lacteals only. In the following year his health failed, he having had an attack of pulmonary inflammation, and it was feared that a case of tuberculosis was going to be the result, so he was advised to change to a warmer climate. He applied for a position in the army, and secured an appointment as staff surgeon. It was during this term of service that his "observations on gun-shot wounds" were made. He was tireless in his investigations in anatomy and physiology wherever and whenever the opportunity was afforded. He investigated the faculty of hearing in fishes and studied lizards and snakes in an effort to learn whether or not digestion goes on during their torpid state.

In 1763, the war having terminated, he located in the city of London to engage in the practice of surgery. Competition was keen, as there were in London at this time a number of able and popular surgeons, and Hunter found it rather difficult on the start to earn sufficient money to meet his needs, so he determined to supplement his income by teaching anatomy and surgery to a private class. Hunter became a member of the Royal Society in the year 1767, and the next year he received an appointment on the staff of surgeons at St. George's Hospital, and became a member of the Corporation of Surgeons.

Among the pupils of Hunter was Doctor Jenner, who immortalized his name by the discovery of vaccination. He remained a lifelong friend of Hunter, and visited him in his illness in after years. Hunter had a residence at Earl's Court, where he kept the animals he used for observation and experiment in his research work. Here he had prepared a sort of an underground cage, or cave, where the wild animals were confined. It is said "it was his delight to spend an hour or two amongst the strange inmates he congregated from all parts of the globe, engaged in observing their habits and instincts, and amusing himself in making them exert their various methods of self-defense against his playful attacks."

Hunter's contributions to dental literature consisted of two volumes; the first was published in 1771, and was entitled "The National History of the Human Teeth."

In the year 1776 Hunter was signally honored by being appointed Surgeon Extraordinary to the King. The next year he was taken seriously ill and was confined to his bed for quite a long time. "The most distressing feature of this illness was a constant vertigo which rendered him incapable of raising his head from his pillow for ten days." During this illness he was visited by Jenner, his former pupil.

In 1778 he published his second treatise on the teeth. This work was entitled "The Pathology of the Teeth." It may as well be noted here that Hunter was a hard man to work with, as he was "out-
spoken" and blunt in manner, and used language that was coarse and rough. In the year 1780 he became estranged from his brother William on account of a dispute that arose between them over the priority of discovery of some part of the anatomy of the placenta. This estrangement lasted until about the time of the death of his brother, when the breach between them was finally healed.

In 1778 Hunter developed a serious and painful affection of the heart and arteries, from which he never completely recovered. While in this unstable state of health he was accustomed to say that "his life was in the hands of any rascal who chose to annoy and tease him."

In 1783 Hunter became involved in a dispute with his colleagues over an appointment on the hospital staff. Friction and bad feeling were produced, and further disputes arose concerning the regulations under which pupils were admitted to the hospital. A new set of rules was finally adopted requiring all students entering the hospital to have certificates showing "that they had been educated to the profession." This rule was evidently designed to exclude certain pupils who came up from Hunter's country, recommended to him, and entered as his pupils, without having had any previous medical education. The new law was put into effect at once, and in the fall of the same year two of Hunter's countrymen, ignorant of the new regulations, applied to him for admission to the hospital as his pupils. He informed them of the new conditions, but told them to furnish a written statement of their case, and that he would present it to the board at the next meeting and try to secure their admission.

On the 16th of October the board met. Hunter was aware of the danger to himself in undertaking anything that was liable to agitate or excite him, but he determined to carry out his promise.

At the accustomed hour he left his house to commence his morning rounds, and by accident forgot to take with him his list of appointments. He had left the house but a few minutes when it was discovered, and Mr. Clift, who was then residing in his house, hastened with it to York Street, St. James, the first place on the list, where he found the carriage waiting. Hunter soon made his appearance, took the list, and in an animated tone called to the coachman to drive to St. George's. Arriving at the hospital, he found the board already assembled, and entering the room, presented the memorial of the young men, and proceeded to urge the propriety of their being admitted. In the course of his remarks he made some observation which one of his colleagues thought it necessary instantly and flatly to contradict.

Hunter immediately ceased speaking, retired from the table, and struggled to suppress the tumult of his passion. hurried into the adjoining room, which he had scarcely reached when, with a deep groan, he fell lifeless into the arms of Doctor Robertson, one of the
physicians of the hospital, who chanced to be present. Doctor Ballic had immediately followed him from the board room, and Mr. Home, who was in the house, was also summoned to his assistance. Various attempts were made for upwards of an hour to restore animation, under the hope that the attack might prove to be a fainting fit, such as he had before experienced, but in vain; life had fled, and all their efforts proving useless, his body was placed in a sedan chair and conveyed to Leicester Square, followed by his now vacant carriage. Hunter's remains were laid to rest in St. Martin-in-the-Fields, where he was privately buried. His body was allowed to remain there for more than half a century, until time had demonstrated more fully the value of his service to mankind, when it was removed, and re-interred with much ceremony in the North Aisle of Westminster Abbey. The spot is marked by a sepulchral tablet of brass, upon which these words are inscribed:

"Beneath are deposited the remains of John Hunter. Born at Long Calderwood, Lenockshire, N. B., on the 13th of February, 1728. Died in London on the 16th of October, 1793."

His remains were removed from the Church of St. Martin's-in-the-Fields to this Abbey on the 28th of March, 1859. "The Royal College of Surgeons of England have placed this tablet over the grave of Hunter to record their admiration of his genius as a gifted interpreter of the Divine power and Wisdom at work in the Laws of Organic Life, and their grateful veneration for his services to mankind as the Founder of Scientific Surgery."

Hunter prepared a large number of specimens in his investigations of the anatomy and pathology of the teeth. These specimens are to be found in two museums. Those in his possession at the time of his death were purchased from his estate by the British government, and they are now in the Museum of the Royal College of Surgeons of England. These specimens were in number about 500, and they covered a wide range of the animal kingdom, and by a study of them in later times, the science of comparative odontology has been built up. The other collection is in the Hunterian Museum at Glasgow University. These were in the possession of Dr. William Hunter at the time of his death, but the evidence at hand, which appears to be conclusive, shows that they were prepared by John, while he was acting as assistant to his brother. Hunter's mind was centered on scientific investigation, and he practiced surgery as a means of securing the money with which to carry on his work. He was a poor man, but he did not spare expense when it was necessary in order to secure rare and interesting specimens. The total number of specimens of all classes, including zoological, osteological, physiological, microscopic and all other preparations, according to the statements of "Professor Stewart and Mr. Timothy Homes," was
more than thirteen thousand. He paid five hundred pounds for the body of "Bryne," the noted Irish Giant, borrowing the money with which to pay it, and bribing the guards who were hired to see that the body was placed in a leaden casket and sunk in the sea, as "Bryne" had gotten the idea that the "doctors" wanted his body, and he was very desirous that it should not fall into their hands.

Hunter recorded the results of his investigation with the greatest care and pains. His assistant, Mr. William Bell, who lived in his house for fourteen years, did the greater part of the writing and made the drawings while Hunter did the dissecting.

His specimens were kept in a museum at Leicester Square, where Hunter lived until they were sold to the Government by his executors.

Physically, Hunter is described as being of medium height, strong and robust frame, high shoulders, short neck and reddish yellow hair, changing to white in his later years.

In disposition he was humane and generous, and not at all exacting in the matter of fees, often returning the fees of patients upon learning of their being in straightened circumstances.

He was addicted to the use of profane language, and was inclined to be arbitrary and overbearing when he could not have his own way. Of him we may truthfully say, as Professor Huxley said of Joseph Priestley: "Such men are not those whom their own generation delights to honor; such men, in fact, rarely trouble themselves about honor, but ask, in another spirit than Falstaff's, 'What is honor? Who hath it? He that died o' Wednesday.'"

In the domain of science the good that men do as well as the evil, lives after them, and whether we hold their names in grateful remembrance or allow them to be forgotten, their works will live and bless mankind till time shall no longer be.

The following committee was appointed to report on the annual essay: Drs. J. A. Sinclair, P. E. Horton, R. T. Gallagher.

Upon motion, duly seconded, the Society took a recess until 9:30 Thursday morning.
SECOND SESSION.

Thursday Morning, June 25, 1914, 9:30.

The following applications for membership were reported and elected:

W. J. Springs, Mt. Holly.
W. C. Taylor, Salisbury.
E. A. Truxler, Spartanburg, S. C.
Paisley Fields, Boardman.
A. J. Adams, Durham.
Whitfield Cobb, Winston-Salem.
R. M. Olive, Fayetteville.
H. O. Lineberger, Raleigh.
E. W. Worsham, Ruffin.
E. M. Peeler, Casar.
Wm. F. Bell, Asheville.
Jno. G. Bell, Morehead.
Joseph Fulton, Asheville.
Sam Levy, Charlotte.
H. K. Foster, Liberty.
C. H. Chamberlain, Yadkinville.
J. W. Zimmerman, Salisbury.

On motion the name of Dr. J. W. Stanley was changed from the Honorary roll to the Active roll.


ORAL OR MOUTH HYGIENE.

DR. J. C. WATKINS, WINSTON-SALEM, N. C.

Mr. President and Members of the North Carolina State Dental Society:

Oral or Mouth Hygiene is today receiving more attention than any other department of dentistry, and it is very gratifying to see, not only the laity, but the medical profession as well, considering it
with so much favor. In fact, the leading men in the medical pro-
fession attach more importance to Oral Hygiene than does the den-
tist. It was only quite recently that one of the Mayo Brothers, the
gifted surgeons, made the statement that the next advanced step in
medicine must come through the dentist in preventing oral sepsis.

Recently we have known of four patients who went to Doctor
Thayer, the gifted, as well as noted diagnostician at Johns Hopkins,
and in each case he made an examination of the mouth first thing,
because he frequently found that oral sepsis was responsible for
many pathological conditions.

With the splendid magazines, "Oral Hygiene," the "Cosmos," the
"Dental Summary," and other progressive dental journals, filled
with information along the lines of Oral Hygiene, it is not necessary
for your committee to go into a lengthy discussion of the subject.
We will simply call your attention to a few facts, a few troubles
that come directly from bad mouth conditions.

It is high time that dentists turn aside from filling teeth, con-
structing bridge work, and restoring lost tooth structure, and do
a little more towards preventing the loss of tooth structure, getting
better mouth conditions, and help prevent bad health.

During the period I have been observing mouths and teeth, I have
noticed a great increase of decay in children's teeth. I believe,
taking the average, that the teeth of the younger generation are
forty or fifty per cent worse than children's teeth, of the same age,
twenty-five years ago.

The ability to masticate properly, the ability to properly prepare
the food for distribution and assimilation, is much more important
in the years of childhood than at any other period. And children
with decayed teeth cannot properly masticate their food; they are not
building up bodies that represent the best. When the child's face
aches, his checks are swoolen, and the mouth is full of matter and
decay, that child is irritable, he cannot study, he does not develop
naturally, he falls behind in his classes, because his physique can-
not properly support his body.

The great majority of bacteria that causes infection in the human
body finds access through the mouth, which is the gateway to the
system. It is a fact that oft-times there is an accumulation of filth
(in many cases invisible) around the teeth, just at and under the
gums. If these accumulations are not removed, they continue to
form deeper and deeper until the alveolar process is reached. This
it diseases, and as a product of this decay, pus is formed, which con-
stantly oozes out from around the teeth, and under the gums. The
gums become tender and constantly bleed, the teeth decay, much pain
is experienced, and abscesses (gum boils) are formed which con-
tain pus. This pus is either absorbed directly by the blood, or is
poured into the mouth, thence to the stomach to be disposed of by the
different digestive organs. Unclean mouths and decaying teeth form
a breeding place for many kinds of germs. These bacteria mix with
the food during the process of mastication, and are carried into the
stomach, where they ferment, causing the food to sour, and thus the
general health is impaired. These filthy mouths are "cess-pools of
bacteria," and many kinds of germs are found therein. These
bacteria constantly form in and around the teeth, then pass into
the alimentary canal. The fluids of the body tend to make them
inactive, and for months they may do no harm, but when they find
a weakened part, suitable for their action, they at once occupy this
place, form a colony, and their peculiar disease follows.

The lining of the alimentary tract is a continuation of the lining
of the mouth, and if the lining of the mouth is inflamed, this inflam-
mation is likely to extend on down and cause tonsillitis, gastritis—
and in fact any of the inflammations to be found in the alimentary
canal. People who constantly swallow these accumulations of filth
often become pale and anemic, these accumulations passing into the
system affect the blood, causing many forms of boils and eruptions;
pernicious anemia, and forms of heart trouble often follow. The
kidneys are expected to carry off their part of this filth or poison,
and this they do, for a while; but, by-and-by they wear out and fail
to work, which causes many forms of kidney diseases, and some-
times sudden deaths.

Knowing all these things, and realizing, as we do, the importance
of mouth hygiene, what are we, as a Society—as individuals—doing
to prevent these troubles? Are we warning those who do not know
of these insidious pus pockets and the dangers that surround them?

I wish here to thank my friend and associate, Dr. Whitfield Cobb,
for assistance in the preparation of this paper. During the last
month, in order to ascertain the condition of affairs, he wrote for
me, enclosing stamped envelopes for reply, to the superintendents of
thirty-two of our larger city schools, also to the State Superintendent
of Public Instruction, and asked them what they had done the past
year along the line of oral hygiene in the way of inspection, lectures,
essays, etc., also we asked what were their plans for the next year
in this connection. We find that most of them have done very little
along the line of Oral Hygiene, but in order to be more exact, we
will quote from the letter received from each superintendent who
answered:

Asheville: "We have done nothing during the past year in the
way of Oral Hygiene except talk about it. We have been discussing
medical and dental inspection, and are still discussing it with the
view to introducing it next year."

Charlotte: "I beg to say that a committee from our board has
been appointed to confer with a committee from the Dentists' Asso-
ciation of the city, that they may work out some definite plans for
next year. This year talks have been given by the teachers to
their own grades, and in some rooms a daily record has been kept.
on the blackboard of those children who used a tooth brush each morning. I am informed by some of these teachers that the number at the end of the year was 50% greater than at the beginning. We hope to have a good report to make you a year hence."

DURHAM: "The Durham Board of Education voted to put in a system of medical inspection the coming year."

ELIZABETH CITY: "We have encouraged the use of the tooth brush by using Colgate's offer of a sample tube of paste and have followed it up by weekly inquiring as to whether the brush was being used, and by weekly talks by teachers on this and other matters of hygiene. We have had no special lectures or essays on the subject. We use the Ritchie Caldwell books as text books in two grades of the grammar grades."

GOLDSBORO: "We had medical inspection in the Goldsboro Schools last year. The inspection included examination of the teeth. Enclosed you will find a copy of the card that was sent to the parents of pupils needing attention; seventy-seven of these were sent on account of teeth. Practically all of these children went to a dentist shortly after the inspection."

HENDERSON: "For several years we have had the co-operation of the physicians of Henderson in examining the pupils on entering school. Blanks are prepared for each child examined. Should the pupil need the attention of a physician, a dentist, or a specialist on throat, nose, ear, etc., the parent is notified of this and advised to have the matter attended to at once. Every child is examined as to vaccination, skin, throat, eyes, hearing, and whatever else the physicians may deem important, and especially the teeth. This has worked great good for children whose parents did not dream that there was need of attention for the child."

HIGH POINT: "We have had dental inspection for the first time in the history of High Point schools at the first of this school year by the dentists of the town who gave their services free. Duplicates of the enclosed blank were made, one given to the pupil, the other left on file in the superintendent's office."

LEXINGTON: "We have not done anything in the Oral Hygiene line. Have arranged with Doctor Kibler here to do something along this line next year. In fact, we planned to do something this year, but did not."

MARION: "About the only thing we have done so far has been to hold contests annually for the prizes offered by Colgate & Co. The children get their information from the dentists and from their teachers. Much interest is always manifest, and the tooth brush is commonly used as a direct result."

NEW BERN: "We have had during the year lessons, lectures, and illustrated talks on malaria, tuberculosis, general health, etc. Pupils are taught cleanliness, the value of fresh air, danger in flies, mos-
quites, screening of houses, etc. This work will be continued in the future very much as it has been in the past."

Oxford: "Nothing definite has been done more than what the teachers have done in their rooms individually. The local dentist is to give us a lecture on mouth hygiene in the early fall."

Raleigh: "We teach hygiene in the fourth, fifth, sixth and seventh grades, and use as text books the Gulick Hygiene series. In the seventh grade we teach Riche's Primer of Sanitation. We have medical inspection, with a regularly employed medical inspector."

Tarboro: "I regret to say that we have done nothing. Lack of funds is our great trouble. In my judgment health, teeth, etc., ought to be attended to; if no other way, shorten the school term."

Wadesboro: "Our work on General Hygiene from fourth to seventh grades is in the main just what is prescribed in the two books on the adopted list. In the primary grades we get a great deal of the "oral" as well as other hygiene in what we call morning talks by the teachers during the opening exercises. This varies in amount according to the teacher, and her resourcefulness in getting material, etc. We have been rather fortunate in our primary grades in getting wide-awake teachers who did a great deal of this, but we should appreciate more suitable material for this kind of work. This will be more effective than lectures by local dentists, who are not experienced in getting their terminology down to the level of the average child. We have tried the lectures only once for this specific purpose, though."

Washington: "The only work we had in oral hygiene last year was Ritchie's Primer of Hygiene and Primer of Sanitation. During the fall Dr. Von Ezdorff, of the United States Public Health Office, was with us and talked to our school about malaria and its prevention. We had no lectures or essays along this line. Next year I hope to have at least, in a limited way, some sort of inspection in our public schools. If I can get our board to agree to this, I shall write you just as soon as our plans are perfected."

Wilson: "We have succeeded this year in getting every pupil in school to use a tooth brush. We have no dental inspection."

Winston-Salem: "I am indeed sorry to have to report that our work in Oral Hygiene during the session of 1913-1914 was not what we wanted it to be. We had no inspection, but I believe the lectures given and the essays written by the children along the line indicated did great good. One of the colored schools distributed about 600 tubes of paste, and did great good in encouraging the use of the tooth brush. I hope to push this matter another year."

I have just received letters, which I quote from as follows:

Hickory: "I have been away for two or three weeks, hence the delay in replying to your letter of inquiry. We have, in our course of study, text book work in hygiene in the fourth, sixth, and tenth
grades. In all the other grades there are oral lessons on health subjects, care of the teeth, etc. Prizes are offered for the best essays on these subjects. We have not had as yet any inspection of pupils' teeth, though we are working steadily to that end. We hope to make a beginning along that line during the coming year: inspection of teeth, eyes and ears."

J. Y. Joyner, State Superintendent of Public Instruction: "In answer to your inquiry, I beg leave to say that I regret that I cannot give you any definite information in regard to the work in the public schools along the line of oral hygiene, etc., during the past year.

"I doubt, however, if any organized, effective work along this line has been done, except in the city schools and in some of the rural schools of the most progressive counties, especially those counties that have full-time health officers."

S. S. Alderman, Secretary Education Campaign Committee: "I noticed this morning a letter which Superintendent Joyner had written to you in reply to your recent inquiry as to the work of the schools along the line or oral hygiene.

"I am sending you under separate cover marked copy of the volume of the Proceedings of the North Carolina Teachers' Assembly, in which will be found the report of the Committee on School Hygiene, appointed by the State Primary Teachers' Association. This report treats to some extent of oral hygiene work, and may prove of interest to you."

I hold in my hand the volume referred to, and in looking over the report by Miss Hattie Parrott, I scarcely think it worth while to quote from same, because there is very little in it that would be of special interest to our Society.

We have been able to hear of very little in the way of public lectures on Oral Hygiene, with the exception of the Cleveland District Dental Society at their meetings at Marion and Charlotte. Only one mill that we know of has done any work along the line of Oral Hygiene. That is the Shamrock Knitting Mill, of Winston-Salem. Among the modern ideas they have for the benefit of their employees, the superintendent arranged for lectures on different subjects, one lecture being on Oral Hygiene, given by one of the local dentists. As a result of this one talk, the superintendent reports that the employees are more interested in the care of their teeth, a good many have arranged for dental work, and the general health of several has already improved. They hope to have several mouth hygiene lectures during the next year.

The Colgate Company has done quite a little along dental educational lines, this being part of their advertising policy. They furnish lectures for the teachers to use, and furnish sample tubes of their paste for distribution among the children. They also have several dental lecturers who are working for Oral Hygiene. They come, if
it is desired, without it being known that they represent the company, and without mentioning Colgate.

The National Mouth Hygiene Association has arranged a motion picture film entitled "Tooth-ache," which they offer for sale, or the same can be rented. They also offer the first of a series of lectures on Mouth Hygiene. This lecture comprises a thirty-minute talk on "The Care and Use of the Human Mouth," illustrated with thirty-six lantern slides, both manuscript and slides having been prepared and edited by specialists. This lecture (including the manuscript and slides) will be furnished members of State Dental Societies at a charge of $1.00 for use on one date.

We would recommend that our members try to get the schools in their home towns to have essays written along the lines of oral hygiene, and arrange for prizes to be given for the best. Also that the dentists offer to lecture to the school teachers, and impress upon them the importance of constantly encouraging their pupils to brush their teeth and give frequent talks along these lines. They might induce several to have tooth brush drills. Others might keep a record on the board of all who brush their teeth. It would be well to also lecture the school children, especially to give little talks in the different class rooms. Public meetings could be made very interesting and instructive. We should also interest the factory and mill owners, and get them to have practical lectures delivered to their employees. To the busy dentist it is very hard to get the time to prepare and deliver these talks, but I believe it is our duty to help educate the people along these lines.

In the words of Dr. D. D. Smith: "Let us stand together on a higher platform, even that of trying to benefit humanity. We hold in our educated hands what can be made to do for humanity more than any physician that lives. Some day, some time, it will be recognized that that is the case. Why? Because dentistry has to do with the human mouth; the very vestibule of human life; and when we come to understand the overpowering infection that is centered in and about the teeth—not in cavities of decay—but at the necks and on the surface of the teeth, we will better understand why we hold the key to many pathological conditions in our hands. The time will surely come when dentistry will be loosed from its present narrow confines, and expanded into a true specialty of medicine. It will yet be recognized by the medical profession as the most helpful of its allies."

Hendersonville, N. C., June 2, 1914.
Proceedings North Carolina Dental Society

Paper—"Oral Hygiene," Dr. G. W. Whitsett, Greensboro.

ORAL HYGIENE.

G. W. WHITSETT, GREENSBORO, N. C.

The oral hygiene propoganda is looming big before the dental profession, and the time is soon coming when medicine and dentistry will render their best services to humanity along the line of prevention, and our better classes will require the services of a dentist for prevention rather than cure. Not until we suffer in conscience as a profession is there any real hope of relief from suffering among the laity. We all know that the most important death dealing diseases depend upon some form of micro-organism. We analyze our water to have it pure; we inspect our slaughter houses to have them clean; we inspect our dairies to see that the cows are not diseased, the stall kept clean, and the milk properly handled. This is all as it should be, and is eminently proper and worthy of those performing this duty; but we stop too soon, and I am afraid a great deal of the blame can be laid at our doors. We know the importance of the human mouth and the necessity of keeping it clean. Why bring pure milk to a child and pass it into its little body over a cess-pool of filth? You know that the micro-organisms of pneumonia and tuberculosis, as well as many other highly infectious diseases, as diphtheria, are often found in the mouth, only waiting a favorable opportunity to get in their death-dealing blows.

The mouth is the protective gateway to the alimentary canal, the laboratory of the body where the food is prepared for assimilation. Do you know North Carolina loses 3,000 children every year, and 1,800 of these are bottle fed, and die from filth? Do you know we lose 6,000 from tuberculosis when cleanliness and pure air will save them?

The doctors and health officers are relegating this part of the work to us. The doctors are not doing their full duty to us from the simple fact that we are not doing our full duty to them in calling their attention to this phase of the subject in a more emphatic manner. You all know how doctors will put patients in a hospital for acute infectious diseases and neglect the mouth when nine-tenths of the infectious diseases are contracted through the mouth. Again, you know how our lady patients are not as free to tell us their physical condition as they are their doctors, and how careless the majority of the doctors are with their patients' mouths during the period of gestation, and how, if there was a mutual understanding between the doctors and the dentists and the patients, so many mouths could be kept clean and pure during this trying period.

We are being looked to at this time for more than what has been expected of us heretofore. It has only been in recent years that we
have been looked to for any co-operation or relief in solving the question of preventative medicine. The relation of the mouth and teeth to health and disease is appreciated as never before. Not more than a year ago that great surgeon, Dr. Charles Mayo, said: "The next great step in solving the question of preventative medicine must come from the dentist." I am glad to say this question is being solved today by the great work being done through the Scientific Foundation and Research Committee. Now what I've said is merely preliminary to what I wish to say. This society has reached a stage when we ought to take a definite stand and do definite work in oral hygiene. It is pitiful and almost a crying shame that such a paper as Doctor Watkins has just read is heard only by a handful of people, and they are pretty well informed on the subject. When there are 2,000,000 people in North Carolina who know nothing about the subject and ought to know as much about it as we do. Can't we in a measure remedy this state of affairs?

We ought to have a special oral hygiene committee whose duty it shall be to prepare a special oral hygiene programme and set aside one evening of our meeting for this special programme. Invite and insist by advertising that the public attend this meeting. Have some one read a good paper, and by stereoptican views show what we are trying to do. Also let it be the duty of this committee to get up an oral hygiene exhibit, and have it in such form that it can be sent from place to place to any dentist who wishes to use it in a public talk. We are having these talks all over the State, but the dentists are not making any of them. We ought to have some dentist at Chapel Hill and the State Normal now to make several talks before the teachers in session at these institutions. And some one ought to be appointed or elected to make a talk before the State Teachers' Institute. Really, gentlemen, don't you think we have set back on our professional duty about long enough? There is a great medical meeting now in session in Atlantic City. Sunday fifty pulpits were filled in Philadelphia by doctors talking on health subjects. How many of you read the back of your June Cosmos? *Mens sana in corpore sano*? Read it when you go home.

The plan for raising the money: We, as a profession, do not appreciate the opportunity now opening before us to do good to our fellow men. It is not only our duty, but is obligatory on us to increase the efficiency of the body politic.

Discussion of Dr. Watkins' paper led by Dr. J. H. Wheeler.

A friend of mine asked me yesterday what this paper was about—the idea of anybody asking what Dr. Watkins was going to write about. We all know Watkins as a "crank." A lady friend of mine in the eastern part of the state said in a conversation recently that she was talking with a gentleman
who was a mill owner and they were discussing some subject
in which she was very much interested, and he said to her,
"Mrs. So and So, you are such an awful 'crank' on this sub-
ject." "Yes, I am," she replied, "but you will answer me a
reasonable question, won't you? You are a mill owner;
I want you to do me a favor." He says, "I will do anything
in the world for you I can." "Then I want you to go in
your mill and take out every 'crank' in it."
"But if you take the cranks out you will ruin the mill.
That is just the point."

If you take all the cranks out of humanity you will ruin it.
Do you know what a crank is? He has been defined as a man
of one idea, that is one dominating idea, and it is the cranks
in humanity—the men with the dominating idea—that are
like the "cranks" in your mill machinery that make things
go. Don't forget that. It takes a crank to make things go.
I have heard Watkins called a "crank" more than once, but
I wish I were the same kind of a "crank."

Watkins is delving down into things that mean more for the
conservation of human health than all of the gold and all the
silver that all the balance of us will ever put into human
mouths. He took up this thing of children's teeth. We all
see them. We all treat them. We know how hard it is to
handle the little folk, and yet I say to you, as you well know,
that right there is the very inception of our duty.

I heard a statement the other evening at home by a man
who is absolutely reliable and responsible, in regard to the ef-
flect of the drinking cup in Guilford County, North Caro-
lina. The ratio is approximately what I give you: my fig-
ures may be a little bit off—that last year there were 35 cases
of diphtheria in the county; this year there were three; be-
cause of the fact that they had introduced into the schools
sanitary drinking apparatus.

I have in Greensboro a friend in the hospital who had 52
inches of his intestines removed. I said to a physician
shortly after that operation was performed that I believed that
his trouble was caused from his oral cavity. I told him why. To my unmitigated surprise, he says, "Doctor, I think you are right." I know that that man's mouth was generating enough poison in 24 hours to kill half a dozen men. The price that we pay for civilization is the price of inferior bodies. The higher the civilization, it seems to me, the more the human body is susceptible to disease. We do not have anything in this world in the way of genuine necessities of the world but what are brought about by a demand; and this great oral hygiene movement has been brought about by a demand, a necessity on the part of humanity for this thing. That is why we have got it, and we have got to take hold of it. We have got to get in line with it, to conserve the health of the public.

Dr. A. H. Fleming: I feel that I can't let the paper go without saying something about it. Although I did not hear it, I thoroughly agree with Dr. Watkins in anything he said. I am heartily in sympathy with everything that is preventive, and while we as dentists will always have a great deal of this kind of work to do, the educational end of dentistry goes back farther than that. The time to begin to take care of a child's teeth is with its grandmother, and until the dentists in each town realizes this fact and get right out in the field of education and do personal work among their patients and in the schools, we will be working backwards. There is a tendency on the part of every civilization known, when they reach the zenith of their civilization, to retrograde. That has been the history of the world, and it is truer of the human system. The more we know about it the more we abuse it. There is no logical reason for a man ever to be sick. People should wear out, and that should be the end of them, and I am glad to see that the doctors and the dentists are realizing the fact that we must fire the human system just like an engine, with the proper kinds of fuel, to get the most efficient service. We see sometimes a young man, well and strong apparently, taken sick; he dies,—beautiful character, Christian young man; people go to the church: the preacher will say "the
Lord has called him to a higher work." There isn't a word of it so. God has never called a good man. Tuberculosis sent him.

The thing that each dentist could do is to get up a series of slides, taking cases in his own practice. There are few months or few days that something of interest does not come into the hands of dentists; and the way to educate people is to show them something. I started in my own practice about two years ago. Whenever I have an interesting case or a case that is the least bit out of the ordinary, I take them out to the photographer and have a picture made. At sometime I hope to have all these made into slides, and I hope to have other men all over the state do the same thing, and exchange slides; and I believe if we will each one do that and get these slides together, with a series of lectures in the public schools, we could do more to educate people than any other way. We could reach them. We come here to these meetings and discuss our ways and means, but the people who really need to know these things most never hear them. There are few women who ever know how to take care of a child; to care for it properly; and at this day and time they are giving a great deal more interest to tangoes, teas and bunny hugs than they are to baby hugs and hot water teas; and until women realize that they are the ones to care for the homes and care for the family, we will always have trouble, and if we can get a series of lectures and educate people along these lines it will be the biggest thing we can do.

Dr. R. H. Jones: It gives me a great deal of pleasure to hear the papers read by Dr. Watkins and Dr. Whitsett. It is along the line that we have been thinking and talking a long while, but it has got to be more practical. If you will excuse a personal reference, I believe the first paper I read in this state society 20 years ago at Winston was on this subject, oral hygiene. While I have not been as careful probably in many respects and have not carried out those ideas like some dentists have, I have always recognized its importance,
and in a mild way I have always tried to impress it upon my patients: but it is very difficult for a man in active practice to take up one thing like that and get his patients interested without he talks it all the time, and then he is called a crank. But we need those cranks.

Now, coming down to the main points. I think Dr. Whitsett has suggested a practical idea. We sit here and talk when our convention is held and we are interested in the talk, but how many people of the community are? I believe that his idea is a good one. If we could set apart some hour and get the people where we go interested and have them attend, and have these slides and a short lecture, I believe we would do more to educate the people and to impress them with the importance of what we believe in oral hygiene, than in a century getting together like we are, talking among ourselves. I think the time has come to be more practical in this matter and to do something that will educate the people. I think we could spend a hundred or a hundred and fifty dollars each year in that way and it would certainly be for the benefit of our patrons and the public, and indirectly for us, but that should not be a consideration at all; we want to benefit the people.

Dr. R. T. Allen: I think one of the best ways that we can benefit the people is for the dentists, if they can, to get their county commissioners to employ a health officer for his full time and let him go about among the public schools, with the superintendent of public instruction, and examine the children and report those defects to their parents. I am glad to say in our county we have a competent physician who gives his entire time to that purpose, and as he goes about with the county superintendent examining the children for adenoids, diseased tonsils, ear and eye defects, if he can’t get a dentist to go with him he will examine the teeth; and he reports those defects. In our home town we examine the teeth of the graded school children under our county physician, and he is reducing the death rate in our county materially.
Dr. Everitt: In reference to the papers read I will say there are a great many practical points to be drawn and to be considered in taking action on a proposition of this character. In the first place we have got to face a very suspicious class of people in order to benefit those that are really most in need of our services. We in Wake County, Raleigh, have experienced that difficulty perhaps more thoroughly than most any town in the state. We made a report two years ago to the State Society in relation to the work that we had undertaken there, and it is useless to repeat that now. But in Raleigh and Wake County we have a county superintendent of public health who is required to give his entire time to the work, and we also have an inspector in the state who keeps right in touch with the school system all the while and has done a valuable work; and I find, as I presume others in the profession have, that the great bulk of the poorer classes in the schools in Raleigh look with suspicion on Dr. Root, who is our examiner (and a capable and good man he is too). He requires them to take the statement that he furnishes to their parents and demands of their parents that they see their dentist and know the conditions, whether he has accurately reported them.

Now there are a great many ways of getting at this thing. You have got to educate the people and you have got to take a long time to do it. You can't force them to take this information that we are ready to impart to them at all times. You can take the money that you use for publishing the proceedings here and you can condense the proceedings every three or four years and publish them in the form that our worthy secretary has got out for many years preceding, and you can use that money in illustrating, by slides or otherwise, but you have got to gradually impress it upon the people that you are trying to benefit them.

I had a beautiful illustration this past March: A very prominent physician in Raleigh, Dr. Knox, came to me and said he had a patient that was going down hill. He had
been treating the patient for a couple of months and not benefitting her. He wanted me to go in consultation with him. I went, and I found every tooth in that lady's mouth, 16 all told, just surrounded by congested gums, pus pouring out all around, anaemic condition generally. As a matter of fact I could have taken my fingers and removed every tooth in that lady's mouth. I told Dr. Knox my judgment was, from the condition she was in then, that the best thing to do was to remove those teeth. We took them out, used disinfectants in her mouth freely, and in three weeks' time that lady was up on her feet.

We see cases of that kind frequently, and yet the average man in our profession has not the backbone to come out and antagonize his physician and say that we know what we are doing and you are wrong. The average dentist feels today that the M. D. is his superior, instead of asserting his right and demanding that he be treated as a professional man. We have to be up and doing, and the sooner we realize that we have got to take hold of this subject and study it and work it one way or another, the sooner will we get the results that we are entitled to.

Dr. Wexler Smathers: I did not think I'd say anything on this subject. In fact last year at Winston-Salem I had a paper on the same subject—dental prophylaxis. When I see Dr. Watkins going along, making progress, and hear Dr. Jones say that 20 years ago he had a paper on it, then Dr. Everitt takes a step just a little farther, that makes me say if we have spiritual trouble we apply of course to the minister; if we have legal trouble we call in a lawyer; if we have a general health disturbance we call a physician; and now the thing occurs to me, when the people have trouble with their teeth why don't they call the dentist; and it occurs to me also that the reason they don't do it, is our own fault. It is our business; we are the dentists and we should elevate dentistry more than we are. We are not progressive enough. We
have to co-operate with the medical men because they are our great helps, and we are their helps. They cannot treat disease as well if they do not send their patients to consult with the dentist and have their mouths examined. We know that they are of benefit to us. Their co-operation is necessary. But we need not try to push this duty off our shoulders. Why don't we formulate some plan at our state meetings that we should carry out during the year? Why not have a committee and reports from individuals at the next meeting what progress has been made; and from that add other things and in a short time we will commence doing what we should have done long ago—get dentistry elevated through this one channel, through dental prophylaxis.

Dr. J. A. Sinclair: We all agree and there is no question about the amount of injury that is caused from neglect of especially, the children's teeth, and we all may have one goal, that is that we want to correct this, and the question is how to accomplish it. Each one of us perhaps has a different idea as to how to accomplish it. You lecture to the children in the school; after the lecture is over—you know they are the busiest people in the world, they play all the time; they go out to play and forget about the lecture. Then you make an examination of the child, send a card home with instructions as to what shall be done. The parent reads it over and says "Well, I needn't have that done; it is a little graft; and if the child gets the tooth-ache we will attend to it and not until then." There is one class of men that we have got to educate before we can accomplish this, and that is the physician. The physician is nearest to the family of any one else. They have more influence perhaps than any one else. The parents and children will listen and heed any warning that the physician will give them. They, as a rule, will carry out the instructions of the physician: and the physician is the man that we must educate. We must not oppose him in anything. We have one physician in Asheville that I know
is educated as far as we are concerned. He has an extremely successful business and an institution that he is at the head of. He takes no patient in there unless his mouth is put into a thoroughly healthy condition. That is the first requirement; and in speaking to me he says that he does not believe that there ought to be such a thing as a decay in teeth; and his patients go regularly to the dentist.

If you go before your state medical society and county medical society with such papers as Dr. Watkins has read, we may not at the first time get much results, but if we keep after them and show them, after a while your physician—if the right kind of a physician, with the love of his patients—is going to instruct that patient in the value of the care of the child's teeth and the condition of the child's mouth.

Dr. J. W. Stanly: What Dr. Sinclair has just outlined brings to my mind a thought that our Society ought to adopt some plan whereby we can go to the State Board of Health. Dr. Rankin is a big man, and all big men will recognize big things, and this is a big thing that we are dealing with—the biggest thing in dentistry; and in connection with Dr. Rankin we have a man in Wilmington that is recognized not only in this state, and in the United States, but he is recognized all over the world. I speak of Dr. Charles W. Styles, the hookworm man. And, by the way, perhaps if some of the dentists that are too lazy to do this prophylactic work, and will go down and take this hookworm cure they would get better! Dr. Styles will co-operate not only with the profession in Wilmington, but he will co-operate with the profession of the state. He is a big man. Since hearing this paper read and hearing the discussions, it has given me a vision of what can be done, especially in Wilmington, with the assistance that I know Dr. Styles will give. He has already suggested that the dentists of the city meet with him, or he will meet with them at any time that they suggest, and outline a plan whereby the children of the city of Wilmington can be inspected and reap the benefits of prophylactic work.
I appreciate the paper very much, and it has enthused me, as his papers always do, but I do not think we ought to leave our enthusiasm when we leave these four walls. I think we ought to take it home with us and I think this Society today should adopt a plan whereby we can reach the children of the state of North Carolina through the State Board of Health.

I will make a resolution to that effect later, that we adopt a plan whereby we can appeal to the State Board of Health to help us in reaching more people on the subject of mouth hygiene.

Dr. Henry W. Morgan, Nashville, Tenn.: The subject is of very great interest to us all. I did not hear all of Dr. Watkins' paper, but I can certainly congratulate him and congratulate the North Carolina Dental Society upon having one who is so deeply interested and who has gone into this matter so practically and so thoroughly that he can bring you a report not only of what he has been doing himself, but what is transpiring throughout the state, at least the measure of the interest that is being exhibited elsewhere. I congratulate you also upon having one to discuss it who has the courage to confess that when it is necessary he is not afraid to extract a tooth; and this great subject of mouth hygiene is upon the eve of having it brought more prominently before the people of America and the world than ever before. While the newspapers, magazines and our own literature have been open for years, at least for the last 20 years, ready and willing at all times to do what they could do for the circulation of this information, the National Mouth Hygiene Association has recently employed a man who it is intended shall go from state to state, city to city,—a layman, an ex-secretary of the Washington Y. M. C. A., a man thoroughly alive and thoroughly capable and competent, well educated, polished, a fluent speaker, and a man who is going to put into mouth hygiene more vim and more will than has ever been put into it
before; coming as it does, in my opinion, from a layman, it will have additional strength given to it. It will be robbed of all charge or sordid personal influence and benefit.

I have but one criticism of the paper. I want to ask Dr. Watkins to go over it and cross out that word "oral." The National Mouth Hygiene started out as an oral hygiene association. The word "oral" is associated with speech. The association changed, adopting the word "mouth" as an expression that more fully and easily conveys the meaning of what is intended. We use interchangeably also the words "hygiene" and "prophylaxis." They should not be so used. There is a prophylactic intention of everything that a dentist does. Not always is that prophylactic intention a hygienic one.

Dr. Everitt's confession rather emboldens me, and I want to relate one in my own practice. Some 12 years ago a young boy came to me, about 11 years of age, with three badly decayed first molars; the pulps were exposed in three of them; the fourth, the upper on the left, had five cavities of decay. The proposition was what to do for him. I did what Dr. Everitt told us that he did. I extracted those four first molars. A few weeks ago he was in my office. I made plaster casts of his mouth. He is 23 or 24 years of age now. I should have stated that at that time there was but one other tooth in the mouth, the lower second bicuspid upon the right side, that had a cavity in it, which I filled at that time. That is the only filling that he has in his mouth. The prophylactic work that I did in extracting those four first molars was far greater than I had ever dreamed of. I not only robbed him of four teeth but I robbed him of all the caries that was in his mouth—at least it stamped it out. There has never been another cavity. We have got to learn that crowned teeth do not last more than eight or ten years; sometimes they do, under very favorable circumstances. Much of the work that we call "permanent" is a relative term, and we can't expect it to last beyond 15 or 20 years; and to condemn a young boy at 11 years of age to gold crown would have been malpractice,
in view of the history of the case that I am now able to arrive at.

The world has wakened up to the fact that the mouth is the portal of entry of from 50 to 80 per cent. of all the preventable diseases that the system is heir to. When we make that statement and then make the statement on the other hand that in the United States alone we are spending in the neighborhood of between five and ten billions of dollars every year for medicine and the services of physicians for the relief of these preventable diseases, we bring home to our patients a lesson that is far more impressive than any other we can transmit to them. My only regret is that that sentence quoted by your essayist here this morning from the sage of Rochester, Minnesota, had not been made in the presence of physicians instead of dentists, as it was. I believe that the dental profession is and has been for years endeavoring to take that “next step” in preventive medicine. We are doing it. Dr. Watkins has been doing it year after year. The beautiful paper you have just listened to is but an echo of one I heard the essayist read several years ago, and he has reported much advance since that time.

Dr. SIMMS, Spartanburg, S. C., being given the courtesy of the floor, said: Dentistry should be taught from the chair and not alone in the dental schools and public schools of the country. If each and every one of us would never turn a patient loose without endeavoring to teach him some prophylactic hygiene, or some other thing, we would all be better, not only the dentist but humanity itself would be better. There is not a man that is practicing dentistry in the state of North Carolina or in the state of South Carolina who is so dull that he can’t teach even an M. D. something. Ninety-nine per cent. of the M. D.’s will tell you that it is utterly useless to try to save the teeth of a child. I make the broad assertion that it is more important to save a child’s teeth than it is to save a grown person’s teeth. While I make that as-
sertion I do not propose to go into a discussion of it, but it is a self-evident proposition.

Now there is something Dr. Morgan said I want to refer to. He said he extracted those teeth. I want to ask the doctor if it was not possible to have crowned those teeth? He says that a crown should not last over eight or ten years. I deny that proposition. If he will put the crown on with care there is no reason why it should not last, if the roots are in good shape, as long as the other teeth will last.

DR. L. L. DAMERON: I wish to submit just a very few observations. I do not wish to draw out this discussion and make it tedious on account of its length, and I promise to make my remarks short enough so that they will be bearable even though they may not be very interesting.

While these gentlemen were discussing this great subject I recalled some statistics that I remember to have seen a short time ago with reference to the average human life in various countries of the world, and I noticed that the average human life in India was about 25 years. I remember to have read not very long since an article written by a dentist practicing in that country. He said that the great masses of the people of India knew nothing about dental surgery; that they were a nation of filthy mouths and unkept teeth. When I read those statistics and recalled that fact it came home to me at once that there was the source in a large measure of the short lives of the people of India.

I wish to mention one case that came under my observation a short time ago. A man about 40 years of age who had a mouth that had been totally neglected; I do not think there was any evidence of a filling or any attention to the mouth at all in previous years. He had several exposed nerves and several abscesses, and he said that he was hindered from his work every few weeks on account of a new abscess or a case of toothache, and he wanted the trouble remedied. His mouth was put in as good condition as I could put it and the patient
dismissed. He came back about four weeks later and said that he had gotten rid entirely of a case of indigestion that had been troubling him for some time, and without my asking him anything about the facts in the case, said that he had gained 13 pounds in weight in about four weeks.

Now that was nothing extraordinary. Any dentist in this association is doing the very same kind of work, but it just brings it home to us in a concrete form, just to let us know exactly what the results are.

Dr. Whitsett: I want to say a word or two with reference to the practical ways of bringing this subject before the public. A short time ago I read of a certain enterprising firm of dental manufacturers who had inserted their ads in some widely circulated magazines, calling attention to the value of their products as filling materials for teeth and commenting at some length on the beautiful esthetic effects to be obtained by the use of those materials; and a western dental society took the matter up soon after it came out in the magazines and passed a resolution condemning this firm. Their reason was that it was creating in the mind of the public the idea that certain material was to be preferred over all others, and they figured that the result would be that their patients would come to them and say, "Doctor, do you use such and such a preparation?" And if he said "No," they would say, "Why that is the up-to-date thing; you are behind the times." So we see at once the potency of publicity, of bringing a thing before the people in a practical way. There is a passage of Scripture somewhere that says "For the lack of knowledge the people perish;" and some one has said that the laws of nature were so arranged that when we transgressed those laws that the punishment came, and it was not a word and a blow, but it was the blow without a word. That truth impressed me a good deal.

I notice in some of the schools essays have been written by some of the children on the subject of oral hygiene, and if you
will show me a parent that is not interested in his own child and interested in any kind of literary production that he presents, then I will show you a prodigy. The suggestion I wanted to make is this: that if one child in each grade, up say from the fifth or sixth, is selected to read an essay in school, either at commencement or at some other time, and a prize is offered on the best essay on that subject, the parents will take pains to get up the information and help the child out. They will go to hear it when it is read, and the seed of truth will be sown that will bear fruit, and the practical results that we are aiming at could be accomplished in a large measure by such means as that.

Dr. J. M. Parker: I wish to say that I enjoyed Dr. Watkins’ paper immensely. Like Dr. Morgan, I think the word “oral” should be left out; I think the word “prophylaxis” should be left out as much as possible. I know we should attempt to educate the public, not the dentists. They don’t know what oral means. It is only a Latin scholar who knows. “Mouth hygiene” is very plain; everybody in the state knows what hygiene means.

I feel somewhat like Rip Van Winkle. I have not attended the State Dental Society in 14 or 15 years. I have several times attempted since that, but I have been sick. I am very glad to be able to attend this one. I am very happy to feel and see that there is such a general spirit of mouth hygiene among the dentists. I can see the biggest sort of change from what it used to be. I remember 18 years ago a paper on Mouth Hygiene was not even recognized. I can see the time is ripe for the Board of Health and the whole machinery of the state to take up this idea and assist and cooperate with the dentists.

Dr. Eubanks, of South Carolina, being extended the courtesy of the floor, said: I appreciate the courtesy extended to me to make a few remarks. Dr. Watkins has always had a
warm spot in my heart. He has been working along lines that have a deal of interest for the whole profession throughout the United States.

I am a great believer in mouth hygiene. I have observed in the 14 years of my practice the results of failure to recognize mouth hygiene. As to the question of physicians and their attitude towards dentistry, I think it is largely due to the fact that the dentists as a whole fail to get down to fundamentals, and unless you have some beginning point you cannot get together, and there is the trouble. We do not have a common ground upon which to meet.

Dr. Watkins closed the discussion:

Mr. President and Gentlemen: Dr. Morgan's criticism is well taken. I'd like to state that throughout that paper I used the words interchangeably, showing that I recognized the fact that it had been adopted by the Mouth Hygiene Association.

I think the solution of this mouth hygiene problem is, we have got to pay the price for everything we have. We dentists have not done it. We are not able to do it. But we must sacrifice our time and energy, in order to help humanity. We must first interest those in authority, and then give our time in helping them accomplish results. I remember last fall I said to some school teachers that I wished they would do a little work in their schools. They said they would be glad to do it. I said "If you will ask the Winston-Salem Dental Society I assure you the members will be glad to come and make talks to the different classes." They told me they would ask us, but the invitation has not yet come. In order to accomplish anything on this line we have got to make sacrifices.

In regard to the abscess of teeth and pus around the teeth in the gums, I have made a record of about 51 cases of patients who had pus in the mouth—had this condition that we described—who had died rather suddenly with intestinal and
kidney complications. I had a patient who had a case of heart trouble. He went to Dr. Stingle, of Philadelphia. Dr. Stingle "went over" the man carefully, and said "Your heart is affected; it comes directly from the pus in your gums." I believe, gentlemen, we ought to recognize this pus condition, and impress upon our patients the importance of eliminating the pus from their mouths.


THE CASTING METHOD; ITS USES AND ADVANTAGES.

DR. R. W. STEVENS, APEX, N. C.

It is of comparatively little importance to whom credit shall be given for the invention of any particular casting method, but it is of supreme importance to humanity that every votary of the dental profession be placed in possession of all new ideas pertaining to dentistry; for thus they become more proficient and their clientele receive the full value of the ideas they have acquired. The broad and liberal-minded dentist of today recognizes more fully than ever before his responsibility for the health of the mouths and teeth of those under his care.

When we consider the interest now manifested in tooth restoration, possibly no subject in dentistry is claiming a greater share of the profession's attention than the cast method. The porcelain inlay, which appeals to our esthetic taste, is still undergoing the test, and I do not hesitate to say that many disappointments have already been credited to its account. Except when used with discretion and skill, it is—as compared with the gold inlay—able only to look pretty and mark time. The superior strength and durability of the metal inlay will eventually revolutionize dentistry as practiced before its invention.

Now to attempt to give in minute detail—or even to make creditable mention—of the many casting methods or to call your attention to the many applications which can be made of the casting principle would require more time and attention than I have any right to ask of you. So I shall confine myself to the uses and advantages of the casting method in general.

To quote one of the most eminent dentists in the South, who is also famous for his work in this special field, the cast method is "a method of partially or completely restoring lost dental structure with metal, or with metal in combination with other material." This
definition, it seems to me, covers the entire field, both operative and prosthetic.

Some of my first experiments—and very probably yours—were made on the anterior teeth after failure with gold foil and the mallet in broken down incisors and abraded incisal edges. In such work, which requires delicacy and strength, the gold inlay proved to be the master of the situation; and it remains so to the present day.

Following my success with the anterior teeth, I met with equally satisfactory results in making gold inlays for the bicuspids and molars. The methods of anchorage depended upon conditions to be overcome in each particular cavity; and care must always be taken to provide a suitable seat for such inlays as receive the stress of mastication.

In gold crown work the special advantages of the casting process are that it secures perfect occlusion, accurate approximal contact and symmetry of contour. I know of no other method so ideally adapted to securing these three important ends and none so easy of execution.

Let us take some every-day applications and note the advantages. First, let us take an extreme case, say where the greater portion of the crown has to be restored. By the cast method, we may use either of the following porcelain crowns (with either gold or acolite cast base): the vulcanite tooth, the Davis crown, or the Goslee crown. With any of these crowns a broken down tooth can be restored easily, accurately, and efficiently, without irritating the gum margins with disk stones, and worst of all a gold-cap crown to irritate the gums probably as long as it stays in the mouth, leaving at the end of the operation a worried patient and a fatigued operator.

Since employing the casting process, I have inlaid a number of teeth that formerly would have had to be crowned. One case in particular stands out in bold relief in my mind. About two years ago an upper bicuspid was treated and the canal filled preparatory to crowning, but as the patient requested that the crowning be deferred for a while, the tooth was restored as well as possible with cement. The buccal wall and a little less than one-half of the lingual wall were left standing; mesially and distally, caries had progressed to the gum line. When the patient presented herself, as she supposed, for a porcelain crown, the cement was removed as required, the wall margins trued, a pattern made, and a gold inlay was cast and cemented in position. This inlay restores the entire occlusal surface, both approximal surfaces, more than one-half of the lingual wall, and it shows to about the extent of one millimeter along the buccal cusp. If a porcelain crown had been put on the tooth, as originally intended, it would have lasted, presumably, about ten years. The gold cast would probably last as long as the porcelain crown, with this difference, that when the cast filling breaks off, a porcelain crown can then be put on, which will be as satisfactory and
enduring as could have been put on at first, thus giving the patient a good tooth for double the time. Now I ask seriously, has not the patient received better service than would have been rendered twenty years ago?

I have restored a number of similar teeth that would formerly have been crowned, and I feel that the patients are receiving the benefits of a decidedly better service, for, to my mind, crowning should be considered as the very last resort, for reasons that have been already mentioned.

But when crowning is the last resort for the incisors, cuspids, and bicuspids, for incisors let us use a porcelain facing or a regular porcelain crown, by pivoting the root, waxing up, getting correct articulation; then remove, invest, and cast. This will be the strongest, best fitting, and most sanitary of all crowns for this position, and as to esthetics, it is as perfect as can be had. The same thing can be said of the cuspids. In the case of the bicuspids, I find that with a sound root I can pin as in preceding cases and use one of the crowns mentioned before: the Goslee crown, the Davis crown, or the vulcanite tooth.

In bridge work, both fixed and removable, the casting process is very useful; but as in other fields, its use should never be carried to extremes. Still when the process is properly used with skill and judgment, perfect results will be the outcome.

I might discuss the casting of plates as an improvement over some of the former methods of making plates, but I fear this paper is too long already, and I would rather leave this matter to be discussed by those who follow me.

Casting is in its infancy as compared with other systems in dental surgery. It covers such a large field, and we have so much to learn about it, so much to systematize and standardize that it will take time and the concerted efforts of our foremost scientific minds to give us superlative excellence in apparatus and materials, to improve the methods and perfect the technique.

In the meantime, it behooves each of us to lend any assistance in our power to help and encourage those who are working unselfishly for the interests of mankind; for the casting method is a very valuable addition to dental surgery, not so much, however, from the standpoint of the dentist as that of the public. Formerly we could and did conserve human teeth, but with the casting method we can in many instances render decidedly better services: for with the many systems on the market we can do efficient work all the way from the pinhead cavity to the largest plate or bridge—even in complicated cases it proves a decided advantage to both patient and operator.

Many operators, however, have become so enthusiastic over the system as to announce the relegation of their gold pluggers to the scrap heap, and are inlaying everything. To these gentlemen, if there
are any of them present, I would express my deep conviction that these instruments still have their place in our profession, and that many teeth can be better filled in the old way.

The influence the casting method has had upon both operative and prosthetic dentistry can hardly be estimated. Cavities in inaccessible teeth are now perfectly filled, for it is no longer necessary to adjust the rubber dam. Many such teeth were formerly extracted or provided with shell crowns, a more or less imperfect, and therefore unclean substitute. The long and tedious filling operations, so trying to both patient and operator, are a thing of the past, for the adoption of the gold inlay makes the operation a pleasure.

While this paper is only a general summary, I trust that it will be instrumental in bringing out further contributions on the subject of dental restoration by artificial mechanical means, for notwithstanding the many advances already made in the dental profession, our highest ideals and ambitions are still unattained.

Discussion of Dr. Stevens' paper was opened by Dr. J. W. Stanly:

The paper just read is something that brings to our mind great changes from the old procedure of restoring broken down tooth structure. No doubt all of us employ that method with the cast inlay of the day. There are some points, though, that the doctor did not touch on and that, I think, are very good with the casting machine; that is the bridge work. Six years ago I gave a clinic on casting directly on porcelain, which brought out quite a good deal of criticism, as a great many disagreed with me, saying that porcelain would certainly crack if you throw hot gold on it; but I had proven without a shadow of a doubt that it did not crack any more than a soldered facing, and not as much so. I never back up a tooth for a bridge or single Richmond crown. I can make prettier and more sanitary work by casting directly on the porcelain, and I have had less failures than I ever had in soldering. In fact I have never had but two facings to come off a bridge or crown that I cast. Now, no doubt the question in the minds of a great many of you is this: instead of coming back to me they went to the other fellow. Maybe they did, some of them. I have had the opportunity to see the work that I have put in my patients' mouths that came
back to me, and it has stood absolutely better, and looks better than the soldered facing.

Another point I'd like to bring out is the discoloration of the facing. In soldering up facing you get a different color from the color you started with lots oftener than you will with a cast backing. There is some discoloration, I admit, but there is not nearly so much as there is in a backed up soldered facing.

On motion the name of Dr. M. J. Connell was dropped from the roll.

Resignation of Dr. J. A. White was received and accepted and his name placed on the Honorary roll.

Resignation of Dr. S. M. Long, of Georgia, was received and accepted.

The following applications for membership were received and duly elected:

  George J. Evans, Asheville.
  W. L. Kibler, Lexington.

Dr. J. S. Spurgeon: At the last meeting of this association a committee was appointed to write an amendment to our constitution in order that we could conform to the requirements of the National Association. Dr. Turner was appointed on that committee; since his death I have been asked to do this work. I have the following to submit:

Resolved, That the North Carolina Dental Society become a component of the National Dental Association.

Resolved, That the following amendment to the By-Laws be adopted:

I. That any member who shall fail for one year to pay his annual dues shall after 1915 be dropped from the roll of members; *Provided*, that due notice shall be given to the member by the Treasurer.

II. That any member who has been suspended for non-payment of dues shall be restored only when his dues have been paid.

It is further resolved that all members who have been excused from dues on account of having held membership in this Society for
twenty-five consecutive years, shall be required to pay $1.00 per year, this being the amount that must be paid to the National Association.

J. S. SPURGEON,
For Committee.

A State Society who resolves to become a component part of the National Dental Society, must pay into the treasury of the National Association one dollar for each member. In that case each member of this Society who has paid a dollar will receive a bulletin, issued by the National Dental Association—The National Dental Journal—and some other things. In other words it will keep you in touch with the National Dental Association. We cannot arrange it for this year because this money should have been sent in before now, but if we pay now, that will put it in good shape for next year.

Dr. Everett: I'd like to ask if in adopting the resolutions we will have to pay a dollar for each member.

Dr. Spurgeon: We will not have to pay a dollar for those who have not paid their dues. We will have to pay a dollar for every man who has paid up to 1915.

Dr. Sinclair moved the amendment be adopted. Motion carried.

(The passage of this amendment which had lain over for a year makes the North Carolina Society a component member of the National Dental Association.)

Society adjourned for dinner.
EVENING SESSION.

THURSDAY AFTERNOON, June 25th.

Meeting called to order by the President.

Paper—"Porcelain Art in the Restoration of Broken Down Tooth Tissues," by Dr. J. A. McClung, of Winston-Salem.

PORCELAIN ART IN THE RESTORATION OF BROKEN DOWN TOOTH TISSUES.

DR. J. A. MCCLUNG, WINSTON-SALEM, N. C.

In compliance with the request of the chairman of the Porcelain Committee to contribute a paper at this meeting, I shall endeavor to present for your approval a paper entitled "Porcelain Art in the Restoration of Broken Down Tooth Tissues."

Doubtless many members of this Society on seeing "Porcelain" selected as a subject were not over-enthusiastic about that part of the program, and some who are present to hear the paper read and discussed are not intensely interested in the procedure. Is it because there exists the lack of art and undeveloped skill among many members of our worthy profession in mastering its technique?

By the term "porcelain" is meant not the well known process by which porcelain teeth bought from the manufacturers are mounted on metal or vulcanite base, but the actual manipulative or technical skill of the dentist in the working of the material porcelain, from the mixing of body and colors to the final baking. It involves the making of inlays, partial crowns, entire crowns and bridges.

Porcelain art as here defined is an outgrowth largely of the common adoption during later and recent years of modern methods of crowns and bridgework. At first its possibilities not being clearly seen, its application was confined to a limited field, its sphere of usefulness widening as the process became better understood, and improvements were brought out. As stated in Doctor Evans' work on Porcelain: "Recent methods in the manipulation of porcelain leave little to be desired in special operations, so far as artistic merit and real value are concerned, nor can the permanency of these operations be doubted. They are to be no longer classed as experimental. They have been accepted as having a legitimate place in dental prosthesis."

This is by no means intended to suggest that the processes involved in porcelain art have been finally perfected. Improvements are very
likely to occur, and may be expected as more and more attention is 
attracted to this desirable field of work.

In endeavoring to present this subject I shall deal first with the 
composition, properties and methods of manipulating the porcelain 
compounds at present in use for this line of work. The require-
ments for this class of work have developed a demand for a special 
class of porcelain bodies or compounds, composed of ingredients 
similar to those of which porcelain teeth are made and to those used 
for continuous gum work, but differing from them in that they have 
lower fusing points, are very finely ground and arranged in various 
colors.

In order that we may thoroughly understand the properties of por-
celain, let us consider the ingredients of which it is composed, which 
may be classified into three substances:

First. The basal ingredients, or those which form the fundamental 
mass of porcelain, they are silex, kaolin and feldspar, which are 
very refractory. Silex and kaolin, which when heated alone will 
undergo intense heat with practically no change; and feldspar, a less 
refractory substance, which when heated to a high degree under-
goes liquification.

Second. The fluxes, the fusible substances, which fuse at a lower 
temperature and increase the fusibility of the more refractory sub-
stances.

Third. The pigments which are metals or their oxids and are 
ingredients used to produce various colors.

Silex is the oxide of silicon, a white crystalline substance, moder-
ately hard, as stated above is very refractory and is an infusible 
substance, insoluble in all acids except hydrofluoric, but slightly 
soluble in caustic alkalies. Silex adds strength and firmness to the 
porcelain and gives it a more translucent appearance, forming about 
13.5 per cent of the basal mass.

Kaolin is commonly spoken of as disintegrated feldspar, "Which 
is a white opaque refractory clay." This compound is the silicate 
of aluminum, and is composed of aluminum oxide, silicon oxide and 
water. Kaolin is a very refractory clay when heated alone, but 
readily unites with feldspar when mixed with it. When added to 
porcelain it gives stability of form and permits unfused porcelain to 
be molded and carved. Kaolin forms about 4.5 per cent of porcelain.

Feldspar is the double silicate of aluminum oxid and silicon oxid, 
and is very translucent and varies in color. The chemical difference 
between feldspar and kaolin is that the former contains potassium 
oxid which the latter does not, and the latter contains water of 
materialization which the former does not. Feldspar composes about 
82 per cent of the basal mass.

Fluxes are substances containing sodium borate, sodium carbonate, 
potassium carbonate or glass, "Which contains the oxides of potas-
sium or sodium." The more refractory ingredients, the flux and frit,
are ground together in the preparation of the porcelain for the market. When fused together with feldspar an intense pigment is formed. The chemical change which takes place in the fusing forms an indefinite compound from which none of the original ingredients can be removed except by some process which involves the destruction of other ingredients.

**Pigments.** The pigments commonly used in the manufacture of dental porcelain are precipitated gold, platinum, purple of Cassius, "The oxide of gold and tin," the oxides of gold, titanium, manganese, cobalt, iron, uranium and silver. The colors produced by the use of these pigments in varying proportions are hues of red, yellow, blue, green, brown and gray.

The basal ingredients of dental porcelain bodies are used in the formulae for low fusing porcelain bodies, but the fusibility is regulated by the proportion of flux added to the formulae. The process of fusing and grinding is continued until the ingredients are thoroughly mixed. Porcelain bodies may contain a small proportion of starch in their formulae, which imparts additional stability of form by agglutinating the particles of the mass during the process of molding and carving. This is not, however, a component ingredient of the porcelain, for the heat required to fuse the porcelain will volatilize the starch.

While all porcelain bodies have properties in common, there are, however, certain properties which characterize each manufacturer's product. It is important that these characteristics should be thoroughly understood in order to obtain the best results. With all porcelain the general principles of manipulation are the same.

We have two classes of porcelain, which are termed high fusing and low fusing porcelain. The distinction has been accepted to mean that a high fusing porcelain body is one which fuses above the melting point of pure gold, while a low fusing porcelain body is one which fuses below the melting point of pure gold. While this seems to meet all practical requirements it is unscientific and its only value is to make a convenient distinction between the two classes of porcelain. Porcelain has no definite fusing point. Any enamel body or foundation body of high fusing porcelain can be fused on pure gold, provided enough time is given. Some low fusing porcelain will fuse above the melting point of pure gold, provided the required heat to fuse pure gold is obtained rapidly.

Since porcelain is an indefinite compound and has no definite fusing point, according to Doctor Byram's work on "Porcelain," the scientific distinction between these two classes of porcelain may be expressed as follows: "High fusing porcelain bodies require more than five minutes to fuse, while low fusing porcelain bodies require less than five minutes to fuse at a temperature of 2,000 degrees F. He further states that it is impossible to fuse any of the high fusing porcelain bodies at the temperature of 2,000 degrees F. in five min-
utes, and it is also impossible to keep any of the low fusing porcelain bodies in contact with a heat of 2,000 degrees F. for five minutes without becoming overfused." The process of fusing porcelain is largely a chemical reaction, brought about by the various ingredients combining to form multiple silicates of aluminum, potassium or sodium with the liberation of gases.

The method of fusing porcelain at its maximum temperature for a short time is to be condemned, because it makes the porcelain more brittle and causes the formation of minute bubbles throughout the entire mass, for the intense heat required to fuse porcelain in a short time may cause the generation of gas faster than it can escape. Hence the porcelain mass will not be homogeneous in texture, its characteristic color will be lost, and the surface gloss and finish will be affected.

Overfusing and underfusing will affect the given shade, surface glaze, density, strength and form of any porcelain.

Shrinkage. The shrinkage of porcelain according to the opinion of different authors is found to vary considerably. That of high fusing porcelain body will be found to vary from 15 to 30 per cent; that of low fusing body from 20 to 40 per cent. This, however, is dependent largely upon the consistency to which it is mixed and the density to which it is condensed. Thin mixes show more shrinkage than those of a putty like consistency. The greatest shrinkage is found to occur in the first baking. I find it a good plan to carve a small groove through the body mass before the first baking, as this will partially eliminate the shrinkage away from the margin and toward the center or greater body mass, which otherwise would occur.

Requirements in Baking. All porcelain bodies require at least three bakings. In the first bake and likewise in all subsequent bakings the mass should be dried very slowly, so that the moisture will not evaporate as steam. Unless such precautions are taken sections of the body are liable to be loosened or blown off, thus impairing the form of the piece. After thoroughly condensing and drying with white blotting paper it may be placed just to one side of the muffle door, then directly in front of the door and allowed to remain there until it looks dry and powder like. Then it may be placed inside the muffle. When the body has assumed a red heat it may be placed in the center of the muffle and allowed to remain there until the maximum shrinkage of the body has taken place, and the particles of the mass have become solidly united. This will have occurred, leaving the surface rough but slightly glossy. Then remove from the center of the muffle and allow to cool gradually. The piece should now be placed in the cavity and seated, and the matrix reburnished. The second bake is accomplished in the same way, always using the same care in drying and heating. But the temperature for this may be raised slightly. Care, however, must be taken not to raise the temperature to the fusing point.
The Third or Final Bake. After all defects in contour have been built up the piece is now ready for the final bake. The piece is gradually heated until the actual fusing point is reached, and allowed to remain at this point for about fifteen seconds, until the porcelain assumes a smooth glazed appearance. The current to the furnace should immediately be shut off and the piece allowed to cool in the muffle, which will temper the porcelain.

Porcelain inlays, like other filling materials, are limited to certain classes of cavities. The modern porcelain inlay is an ideal restoration in cavities of the anterior teeth where the metallic filling would be objectionable for esthetic reasons. The synthetic cements may be used to advantage in many such cavities, but the porcelain inlay is far superior in most cases, both from the esthetic and durability standpoint. There are, however, certain requirements in a porcelain inlay as in any other filling. It should accurately conform to the shape of the cavity and fit with accuracy, both within the cavity and at all portions of the margin, and restore the tooth's natural contour. Too much stress cannot be placed upon an accurate matrix of the cavity. If the matrix does not fit the cavity with absolute accuracy, the inlay will not fit, and result will be failure.

The technique of burnishing the matrix requires a great deal of skill, and can only be mastered by practice. There are certain requirements in the preparation of different classes of cavities for porcelain inlays.

This would be a long discussion, so I shall refer you to the able work of the late John Q. Byram, D.D.S., entitled the "Principles and Practice of Filling Teeth with Porcelain."

The discussion of Dr. McClung's paper was opened by Dr. J. H. Wheeler:

Dr. McClung has given us a wonderfully comprehensive paper, one that is well worth our time to consider, and yet I presume that Dr. McClung realizes, as I do, that the question of porcelain is not a very popular one. I well remember the time when porcelain was the "go," and when we were all rushing to buy porcelain and placing porcelain fillings indiscriminately. It only took a very few years for the reaction to come, and then I found some of my friends relegating their porcelain furnaces to the scrap heap. But as good a thing as porcelain can't be downed. It has taken a number of years to recognize the value and recognize the limitations of porcelain, and its limitations are numerous. Its value is inestimable.
and I should feel woefully afflicted if I were forced to give up my porcelain furnace, because there are some things that my furnace will do that I can’t get done otherwise. I can get results in my work by the use of my furnace that I could not get otherwise.

Just at this point there comes to me an idea that I had not thought of in preparing this little discussion; that is that I have a case right now in which a lateral was removed under bad conditions, and try as I might, there has been a great deal of absorption and a great ugly V-shaped space in the gums. Now if you take my porcelain working apparatus and my limited porcelain working ability away from me, and this woman should be dependent upon me, she should have to carry this ugly space. As it is I can take a long tooth grind it to fit that space, bake gum enamel on, and I will have a very sightly piece of work. I remember once, before I had a furnace, trying to get two factories to supply me a tooth made that way and I could not get it.

If you will observe, as you have observed, consciously or unconsciously, a great many mouths, you will find that there is a tendency to deposit in the teeth and around the teeth a little black stain. Don’t ever put a porcelain inlay in a mouth that has that tendency toward that black stain because it will certainly accumulate in the cement space that is around every inlay, and you will get that little stain and have an unsightly job. But if you will take a mouth that does not have that stain the result will be a piece of work that will be a great satisfaction.

I would caution you, if you need porcelain, to watch porcelain for its limitations, to use it and you will find it one of your best friends. I am heartily in sympathy with porcelain and I would deplore greatly if I were forced to give it up.

Dr. A. H. Fleming: I used to work porcelain, used to do a lot of things that I don’t do now. I am one of a peculiar sort. I always start a thing and run it to the limit
and I ran porcelain to where I thought it would not go. I agree with Dr. Wheeler that it has a limitation and that limitation is very limited. Undoubtedly the dream of esthetics in dentistry is a synthetic cement or a cement that will set different from the cement that we have today, one that will set in moisture. We have not gotten it yet. Some years ago I believe I was one of the first men to work porcelain in this section. After that came Ashers.' I believe that Ashers' artificial enamel is the biggest fraud that has ever been put upon the dental profession. What it is now, after it has been remodeled and worked over I am not in a position to say because I have never had the faith to tackle it again. But in reference to what Dr. Wheeler said about casting the fillings in blank, some of you will probably remember that I had a practical case in Charlotte that I showed, centrals and lateral incisors that were gold inlays cast in blank and filled with Ashers' enamel. Those fillings today are doing all right with the exception of that discoloration, that little stain; and I want to know if there is any man in the association that knows what that little stain is, what produces it, what will correct it. This patient that I showed in Charlotte has been constantly under my treatment and I have tried everything that I know and have talked to a great many men that know more than I ever hope to know about this little stain, and nobody has ever been able to give me a remedy. I can remove it but it will come right back. There is no doubt in the world about porcelain being the prettiest filling but it has a limited sphere in the profession. You can build up incisors on the edges of the anterior teeth, but from my experience, I believe I had rather in a great many cases—I won't say in most cases—sacrifice a little beauty for permanency; and there is a very small per cent. of the patients who wear cast crowns and gold inlays that come back.

Now as to gold fillings. Dr. Wheeler, I understand, puts in gold fillings. They did teach that at school when I was a boy, but I am sorry I don't know anything about gold
fillings. But the inlays will stand, and it has been my experience that whenever you put a porcelain inlay on a corner you have got a big question mark.

Dr. Everitt: The prettiest porcelain work that I ever did in my life or ever expect to do was done 35 years ago. Six months ago I saw that patient and that porcelain work was just as pretty as the day I did it. We had no furnaces in those days, either. Now you ask how I did it. I put in four fillings for this lady, two centrals, labial surface, and two cuspids. I was fortunate in having some of the old white teeth, in the days when they made honest teeth as hard as flint. After preparing those cavities as nicely as I could, I selected those artificial teeth that were as near the exact shade of the natural as I could get them; I ground those down and succeeded, after a great deal of hard work, in fitting them accurately to those cavities; I cemented them in. They are there today and I have never changed them. In those days we had honest cement. Dr. J. H. Crawford, when he lost his teeth several years ago, had a cement filling made of the same formula, that was as good when he lost his teeth after 40 years' wear as the day it was put in. Those fillings are in this lady's mouth now. She lives in Raleigh. There are no black marks around them as Dr. Wheeler has described, and I am fully in accord with him when he stated that when you find that deposit you had better let porcelain alone. It makes an ugly mouth.

I am a great advocate of porcelain in a limited sphere, but I do not believe in building up the corners where they are broken off.

Dr. Chisholm, of South Carolina, being called upon, said:

Porcelain in my mind certainly has a very important place in dentistry. How any practitioner can do without it in his office I will never be able to understand. From an esthetic standpoint I don't think there is any filling that will take its
place, and from a standpoint of durability I would criticise any man that says gold is superior to porcelain in many instances.

I think all porcelain workers will agree that the highest fusing porcelain is certainly the strongest. One can get almost any shade or any color that he wants. There are a great many advantages in using the high fusing porcelain filling as a base. First, you have the strength; second, you have the color; and in many instances where the tooth itself has one to two colors you can take your high porcelain and fuse your filling to the size and shape that you want, take it out of your matrix, put it into the cavity and use a low fusing porcelain of glass, and cover your filling so perfectly that you can't distinguish it from the tooth structure itself.

One great thing about porcelain that I have found is simply this: We spoke of the stain between the porcelain filling and the tooth itself. I have a number of cases of my own knowledge. With some of the porcelain fillings the line of demarcation between the tooth structure and the filling is very noticeable; others are not. There are two things that I attribute this to; first an imperfect fit, and second the solidity of the cement. Principally though, I think it is due to the imperfect fit of the porcelain filling.

Another thing that I have heard a good number of porcelain men say is that porcelain fillings and porcelain bridges are not satisfactory for the simple reason that they flake off. In my few years' experience with porcelain I have found that the majority of porcelain workers start by biscuiting their first bake and continuing to biscuit it until the last bake when they fuse. Sometime ago I put a pot of water on to boil and before the water came to a boiling point all through I noticed around the edges that there were little bubbles where the water was hottest and beginning to boil, before it began to percolate all through. And so it is with porcelain workers; in many instances the outside of the porcelain is fused and the inside is simply biscuited. It is just like a man hammer-
ing a gold filling in, unless he works each molecule of gold into it, it certainly will tear off. I think the majority of porcelain workers either bake too rapidly or do not bake thoroughly enough.

Dr. Stanly introduced the following resolution:

RESOLUTION BY DR. STANLY.

Resolved, That the President of the North Carolina Dental Society appoint a committee of three (3) to confer with Doctor Rankin, Secretary to the State Board of Health, to co-operate with the North Carolina Dental Society to instruct teachers and pupils of the State on the necessity of mouth hygiene with a view of better health.

The resolution was adopted and the president announced the following committee to co-operate with the State Board of Health: Dr. J. W. Stanly (Chairman), Dr. J. C. Watkins, Dr. E. B. Howle.

Dr. Everitt introduced the following resolution which was adopted:

Resolved, That the committee of three (3) be appointed to consider and recommend a plan of reorganization of the North Carolina Dental Society so as to bring it up to date.

The President appointed on this committee Drs. J. Martin Fleming, F. L. Hunt and J. S. Spurgeon.

Society then adjourned.
C. D. Baird and J. A. Young were unanimously elected to membership in the Society.

A letter from Mr. W. A. Smith, a resident of Hendersonville, was read, inviting the members to visit Laurel Park at any time with free street car transportation.

The secretary was ordered to acknowledge the invitation with the thanks of the Society.

On motion of Dr. J. M. Fleming a sum not to exceed $25.00 was ordered set aside for the use of the Committee on Oral Hygiene to further their work.

Paper—"Some Pathological Lesions with which every Dentist Should be Familiar," Dr. S. W. Foster, Atlanta, Ga.:

PATHOLOGICAL CONDITIONS WITH WHICH EVERY DENTIST SHOULD BE FAMILIAR.

S. W. Foster, D.D.S., Atlanta, Ga.

The subject selected embraces a field that were I to attempt to fully cover, would not only presume on the intelligence of the gentlemen present, but would consume more time than is allotted on this occasion. The subject matter which I shall present is not done so because of any feeling on my part that you may not be as familiar with it as the essayist, but a review occasionally of the things which affect the welfare of the human family brings before us a sense of our deep responsibility.

As you recognize, there are but few infectious diseases of the human organism that may not become manifest in lesions of the mouth, and since inoculation is easily made through abrasions of the mucous membrane or skin, it is imperative that the dentist should consider these conditions, not only from the standpoint for the welfare of the patient, but from himself also. I mention this for the reason that constant association with conditions often creates a carelessness and indifference to the extent that we fail to safeguard our
best interests. I shall confine my remarks principally and briefly to certain pathological lesions of the mouth associated with specific infectious diseases.

I will speak first with special reference to Syphilis. There is a large per cent of our citizenship who are affected with syphilis in some of its various forms, and since any one or all stages of this loathsome disease is manifest in the mouth, the dentist must necessarily come in contact with it often. Yet it is a fact that the average case passes the operator unobserved very much more than otherwise. As a matter of precaution all lesions of the mouth should be looked on with suspicion, but all lesions by no means are syphilitic or infectious. It is estimated that about ten per cent of syphilitic infections are extra genital. Of this number it is estimated that about thirty-five per cent of initial sores appear on the fingers of dentists and surgeons, and sixty-five per cent on the lips and within the buccal or oral cavity. It is conceded that a majority of extra genital cases are the result of innocent contact with the spirochaeta palida.

Chancre is usually easily diagnosed on account of its well defined margins and shining base, though it often resembles epithelioma. Particularly is this true when occurring along the vermilion border of the lip. When found within the mouth, chancre is usually on the upper surface of the tongue while cancer is found on the border or underneath. Tubercular ulcers may be often mistaken for syphilitic gumma, however there is usually sufficient distinction as the tubercular ulcer has an irregular margin and more often its surface is covered with an opaque scum.

The character of syphilitic lesions, which is of greatest importance to the dentist, are the mucous patches developed, which form in the secondary stage. This stage is manifest in the mouth and characterized by a sore throat and pink or pinkish-brown spots on the mucous membrane of the cheeks, lips and soft palate, sometimes coalescing forming a general catarrh, particularly of the soft palate, but which most usually forms in small ulcerated surface patches. The exudation from these patches is very infectious, and the saliva coming in contact with the most minute break in the skin on the finger or clinging to an instrument can easily inoculate. I have observed three cases of infection in my college clinic during the past eighteen years, which I am sure were innocently contracted while attending patients thus affected. However, all lesions resembling mucous patches are not syphilitic. Lichen planus, a nervous affection, when manifest in the mouth, is characterized by a somewhat ridgy-tuberculated inflammatory condition found on the inner border of the lips and cheeks opposite the interdental spaces and on the tongue or soft palate, and may be easily mistaken for secondary syphilis; also aphthosa in multiple form, or simple catarrhal stomatitis.

The tertiary stage is less infectious, yet it may be regarded carefully. When the bones are involved, it is difficult to distinguish between tubercular, mercurial or syphilitic necrosis, except by a cor-
rect history of the case. Sclerosis of the tongue rarely ever occurs except in tertiary syphilis, and may be considered as irrefutable clinical evidence. Leucoplakia is frequently associated with syphilis, but not necessarily, as it is often found in the mouths of tobacco chewers and others who use stimulants, and the gumma is very much like certain forms of epithelioma, but is never found except on the upper border of the tongue and usually in conjunction with sclerosis.

With these various forms of inflammatory and infectious lesions having a more or less resemblance of syphilis, as previously stated, every inflammatory condition of the mouth should be regarded with caution on the part of the dentist to say the least. For the information of some who may not be familiar with its history, will state that so far as the records show, syphilis was carried from the West Indies and planted in Europe by the sailors who came with Columbus on his voyage for a new world in 1492, and from there spread to the four corners of the earth, Ireland probably being the most seriously of the early infected countries. It was not until 1905 that the specific germ known as spirochaeta palida was isolated. The Wasserman test is the most nearly sure test.

The spirochaeta palida is only active while in the moist stage. It is inactive after from six to twenty-four hours drying. As a preventive, experiments show that an ointment of one part of calomel to two of lanolin applied within an hour after exposure will prevent infection.

Tuberculosis is another pathological condition which is most hazardous to the dentist. While active tubercular ulcers are not constant within the mouth, tubercular bacilla are invariably present in the mouths of tubercular patients. This germ, unlike the spirochaeta palida, is infectious under both wet and dry conditions. Indeed, tubercular infection is most active after drying out.

The question is often asked, is there danger in working for a tubercular patient? The danger in that respect is virtually nil if ordinary caution is observed. Tubercular bacilli cling to a moist surface and are not thrown off through the ordinary process of respiration, but must be forced by coughing, sneezing or being brushed off. While these germs most easily spread after drying, fortunately a few hours exposure to direct sunlight will destroy them, but they will remain active indefinitely when left in an unsanitary corner of your office. This being true, too great care cannot be exercised in disposing of used dam, absorbents, napkins, etc., to say nothing of careful sterilization of instruments.

Gonorrheal stomatitis, while exceedingly infectious, is an acute inflammatory condition of the mucous membrane of the cheeks, gums, soft palate and tonsils, which is usually sufficiently distinct as not to be confused with other pathological lesions of the mouth when once observed. It is characterized by an inflamed surface and acute burn-
ing pain on the cheeks and gums. The mouth has a parched, dry feeling, followed by purulent offensive mucous discharge. The soft palate and tonsils are usually involved. In the progressive cases, a pseudo membrane forms, which when removed, leaves a scarlet bleeding surface. This stage may be easily mistaken for Vincent's angina. The differential diagnosis, however, is easy inasmuch as diphtheria does not involve the mucosa of cheeks and gums.

I will take the liberty of referring to one or two other conditions locally indicated in the mouth in which the general metabolism is disturbed and serious pathological conditions associated. In diabetes, mellitus, the dentist may often observe a peculiar pinkish gingival margin as one of the first symptoms. Every dentist should not only be able to, but should often make urinary analyses. Test for sugar, as found in diabetes, is most easily made by Fehling's solution: Take equal parts of A and B solutions and boil them. Add drop by drop of urine, reboil, and if sugar is present, a reddish or red-brown color will appear. Indican, often to the extent that pharenchomatous nephritis may be produced, is a product of toxine poison, and invariably associated with pyorrhea and suppurating sinuses. Test for indican, known as chloroform test: Place small quantity of urine in test tube, approximately same amount of HCL. Add one drop of HNO-3. Add small quantity of chloroform, shake and let stand a few minutes. Chloroform will settle to bottom an amber color if there is a presence of indican.

Dentists have but little need to examine for albumin, but simple and quick tests may be made with either nitric acid or heat. Nitric acid test: Place small quantity HNO-3 in test tube and let urine trickle down. If white, cloudy rings form at union, indicates albumin. Heat Test: Fill tube two-thirds full or urine, heat top, and if cloudy, either phosphates or albumin present. Apply nitric acid, if phosphates, it will clear; if albumin, it will remain cloudy.

I believe if dentists gave more attention to diagnosis, particularly of the above subjects, they would be able to accomplish more scientifically, would be of greater benefit to humanity, and occupy an advanced position professionally.

The discussion was opened by Dr. A. H. Fleming.

Mr. President: I am sorry that I have been asked to open the discussion on such a valuable paper, because I feel my utter inability to discuss a paper of that character. Still I realize its vast importance in dentistry. The dentist is thrown in contact with more infectious diseases than anybody else in the world, and if we are not careful to diagnose these cases properly it only shows what a great risk the dentist
runs in the pursuit of his practice. I had a case in my office sometime ago, and I am frank to say that I did not know what it was, but it looked curious to me. I got a physician to come in and help me look, and I found that it was a case of syphilis. It was a case that I had treated some five or six times for Riggs Disease, and I had treated and treated without any response at all. I called in a physician and he confirmed the diagnosis that I had made.

Life is a fight between virulence and vitality, and we have certain peculiar diseases that are peculiar to certain classes of people. For instance, syphilis is an Ethiopian disease, while tuberculosis is a Caucasian disease. You can take the average negro and infect him with syphilis, give him molasses, fat meat, buttermilk, turn him loose, and he will get well; the average white man will die. The minute tuberculosis hits a negro he is gone, and it is possible for a white man to get well under those conditions.

Those things come into the practice of every dentist, and the dentist should be skilled not only in the treatment of the conditions which arise from such infections, but he should be more thoroughly skilled in the diagnosis of those conditions.

We have a great move on foot, Mouth Hygiene, but when it comes down to dental hygiene I have my doubts about whether there was ever an aseptic dental operation performed. We can take all the precautions we want to and we can do everything that we can, we can use all the antiseptic and preventive measures that are possible, but I do not believe it is possible to perform an operation in a dental office under perfectly clean conditions. A dentist may go in and sterilize his patient's mouth, as he might call it, with antiseptics which do not antisepticize; he may wash his hands with soaps that do not clean; he may put on white coats and caps and gowns that are possibly infected from handling in the laundries or from the time the nurse took them out from the sterilizer. But it is absolutely impossible to perform a sterile dental operation.
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We should continue to do all we can along the line of sterilization. But we will get the greater results from the prevention of infection than from sterilizing.

Not only in dentistry but in every infectious condition that confronts us we are prone to put it aside, keep it in the background rather than to teach the student or to teach the boy or the girl preventative things rather than the abstinence from those things. The quicker the world turns to educating people along certain preventive lines the quicker we are going to accomplish the thing we all work for—freedom from infection.

Dr. Spurgeon: I did not expect to say anything on this subject, but the importance of the subject compels me to rise. I am specially pleased with the matter Dr. Foster put before us on the subject of diagnosis. I fully agree with him that very often we do not see the condition. We make an examination and see one thing, but we do not see the whole condition; perhaps sometimes we do not even look at the health of the mucous membrane.

I realize in the main that what Dr. Fleming says is true, yet I do not feel like letting that go without a statement. Perhaps it is true that theoretically we cannot perform a perfectly sterile operation in the mouth; yet older men than I am will bear me out that when we use the precautions that are now at hand, use the information that we have, we may do any operation in the mouth without danger of infection either to the operator or to the patient. How often do you recognize these conditions that we have just been speaking of, especially tuberculosis? I am very frequently asked, "Aren't you afraid to operate for that patient?" "Aren't you afraid she has tuberculosis?" Why not in the least. With the knowledge that we have of the situation and the use of that knowledge, I believe that we can feel assured that there will be no infection.

Dr. Wheeler: I do not feel competent to discuss this paper Dr. Foster has given us, but I do want to say that I con-
sider it a very valuable addition to the literature of the North Carolina Dental Society and that I shall take it and study it after it comes out in printed form. The valuable suggestions that he has given us in regard to diagnosis will be of inestimable value to us because he has given us in a concrete form what would have taken a great deal of study for any individual to have worked out.

I believe that the dentist stands in greater peril of infection than any other professional man. I do not believe the surgeon runs the risk of infection that the dentist does, because of the fact that the surgeon when he is operating has conditions in the superlative degree; but we men who are operating in our offices, as Dr. Fleming has said, are working under conditions that cannot be ideal. Furthermore, if I am not mistaken, we have the best opportunity to detect incipient diseases of any profession. We have an opportunity that exceeds the opportunity of the general practitioner of medicine, in that we see conditions that the patient knows nothing about. The dentist has such a fine opportunity of detecting the infection of the tonsils. We have the best opportunity for examining for adenoids. It does seem to me that if any man ought to be equipped with differential diagnosis it is the dentist.

Dr. Foster closes: I stated that I did not bring anything to you with which you may not be just as familiar as I myself am, probably more so, but I felt that in view of the investigations which are being made by the members of the Dental profession and the Medical profession at the present time that it would not be amiss for us to discuss the diagnostic principles involved in these infectious diseases of the mouth. It has been a source of embarrassment to me and no doubt to the dental profession as a whole that the profession has not been prudent in its scope of observation in past years. I feel that the teaching forces in our colleges have probably been responsible for many of these conditions. Dentists seem to think or have an idea, that their field of observation embraces
the tooth per se. This is because, I believe, that the dental profession is not educated, as was suggested by Dr. Sims this morning.

When we consider, as Dr. Morgan said, the percentage of diseases which are manifest in the oral cavity, why should we fail to make a close study of everything within the mouth? All of these diseases of which I spoke and many others are readily observed in the mouth, and every dentist could do more good, he could be both a teacher and a leader if he were to make such observations as have been suggested.

Paper—“Dental Jurisprudence,” by Dr. T. O. Heatwole, Baltimore, Md.

DENTAL JURISPRUDENCE.

DR. T. O. HEATWOLE, BALTIMORE, MD.

Jurisprudence is defined by lexicographers as being “the philosophy of positive law and its administration; . . . the science of rights in accordance with positive law.”

In an effort, therefore, to discuss Dental Jurisprudence, it shall be our aim to apply the latter phase of this definition and deal with the rights of patient and dentist as they affect each other in their legal aspects.

It should not be regarded as being remarkable that only within recent years we have heard of dental jurisprudence. Our profession is one of comparative recent origin, and laws bearing directly on this subject have only been spread upon the statute books of the various States as time has shown their need and usefulness. The period in our history is fast approaching, however, when every practitioner will want to be more or less familiar with the legal rights and requirements of his calling, if for no other reason than to guard himself against possible annoying and harmful experiences growing out of litigation over supposed injury to the person or infringement on the rights of his patient.

It is a well recognized fact that professional men of today are much more frequently haled into court than was the case in former times, and, unfortunately, not a few cases have resulted in the awardment of damages to the patient on one ground or another, so that at this time the public mind is alert to the possibilities of securing judgment against physician, surgeon, or dentist for presumed infractions of the law. Such a condition has undoubtedly been largely brought about by the charlatan practitioner and imposter, whose
efforts to commercialize the profession have resulted in discrediting the honest work of men of science in the eyes of the general public. In the opinion of certain classes, organized under various "ologies," "isms" and "ists," as well as special patients of peculiar tendencies, there exists an impression that much of the work being done along surgical lines at the present day is experimental in character, and is executed with little thought of possible resultant discomfort to the patient.

Because of the rapidly broadening influences of our field and the ever widening scope of our possibilities, it has been impossible heretofore to give a stable, legal definition for dentistry, and just at this period in the development of the profession it would appear to be even less possible of so defining it. Once it becomes amenable to being legally defined, I predict that a new name and title will have been found and adopted by which the better to express the scope of work coming under our observation as specialists.

The higher courts of the various States have had occasion in the past to hand down opinions which have had a bearing on the establishment of our rank as a profession. In the main, these have been in effect that the term dentist was not interchangeable with physician or surgeon, and yet, present day usage would scarcely permit of an interchange of even the terms "physician" and "surgeon." Little attention need be given to this phase of the subject, since in most cases courts of law have put aside the mere determination of professional standing for the more important matter of seeing to it that justice should be done in the point at issue. For instance, in the case of Woodfield v. Colzey, the court ruled that a physician was a "tradesman," this decision being based on the statute which provided that the accounts of "merchants, tradesmen and mechanics" should have interest. In order that justice might be done, and the physician be allowed interest on his account, he was declared by the court to have a "trade" by which a livelihood was made.

This brings us to a point in the discussion where fundamental principles may be considered, and by way of introduction it may be well for you to be assured that a practitioner of dentistry is not bound under the law to accept a patient unless he chooses so to do, even though his sign is exhibited and he is at the time engaged in practice. His refusal to accept may be given with or without explanation. But in the event a patient is accepted, corresponding duties and legal obligations at once arise.

Every professional office transaction, be it the simple extraction of a temporary tooth or the construction and adaptation of a 14-tooth bridge, carries with it—whether we recognize it or not—a contractual relationship and a legal obligation of binding character between the dentist and his patient. This relationship may take the form of either an implied or express contract.

Probably the larger proportion of work done by the dentist in times
gone by was executed with little thought of outlining what was essential to the patient and may, therefore, be regarded as implied in character. That is to say: the patient presented himself or herself, as the case might be, an examination of the mouth was made, a statement of the general condition found to exist was reported, and the work of restoring defective parts proceeded with without any definite agreement or understanding as to the exact amount of work to be done, the character of materials to be used, or the time required for its completion. This will be recognized at once as being the usual custom of our most desirable patients, who present themselves with the simple request that their mouths be put in good condition. In all such cases the law implies an existing contract. It implies that you will make a thorough examination, arrive at a sound and intelligent diagnosis, exercise reasonable skill and judgment in the application of remedies and selection of proper materials for use in each particular case, and, finally, that you will exact a reasonable and proper fee for your services. Should your work under the implied contract prove unsatisfactory or the bill be disputed by the patient, and the adjudication of your dispute made in court, it will be on the basis of what the customary practice of the average professional men is under similar conditions and circumstances.

Examples of the express form of contract are: services charged for by the hour; estimates given for the completed work by the orthodontist; stipulated fees fixed for the administration of an anaesthetic, and many others that might be called to mind. It goes without saying that under this form of contract there is nothing left to presumption. Any litigation growing out of this form would necessarily be in the nature of a violation of the contract, either on the part of the patient or the dentist. It must also be apparent that a contract covering a specified piece of work demands absolute completion in order to satisfactorily fulfill your part of the obligation. If for any reason—other than Providential hindrance—the patient fails to meet his appointment or otherwise openly violates the terms of the contract, you are entitled to the full amount of charges originally agreed upon. By this we do not mean to argue that by mutual agreement an amended or new contract may not be established, which new agreement might be made to either minimize or augment the amount of work to be done or reflect itself in like manner on the fees involved. The essential point in all modified contracts is the annulment of the original agreement through mutual consent and the establishment of new and clearly defined provisions in the substitute, provisions capable of absolute proof.

It is generally acknowledged that the dentist is within his legal rights when charging for his time in case of broken engagements. This has been held as being legally sound in principle when evidence of this policy has been brought to the special attention of the patient. This may be done through verbal statement; through the exhibition
of a card displayed in some conspicuous place in the office stating the fact, or by having the same printed on one's engagement or business card. The courts will hardly allow a charge in full for broken engagements in case you substitute a patient for the hour, or even a part thereof. In the event of partial time given another patient, the amount allowed would be based on the difference, or actual loss.

In earlier days there appears to have existed a general impression that the physician and other allied scientific professional men were beyond the pale of the law, but the frequency and character of suits carried to the courts during recent years demonstrate very conclusively that the public mind has been awakened to the fact that there is a legal right or wrong to everything a professional man does, and there is an eager disposition to hold him responsible for everything that looks to be wrong.

We are professional men only in the sense that we have had training for a special work. When once the practice of that special work—professional work—is begun, we enter the realm of the business man as well. That is to say, all our acts of omission or commission will bring into play all the various legal principles that pertain in the case of the ordinary business man. It is only on this basis that the courts can deal with contentions between a litigant patient and a member of any profession. Of course, there may be special laws under which the professional man may enjoy certain rights and privileges, but these will be found in no way to conflict with general fundamental business principles.

Under what is known to lawyers as the "Statute of Frauds," a law which comes down to us from an old English statute passed in the time of Charles II, we find stipulated certain specific conditions under which written contracts are demanded. One section of this statute is of some importance to us as dentists, in that it provides a method of procedure in case of the death of a patient whose bill with you remains unsatisfied. Under such condition two courses are open to you: First, suit may be entered against the estate of the deceased for the amount of your bill, and, if proved to the satisfaction of the court, a judgment will be granted. It might happen that the administrator would not wish to have suit entered against the estate and should prefer to guarantee your claim, but in order to make such agreement a valid transaction, the same must appear in writing. Again, in case you undertake to do work for a patient at the request of some one other than the parent or guardian, and one not in any way responsible for the necessities of the party who is your patient, then the power to collect your fees from this third party, at least so far as the courts are concerned, will depend upon the agreement being shown in writing.

Another section of this same "Statute of Frauds" has been the cause of past legal entanglements relative to our profession. It pro-
vides "that all sales of goods, wares or merchandise, for the price of fifty dollars and upwards, shall be in writing, unless there is an acceptance and receipt of part of the goods; or unless there is payment on account of part of the price; or something by way of an earnest is put up to bind the contract." Such a provision could only affect our work with respect to prosthetic operations, such as bridge or plate construction. Ordinarily such artificial substitute dentures are constructed in their entirety and put in place as a finishing procedure, consequently there can be no "acceptance and receipt of part of the goods." Our only recourse, therefore, to secure ourselves is under another clause, by demanding "payment on account of part of the price." On the point of whether a set of teeth may be regarded as chattel, the courts have not always ruled uniformly. In England, Canada and Missouri the decisions on record would indicate that they come under the head of chattel. Other American courts have differed on the subject, so that it is difficult to say just where we stand in this matter. Aside from the legal aspect of this question, it is recognized as being a good business policy to insist on part payment at the beginning of any piece of work requiring considerable outlay for materials to be used in its construction. It is only right and proper that you should be secured by a payment which will at least cover the cost of materials used in the work. The mere fact of a patient having money invested in work under construction, through some unaccountable psychologic process, enlists a greater interest and at the same time assures a more ready acceptance once the work has finally been completed.

Dr. J. N. Johnson opened the discussion of this paper.

Four years ago at Wrightsville, Dr. Heatwole read before this Society a paper explaining the new use of ergot in the field of medicine and dentistry. Personally, I can say that I derived more benefit from the light he turned on an old drug, that previous to that time, I had thought to possess specific action upon but one organ, than any previous essay ever read before this body.

His papers are not only unusually well written, intensely interesting, but they are blazing the way to the new and the necessary things in dentistry.

In his paper on dental jurisprudence he is handling a subject of vital impotrance to the profession of dentistry—in fact, we might say, to any who in the language of the statute "practice any professed art of healing for fee or reward."

Dental jurisprudence has to do with the science and prac-
practice of dentistry in all its branches. Dr. Heatwole has dealt with that part of the law which concerns us most, the relation between the dentist and his patient. He has shown us that this relation is for the most part, contractual, but it may give rise to other conditions which lie in the domain of legal liabilities, called by the lawyers, "tort," a tort being an injury inflicted by one person upon another, either by some act committed which the person had no right to commit, or some duty neglected which the person neglecting was bound to perform.

Dr. Heatwole has defined an express and an implied contract. He shows us that in an implied contract the law agrees for the patient that he will pay for the service as much as it is reasonably worth, and that if a dispute should arise on a contract of this kind, and the parties should resort to law, that the jury would fix the amount, and it would be competent to offer in evidence the prices that other dentists of like skill and ability charge. In other words, it is only necessary to know that when a dentist does work there is legal obligations on the part of the patient to pay for the same.

The dentist, on the other hand, in addition to the contract to do certain work, which contract may be express or implied, engages in other implied contracts, which contracts usually form the bases of suits in courts of law, either on these contracts or for a neglect to fulfil the same, which is called a tort. The law applicable to these implied contracts is well stated by Judge Seymour D. Thompson, in Thompson on Negligence, Vol. 5, p. 108, "A physician, surgeon or dentist who undertakes the treatment of a malady or injury, impliedly represents that he possesses, and the law places upon him the duty of possessing, that reasonable degree of learning and skill ordinarily possessed by physicians, surgeons and dentists in similar localities; and he is chargeable with malpractice where he fails to use his best judgment in applying this knowledge and exercising this skill in the treatment of a patient.

In a very instructive case, decided by our Supreme Court
in 1898, where a dentist was sued for damages, the trial court charged the jury as follows:

“That if defendant did not, at the time of treating the plaintiff, possess the learning and skill ordinarily possessed by members of the dental profession, and by improper treatment the plaintiff was injured, the defendant would be liable for such damage as the plaintiff sustained by reason thereof; and the jury should answer the first issue “Yes.” Defendant excepted.

The degree of learning and skill which the physician and surgeon holds himself out to possess is that degree which is ordinarily possessed by the profession, as it exists at the time or contemporaneous with himself, and not as it may have existed at some time in the past; and the physician and surgeon must in general be held to apply in his practice what is thus settled in his profession. Defendant excepted.

That if the defendant did possess the learning and skill which ordinarily characterize his profession, and failed to exercise it in this case, and the plaintiff was injured in consequence thereof, the defendant would be liable to such damages as the plaintiff sustained. (This was given with further explanation as to contributory negligence, and the defendant excepted.)

That the jury in fixing the damage may take into consideration the injury the plaintiff sustained by the unskilful treatment of the case; of such would be the pain, loss of time, suffering, loss of teeth and increased delay in effecting a cure, and probability of permanent injury, necessarily consequent upon the injury sustained by the maltreatment. This was given and the defendant excepted.”

And the case resulted in a verdict for the plaintiff and the defendant appealed to the Supreme Court where the case was affirmed, that court among other things saying as follows:

“The plaintiff alleged two distinct acts of malpractice, one in originally filling the tooth upon a live nerve without proper packing, and the other in improperly and unnecessarily boring
through the jawbone after the plaintiff had returned for treatment. Whether this malpractice, found by the jury, arose from the want of ordinary knowledge or skill, or the want of reasonable care, on the part of the defendant is immaterial, as both are impliedly guaranteed by one offering his services to the public. The degree of care and skill required is that possessed and exercised by the ordinary members of his profession. It cannot be measured simply by the profession in the neighborhood, as this standard of measurement would be entirely too variable and uncertain. 'Neighborhood' might be constructed into a very limited area, and is generally so understood among our people. It might contain but few dentists, in sparsely settled sections perhaps only one or two. Both might be men of very inferior qualifications, and to say that they might set themselves up as the standard of a learned profession, and prove the standard of each by the ability of the other, would be equally unjust to the profession and to its patients. The words 'the neighborhood' as used in the prayer are essentially different from the phrases 'the same general neighborhood' or the 'same general locality,' which are found in some decisions from other states. In the well considered case of Gramm v. Boener, 56 Ind., 497-501, the court says: 'It seems to us that physicians or surgeons practicing in small towns, or rural or sparsely populated districts, are bound to possess and exercise at least the average degree of skill possessed and exercised by the profession in such localities generally. It will not do, as we think, to say that if a surgeon or physician has exercised such a degree of skill as is ordinarily exercised in the particular locality in which he practices, it will be sufficient.'

Dr. F. L. Hunt: I would like to congratulate the dentists on that paper. Dr. Heatwole has written other papers here, and they are always worthy of consideration, but we are unfortunate in this instance in not having had a copy of that paper in order that we might have given it a little bit of
I am quite sure that all of the statements that Dr. Heatwole has made can be borne out by ample proof and by ample findings in our courts, but I do wish that when a paper of that character is to be presented to this Society that a copy of it could be mailed out very largely to the membership of the Society. It is not at all a paper that can be discussed intelligently without a person’s having had some preparation. In discussing the question of dental jurisprudence you have got to be pretty sure of your grounds.

I can’t offer any criticism of this paper except where he refers to partial payments. Of course I do not agree with him quite that the dentist should be partially paid up to the point of paying for material used, because I think that the dentist’s time and his skill and knowledge are equally as valuable, if not more so than the mere materials that he has used. To be sure, the materials represent an outlay of money, but his skill and knowledge represent a greater outlay of actual money, and if you are going to require a partial payment at all it seems to me that you should require a much larger partial payment than merely the payment for the material. I have never yet been able to recognize the modern thought which seems to associate the practice of the profession with up-to-date business. I guess it is a good principle and probably should be followed closely, but I can’t insist upon payments—I need the money but I can’t insist that my patients are to make even partial payments. If I felt satisfied that they were not going to pay me at all, then I should want to insist upon full payment.

As I said, I do not see anything where I could differ with Dr. Heatwole. I wish, sometimes, Dr. Heatwole, you would leave a loophole in your paper.

Dr. Heatwole closes: I feel like saying that in the preparation of this paper it was rather hurriedly done; that it would have been next to impossible for me under the conditions to have sent copies to all the members of your associa-
tion, and I realize, too, that this is a subject which you are not apt to discuss freely. I am glad, however, that several were in humor to discuss it to some extent and were willing to do so; but the point that I had in writing a paper on that subject is to call your attention to the importance, at least so far as my opinion goes, of keeping your eyes open to what is going on. The medical profession for years and years have been teaching medical jurisprudence; the pharmacists have put a course on jurisprudence into their course; the dental colleges are taking up the subject of dental jurisprudence, and practically all the professions are getting a course in jurisprudence which have a bearing on that particular profession. And it seems to me that it is an important matter for us as a profession to consider what has been done in the way of establishing law. Your own statutes carry laws bearing on the subject of your profession. The statute books of practically every state in the Union have a bearing on the dental profession. So that we are accumulating laws and those laws are beginning to spread out farther and farther and to extend as the field of dentistry extends.

In regard to what Dr. Hunt has mentioned in reference to the amount necessary for part payment, that was aside from the law; it was only a recommendation which I make to my students; as a matter of fact they are entitled to at least a part payment on pieces of work that require considerable outlay for materials, particularly do I refer to bridge work.

Dr. Spurgeon: I would be glad to say a few words about the Panama Exposition. As you are aware, in 1915, just a little more than a year from now, there will be held in the city of San Francisco perhaps the greatest dental meeting that has ever been held in the United States, perhaps the greatest in the world. Great preparations are being made throughout the world for this meeting, and I take it for granted that every one who is wearing the state emblem of California will be a booster for that meeting.
Now as to what we are expected to do. All the states are asked to contribute, first if they have anything of interest from a scientific standpoint they are asked to contribute that to the proper committees so it may be used in this great meeting. Next we are asked to contribute financially. In a meeting of that character it takes a great deal of money to arrange it and to make it go. So it is requested that each man who is interested in this meeting will contribute at least ten dollars toward its support. For that ten dollars we will receive the proceedings of the Society and be members of that meeting.

Those who wish to have the proceedings and wish to identify themselves with this great meeting, if they will communicate with me I have the proper blanks to fill out to make them members.
The following applications for membership were received and accepted by the Society:
Dr. N. P. Maddox, Asheville.
Dr. R. C. Hicks, Lawndale.

Dr. J. Martin Fleming stated that he had had the expenditure of right much of the Society's money this year in getting out the proceedings, etc., and that his expense account had been larger than usual and that he would like to have it audited.

The president appointed as a committee to audit the account Dr. R. H. Jones and Dr. D. K. Lockhart.

Dr. Everitt: Last night you appointed a committee on reorganization of the Society. In writing up that resolution yesterday it was my intention to suggest to the committee and to the association that the idea most prominent in our minds at the time was this: That this committee get together and develop as largely as possible our ideas of a more progressive Society, especially on the line of clinics, etc., and in order to make that operative at our next meeting, I would suggest that this committee report to the executive committee, which meets in October always, their plans, and have them carried out to the best of their ability the ensuing year.

The subject of Prosthetic Dentistry was presented in the following three papers:

Paper—"Taking Impressions and Preparing Models for Artificial Dentures," Dr. N. T. Holland, Smithfield; read by the secretary in Dr. Holland's absence.
PROSTHETIC DENTISTRY.

DR. N. T. HOLLAND.

Mr. President and Gentlemen of the North Carolina Dental Society:

It is with pleasure I present this paper on "Prosthetic Dentistry," since the committee has divided it into three parts. I have chosen for my subject, "Taking impressions and preparing models for artificial dentures." Taking impressions of the mouth is an operation of such apparent simplicity as to seem to require but brief description. And yet it is one which is as rarely well done as any operation in the practice of dentistry. It is absolutely necessary for the proper adaptation of an artificial denture that this, the primary step in its construction, be accomplished with an accuracy which shall eliminate any fault of the denture traceable to an inaccurate impression. The operation must consist in securing an imprint of the jaw in suitable material. There are two classes of material used for this purpose: First, those softened by heat and hardened in cooling; second, those made into a paste with water and hardened through crystallization. You know the difference in these materials.

The advantages and the disadvantages: I wish to say that I prefer plaster of paris when in a condition of paste for all kinds of mouths, matters not whether for partial or full dentures. We know plaster expands very little, but we cannot depend on wax or any of the materials softened by heat, as they are liable to pull, and then we have not an accurate impression. In preparing plaster paste for impressions we should be very careful in mixing and not have it too watery. It should be thick enough to require a little pressure to force in place. No doubt a good many operators mix it too thin, and do not take the proper care in the preparation of the mix. In mouths where there are undercuts plaster will break smooth and the broken pieces can be easily set in place and stuck with wax and you have a good impression. In cases where there are a few teeth, and you or the patient desire to retain them, you will find that plaster is best for impressions of this kind, whereas wax or other materials softened by heat will pull, and you have no way of correcting it. The next thing to be considered is an impression tray. It should be of correct size, not too large nor too small. It should be properly shaped and be only sufficiently larger than the jaw to allow the use of a volume of the material great enough to hold together in a common mass. A tray the correct size is more easily adjusted, less material is required and less annoyance is caused the patient, and the impression is more likely to be perfect. Sometimes it is necessary to change the impression trays. You can cut and file and with plyers shape the tray to suit the case in hand. By all means have the impression tray shaped and fitted before you pour the material in it. This applies to the lower as well as the upper jaw. Just a word about mixing plaster for impressions. I prefer the rubber bowl
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for the receptacle. I pour in the amount of water I think necessary and sift in plaster until it has settled to a level slightly below the surface of the water. Any excess of water after the plaster has thoroughly settled is poured off. Now the time has come to mix, and so few of us mix as we should! We should use the spatula edgewise like a knife through the mass, while at the same time the bowl is rotated. This method will give a good mix. It is important to avoid the rotary or churning motion; this favors the incorporation of air with the mixture. Now the procedure for taking the impression: The position of patient and the position of the operator is familiar to you all. There is one thing I will mention, and that is to be careful when inserting the tray that you do not confine air in the vault. Where the vault is very deep it is best to take a little plaster on spatula blade and carry it to the highest part of the vault, conveying the plaster to its deepest recesses. Now the tray is inserted with the plaster in the tray, and that in the vault is connected, and you have no air in the vault. The patient is instructed not to open the mouth too wide as too great a separation of the jaw reduces the width of oral orifice. When inserting the tray the posterior edge of tray is first brought into relation with the posterior portion of the vault, and pressed up until a little plaster shows over the heel of the tray. Then by gradual elevation of the handle of the tray, the patient leaning the head forward at the same time, to determine the excess of plaster anteriorly. The plaster is brought into contact with successive portions of the tissues of the vault and ridge. The lip in center is gently pulled downward to imbed the fraenum in the plaster. The right and left buccal fraenum is treated likewise. We should not attempt to remove the impression until it is sufficiently hard to assure no change in its form. The heat generated in the setting of the plaster is the surest evidence of this.

Sometimes we find patients with irritable throats, the presence of any substance in contact with the soft palate causing protest, from a slight gagging to marked retching or even vomiting. It is necessary in such cases to temporarily benumb the parts to be able to get a good impression. I do this by having the patient to rinse the mouth with a one per cent solution of cocaine hydrochlorate.

Making of Casts and Their Preparation: It is necessary to coat the surface of a plaster impression with some separating medium which shall prevent the adhesion of the plaster of the cast to that of the impression, and yet be of such tenuity as not to obliterate any of the fine lines of the latter. I find that a wash of soapsuds is the quickest, and I might say that I believe it to be as good as any. Thin layers of collodion painted over the surface of the impression will glaze it and prevent the adhesion of soft plaster. We know the method of varnishing the impression with shellac and sandarac is good, but it takes too long and the soapsuds work very well for me. After the
impression has been prepared we are now ready for pouring the cast. We should be very careful in mixing the plaster, and none of the substances useful in hastening the setting of plaster should be employed, for they affect the hardness of the cast, and this quality is more important than the time saved in setting. The use of too great an amount of water in mixing will produce a cast that will be soft in surface and substance. The plaster should be of such consistency that it will flow of its own weight. It is important that the surface of the impression be wet and the excess of water shaken out, as the plaster flows more readily over a wet surface, because it displaces water more easily than air.

In partial impressions care should be taken that the tooth depressions are not left full of water.

Removing plaster impressions is done very easily by removing the overlapping plaster and gently tapping it on the table or bench. It is necessary to remove the impression in pieces so that the model is not fractured or defaced by the operation. The trimming and smoothing of the cast should be done as soon as the impression is removed, as the plaster is sufficiently soft before the slight excess of water used in mixing has dried out.


POINTS OF IMPORTANCE IN ARTICULATING ARTIFICIAL DENTURES.

DR. JOHN H. BROOKS, BURLINGTON, N. C.

To obtain a correct articulation, we must first of all make proper selection of teeth to meet the demands of each case coming to hand. In many cases much careful study is required to meet the complications arising. It is a matter of greatest importance and no less difficult to select teeth that may give the desired expression, and at the same time otherwise fill the requirements in each individual case, and since there has been no rule or set of rules that has been or can be adopted by which we can select a tooth by its number, shade or shape that is positively indicated in any given case, the dentist must have a fair amount of esthetic sense, and a great deal of common sense, if the best results are obtained in making the artificial denture serve all of its purposes.

In this great day of the latest style, we now have in many towns in our State dentists who are shifting the responsibility of selecting the kind of teeth to be used to their patients who may come in for dentures, by leading them to a small glass show case where they have on exhibit a number of finished dentures of different sizes and sorts, shades and grades, prices and styles, ranging down to suit the
trade. These are made by a Chicago firm who makes a specialty of getting up these sample dentures to show the public what grade of work these gentlemen have done and are doing in their offices right here at home, and also to assist the shopping public in placing orders. We have to go only a few blocks on a street car, or to any place where any number of people have gathered, to conclude that many artificial dentures have been selected by their owners or by some laboratory boy.

In considering the esthetic side of the subject, after we have applied the principles gained from our text-books and dental journals, we may gain something by comparing our patient and his needs to other personages with quite similar makeup who have normal dental anatomy. But we want to be sure we can tell when we meet a person whose dental anatomy is normal in all its proportions.

If it were possible to add another art to the now admitted number of fine arts, should it not be the dental art?

The word "art" is often used in contrast or opposing nature. But here art says, "Only let me be nature, stand in nature's place or stand in the gap where the vehicle of time or devastation has passed through."

In cases of full upper and lower dentures where the two arches are of equal size and curvature, the matter of articulation is not a hard problem, but where the jaws are mismatched, one large the other small, or one arch narrow at the back, broad at the front, and the other broad at back and narrow at front, we find ourselves confronted with crooked calculating to be done. After obtaining the correct bite and carefully mounting the two models upon the mechanical articulator, while setting up the six anteriors the esthetic feature is to be the ruling thought, but when coming to where the bicuspids and molars set in, the work they must do is the one point above every other. To proceed with the bicuspids and molars, place each tooth in such a position that the center of its occlusal contact point shall be found in straight line from the center of its ridge toward the center of the ridge upon which its antagonist is seated. If this is done each tooth meets its antagonist at the point of greatest resistance, and resistance is the point above all others if we want grinding done. We believe by this procedure in an indirect way, the same scheme is carried out and the same results are obtained as when we have worked by the more definite and scientific method of accurate calculating and finding what is known as the condyle path, locating the axis of rotation and by the application of minute angles, triangles and equilateral triangles, finding the position each tooth shall take, just as the civil engineer finds where to drive his stake.

One other and the last point is that whatever method you may work by, it is never safe to depend entirely upon any articulation we may get by the use of any mechanical articulator. It is a good practice to first vulcanize and finish the upper plate and place it in the
mouth, then remove the waxed lower plate from model and try in the mouth for testing the correctness, which occasionally proves to be the incorrectness of your articulation.

Paper—"Flasking and Finishing Rubber Dentures," Dr. D. E. McConnell, Gastonia, N. C.

**FLASKING AND FINISHING RUBBER DENTURES.**

**DR. D. E. MC CONNELL, GASTONIA, N. C.**

While few of us can discuss an assigned subject so well as a chosen one, there may be a few things I have picked up here and there in fifteen years' experience that may be of use, especially to the younger members of the profession.

To a great extent, one may choose between finishing the plate while in the wax or in the rubber.

I greatly prefer to finish the wax plate nicely, and so avoid the harder work with scrapers, files, etc.

After the teeth have been set up and the plate fairly well shaped up, it can be smoothed and polished with a piece of absorbent cotton saturated with chloroform, or gasoline. I prefer chloroform, as it is the better solvent for the paraffin, more cleanly, is not dangerous about a flame, and is used in such small quantity that the cost is trivial.

As you polish the plate with the chloroform some of the paraffin will collect between the teeth. This may be removed and the gum nicely shaped between the teeth by using a piece of floss silk between them much as you would use it between natural teeth in polishing them.

A good outfit of flasks is almost a necessity. The brass flask is so much more cleanly and durable than the iron, that the little extra they cost is soon made up. Personally I like the Donham, closing in the spring clamp, although I get the flask about closed in hot water before putting it in the vulcanizer.

In investing, I was taught in college to shellac and then oil the first half of the investment to separate the flask. Now-a-days I run a little vaseline on a bit of cotton, or a finger tip, around as soon as the plaster is set, and wonder why we didn't know that much long ago.

I do not consider the so-called "vacuum chamber" necessary in any plate, by that meaning the sharp-edged kind made with a thick piece of metal, or by cutting into the impression.

However, I always relieve the pressure on the bony palate with No. 60 tin foil, using two or three leaf-shaped pieces over the center and covering these with another that covers the entire palatal surface of the model, coming up to the middle of the ridge.
These pieces of foil are adapted by burnishing with cotton and burnishers, and held in place by the coat of liquid silex put on just before packing rubber. This foil within the arch and a smooth model coated with silex, will insure a finish to the inside of the plate. This smooth model is best obtained by coating your stained impression with sandarac varnish, then thoroughly soaking the impression in water before pouring the plaster. The plaster should be poured into the water and not stirred.

I find the easiest way to judge the quantity of rubber for a plate is to begin each one from a fresh sheet of pink wax; use from that only, and cut your rubber by the wax you have used, the sheets of rubber and wax being about the same size and thickness.

In vulcanizing, I find that cooking for an hour at 300 degrees and leaving the vulcanizer to cool down slowly gives better results than a higher heat and shorter time.

In the finishing I have few special methods. If the waxing was carefully done, we should need files and scrapers on the edge of the plate only. The electric lathe should take care of the rest.

A good finish to the rim of the plate is very essential to the comfort of the patient. The rim should be scraped from within as well as from without until the top edge is round as a wire, and should then be polished until it is as smooth as glass. This gives the muscles a pulley-like surface to glide over.

The final polish to the rim should be given with a buff wheel, such as is used to polish gold work.

The finishing of the gum around plain teeth is easily done with the engine, using a rubber cup, or a section of rubber tubing, on a mandrel just as one would in cleaning natural teeth.

The discussion of the full subject was opened by Dr. J. H. Wheeler:

I was particularly pleased when I found that we were to have three papers on the different phases of this work that so little attention is paid to. I do not know of a human being that needs better attention so far as restoration goes than that patient who has lost all of his or her teeth, and that is the thing that a large percentage of us, I am ashamed to admit, are turning over to laboratories to do, things that we ought to do. I know of nothing in dental restoration that is more important than this work, and I think it is barely short of a crime to send this work out to be done by people who are doing it at so much per, instead of putting our own time and our own skill into it. Plate work went along in prescribed
grooves for a number of years, but in the last few years men have been studying the restoration along these lines and they have worked, and worked hard and they have evolved, as you have heard in these papers, methods and principles by which it is possible to do good work.

Let us quit sending this work away. Let us take this most important part of the whole thing into our own hands and serve our own patients to the very best of our ability; and let us know what we are doing; let us keep up with the times.

Dr. C. N. Hughes: I feel that I cannot let this subject of prosthetic dentistry pass without taking more or less part in the discussion of it. It will be very difficult, of course, to handle this discussion following Dr. Wheeler, without repeating some of the points that have been stressed, and yet, frequently we find in repetition that we get the ideas more thoroughly impressed.

Now the first idea I want to follow Dr. Wheeler on is the responsibility which is placed on the dental surgeon when a patient comes in for a prosthetic restoration. It is one of the most serious responsibilities that rests upon the dental surgeon—the handling of that patient. Now you ask why. Simply because that patient's health, appearance and even life itself depends more or less upon the work that you are going to do for that patient in restoring his loss. I say his health; when we know that by using the anatomical moulds of the teeth that are now on the market that we can increase the power of mastication 250 per cent., and when we use the anatomical articulators and follow out the simple rules that we can double that again, and realize that we can increase their masticating power 500 per cent. over the old moulds of teeth and the old articulator. Then we must realize the importance of the anatomical articulation in that person's health, because no food can be properly assimilated until it is properly masticated.
The human anatomy is one thing on which the human mind has never been able to suggest a practical improvement. Have you ever thought about the perfection of this human anatomy? Still for years and years the dental profession has been going forward with its prosthetic work, forgetting entirely the lateral curve, and giving their patients only a part of what they should. Yet I will venture to say that there are very few men in this room this morning who have the anatomic articulator and carry out the ideas of anatomical articulation in their prosthetic work. I want to stress the importance of studying this work, thinking about the responsibility that rests upon you and thinking about that patient's appearance, his health and his life, and after you have finished this work as it should be, the patient will come back to you, and you will feel some satisfaction from your work when a patient comes back and talks to you in that manner. You feel that you have not only earned the money that he has paid you, but that you have done a real service, one that is going to be a satisfaction to that patient for the remainder of his life and to you also.

Dr. Brooks closing the discussion, said: I am glad to hear the points that have been brought out in the discussion, and I thank you for them.

Dr. Jones and Dr. Lockhart, committee appointed to audit report of the secretary, reported that the account was found correct.

Paper—"Practical Anæsthesia in Dentistry," by Dr. George E. Dennis, Charlotte.

Dr. Dennis being absent and time being short, it was moved and carried that his paper be read by title only, and published in Proceedings.
PRACTICAL ANÆSTHESIA IN DENTISTRY.

DR. GEORGE E. DENNIS, CHARLOTTE, N. C.

The subject on which I am writing (Practical Anaesthesia in Dentistry) is one of the most important and probably the most puzzling question confronting the practical dentists of the day, and justly so because of its manifold properties and actions, and the responsibility in judiciously employing same.

I shall not try to go deep into the subject of anaesthesia, in specifying each of the numerous varieties, giving their origin, derivation, properties and functions of each, but wish to speak of those most commonly used in dentistry today.

I shall divide them into two heads, viz.:

First. Those administered by application or injection, known as local anaesthetics; and

Second, Those administered by administration or inhalation, known as general anaesthetics.

In the first we have such agents as cocaine and its various derivatives, such as neurocaine, novocaine and other derivatives; morphine, atropine, codeine and muriate of quinine with urea and dozens of proprietary preparations of which the principal ingredient is a derivative of cocaine. Up to the present time these have been the chief anaesthetics of the dentists, and will continue to be for a long time because they have become common factors by the dentists, and is regarded by the laity as such. Their administration and use is simple, and when judiciously and cautiously used, the prognosis of their effect is favorable; and should there occur an accident from their use, under ordinary precautions the dentist would not be censured for employing agents out of his field of practice. Greatly beneficial results may be obtained by the employing of such agents as morphine compounds, or other narcotic agents to allay nervousness and fear. Using cocaine compound injections to anaesthetize tissue locally, while physiologically the morphine counteracts the effects of the cocaine to a degree and lessens the danger from same.

For simple operations, such as extracting, removing nerves, etc., for practical dentists, there is nothing that excels cocaine applications because of the minimum amount of excitement and fear of the anaesthetic and the favorable prognosis of same.

So many people come to the dentists in a state of nervous collapse from mental anguish from the anticipation of pain, when by the administration of some compound of morphine or bromide or heroin hydrochloride, this excitement can be greatly allayed and the coagulating of the field of operation with one-half of one per cent solution of cocaine compounds such as adrenalin or morphine greatly relieves the state of nervousness and successfully anaesthetizes the field of operation.
By this method we avoid the uneasiness of the patient and the watchful administration of the anaesthetic, leaving our mind free to concentrate on the field of operation without the presence of a bunglesome apparatus which is an obstruction to our operating.

Now let us deal with general or etherial anaesthetics. Of these I shall mention only four: Chloroform, ether, nitrous oxide and oxygen, and somnoform, which is a combination consisting of ethylchloride 83 per cent, methylchloride 16 per cent, and the ethylbromide 1 per cent. Most of us are familiar with the dangerous disadvantages and deleterious effects and the impractical use of both chloroform and ether in the anaesthesial stage for continued operations in the oral cavity. However, I believe chloroform may be used to an advantage in the practice of dentistry, sometimes by administering enough to produce the stage of intoxicating effects upon the patient, who will abide by the instructions given them and will try to assist the operator through mental suggestion. For example: Not long ago a physician brought his patient, a gentleman of about forty years, into my office and wished a number of teeth extracted. He being in a state of nervousness, the physician taking a bottle of chloroform just purchased, proceeded to administer same. Just at the stage of intoxication, or what some might term analgesia, the doctor said we might proceed. The patient knew all that was being said and done and obeyed suggestions. After extracting a number of teeth he stated the operation was painless.

The same experiment was tried on another patient who would not obey suggestion, and who had to be completely anaesthetized before operation could be completed.

Ether (nitrous oxide with oxygen and somnoform).—I have not experimented with this. It is of the last two of the anaesthetics mentioned of which the dentists are most concerned at the present time. These two compounds have many advantages over chloroform and ether in the dental administration because of their ease of administration, their quick action from the nerve centers and short duration after administration and the absence of the prolonged effects of the former. Usually when properly administered, there is but little nausea, sometimes not enough to be noticeable, when again there may be excessive vomiting. I believe, from practical experience, this is more often the case with nitrous oxide than with somnoform.

The mode of administering both nitrous oxide and somnoform are about the same with the same kind of inhalers. One advantage with nitrous oxide and oxygen is that you can secure a steady flow of the gases from their containers, while with somnoform we have to take time to add new capsules to inhaler, as needed, therefore for long administrations I would prefer giving nitrous oxide and oxygen. And for short durations, I prefer somnoform from personal experience, and I have both taken and administered each a number of times. The nitrous oxide has a very depressing asphyxiating effect
and more or less nausea and sometimes vomiting, while somnoform seems to act more as a medicinal agent and stimulating effect similar to intoxication, and in my own case there was absence of nausea and vomiting with somnoform.

The methylchloride has a tendency to hasten the effects of the anaesthetic and the ethyl-bromide to prolong the effects of the anaesthetic, which makes the combination with ethyl-chloride a desirable anaesthetic. Somnoform does not seem to have the depressing effect on the nervous system and vital organs that nitrous oxide does.

And with the properties mentioned before, I believe it to be the safest anaesthetic known, and would prefer its use in all dangerous cases, and have successfully given it to children one year old for minor operations and to adults suffering from heart and kidney troubles, also tubercular patients after they had informed me they were "ready to go," if necessary.

Last week a physician requested me to extract some teeth for one of his patients whom he preferred not to give a general anaesthetic, if it could be avoided, on account of her constitutional condition. We first tried the injection of a weak solution of cocaine and adrenalin, but on beginning extracting she went into nervous hysterics, and I proceeded to administer somnoform until she became quiet and finally anæsthetized. Then proceeded to extract until she began to regain sensibility, when again I administered somnoform the second and third time, until I had extracted twenty roots and teeth, using three tubes of five cubic centimeters each. She recovered with slight nausea, but without vomiting.

Some weeks ago with another patient I used five tubes of five cubic centimeters each of somnoform without even putting the patient to sleep, after which we stopped in disgust and the patient went home. We reached the analgesia stage or stage of intoxication, however, but not of insensibility. Now for the analgesia stage, which is the talk of the dentists and the hobby of the journals, and which is the ideal stage, when it works. There has been great progress along this line in the last few years, and I believe there soon will be an ideal anaesthetic with an ideal way of administering same. But as yet such anaesthetics and the administering of same has not been perfect. The great trouble, as mentioned above, in administering nitrous oxide and somnoform is the mode of administration, by the various inhalers, which obstructs the field of operation to a great extent. And because of this fact, and the unavoidable inhalation of air, the analgesia stage is hard to maintain, as the margin between that of sensibility and anaesthesia is so narrow, or closely allied, that the analgesia state is hard to maintain, so that the patient will either suffer pain or lose self-consciousness and self-control.

Again, with some the small amount, enough to allay nervousness, which we call the analgesia stage or stage of numbness, the patient will readily respond to mental suggestions and the operation may be
continued painlessly, while with others, they will have to be taken to the anesthesia stage and to insensibility before the consciousness of pain is annulled.

For an example: DeFord, inventor of the DeFord Inhaler, while on a tour of demonstration through the South and while in Charlotte, demonstrated to the satisfaction of a number of dentists that the stage of analgesia could be maintained under favorable conditions for some time, but not in all cases. For instance a young man of 17 years of age, very nervous, yet readily taking the Somnoform to any stage, could not be operated on except in the stage of deep anesthesia.

Yet while we have not obtained an ideal anaesthetic and mode of administering same, for the dentist, I believe Somnoform and Nitrous Oxide are the most practical of the general anaesthetics. At the same time, I do not believe in the attempt of the operator to administer same alone, but with the assistance of an experienced assistant in administering these agents. In many cases the operations may be carried on successfully, but before attempting the administration of any general anaesthetic, we should have a thorough knowledge of the actions of the anaesthetic and the various remedies to rely upon and procedure in case of accident, until the public have become more accustomed to the use of these anaesthetics by the dentist.

There is one other mode of anesthesia that I would like to mention which seems practicable and possible. The local or inhibitive anesthesia, as practiced by Dr. William H. Fitzgerald, a nose and throat specialist of Hartford, and outlined by W. J. Hogan, D.D.S., of Hartford, Conn., in the "Dental Digest" of April, 1914, in which the writer describes the mode of anesthesia by pressure upon the nerves supplying the field of operation. This, if proven practicable, will, to my mind, revolutionize the mode of anesthesia in all minor operations, and be a great boon in alleviating fear and pain of patient and of the dentist during the operation.

Dr. I. H. Davis read report of the legislative committee as follows:

LEGISLATIVE COMMITTEE REPORT.

Mr. President and Members of the North Carolina Dental Society:

Your committee appointed to revise and rewrite the Dental Law of North Carolina to be submitted at this meeting beg leave to report as follows:

After carefully considering the present law, we are convinced that several radical changes are necessary, but that the limited time given the committee since they have been able to get a quorum, and because of the importance of the law, which we desire to present at a
later date, we have deemed it advisable to ask the Society to consent to the plan which we now submit.

We would ask that a committee of three be appointed and that said committee of three be authorized to prepare a bill at an early date, embodying the requirements entering into an up-to-date and progressive dental law for North Carolina. We also desire that the committee be authorized to employ competent counsel in order that our law may stand the test of the Supreme Court decisions which have been rendered in similar cases. We would further ask that the committee be instructed to prepare this bill at an early date and to submit a copy of same to each licensed dentist in the state, irrespective of his affiliation with the North Carolina Dental Society, requesting him to offer suggestions and writing either an affirmative or negative vote within 15 days from date of mailing copy of the bill to him; his failure to indicate his vote to be construed as an affirmative vote. After receiving the votes the committee to be required to proceed immediately with the steps necessary to having the bill, if approved by the dentists of North Carolina, presented to the next session of the legislature.

Respectfully submitted,
I. H. DAVIS,
A. H. FLEMING,
F. L. HUNT,
J. N. JOHNSON,
H. V. HORTON.

In accordance with this report the president appointed the following legislative committee: Drs. I. H. Davis, J. N. Johnson and F. L. Hunt.

The Executive Committee reported the name of Dr. Eva C. Carter for honorary membership, and she was duly elected.

Report of the Prosecuting Committee read.

REPORT OF PROSECUTING COMMITTEE.

I wish to report the prosecution of three cases during the past year. The first case was that of J. J. Siler, of Lee County. He was convicted and fined $25.00 and costs.

The second case was that of one Pitt Beam—prosecuted and convicted in Durham, but for some extenuating circumstances unknown to me, he was allowed to pay the cost and agreed to leave the state.

The third case was one full of interest in that we successfully tested the law as to a second conviction. Dr. J. W. Sikes—convicted in 1908—was again found practicing in the outskirts of Raleigh. He was arrested and on failure to give a $200.00 bond was committed to Wake County jail, where he was held about three weeks till his
case was tried. At the trial he was convicted and sentenced to 30 days in jail and to pay the costs.

He served his jail sentence but escaped the costs by taking the insolvent debtors' oath. The total cost to the Society of the three cases was $85.70.

A personal expense for postage and notary fees was only $1.50, which I have included in my expense account as secretary.

Respectfully submitted,

J. MARTIN FLEMING.

Report adopted.

Report of Publishing Committee read.

REPORT OF PUBLISHING COMMITTEE.

Your Publishing Committee reports that the Proceedings of the year 1913 were published and mailed to the members by about August 15th, 1913. There are some mistakes but it is almost impossible for one not accustomed to proof reading to publish it without mistakes.

As to the publication of the old minutes from 1875 to 1898, the work has been done as best it could—not a word was omitted from the minutes of the old book with the exception of some pages of the roll of members which was so badly tangled as to be of no importance. This book was mailed only a few days ago and its publication completes the record of the Society since its organization and those who have saved the other publications can now have all bound for preservation, as has been done with those of the Society.

They can be bound in two volumes at a cost not to exceed $1.00 or $1.50 per volume.

The cost of the work was $216.50, which was more than I would have liked, but the cost of obtaining and printing the cuts amounted to more than a third of the total.

Respectfully submitted,

J. MARTIN FLEMING.

Report adopted.

Report of committee on change of law to conform with Virginia law.

REPORT OF COMMITTEE ON VIRGINIA LAW.

Your committee appointed at the last meeting of our Society in 1913 to consider the advisability of urging the enactment by the legislature of a law similar to the law of Virginia requiring applicants for the degree of D. D. S. to have first graduated as M. D's. desire to make the following report: We deem such legislation in-
advisable and impracticable. The people of Virginia through their legislature took this view of the matter and repealed the law before it became operative. Your committee desires to go on record as favoring the highest and best practicable education for dentists, even to the acquiring an M. D. degree after graduating in dentistry if that be within reach of the student. We therefore recommend the strict enforcement of the rules now agreed to by the dental colleges requiring that applicants have at least a high school diploma or better still a course in a literary college, so that they may be the better prepared to receive instruction in the dental colleges.

R. H. JONES,
J. N. JOHNSON,
J. MARTIN FLEMING.

Report adopted.

Speaking to the resolution as to the Virginia law and general education Dr. H. W. Morgan said: The question of the elevation of the profession of dentistry through increased requirements of educational institution is one of deep interest to all of us, and it is especially one that the boards of trustees and faculties of our professional schools have given a great deal of attention and time to. Back yonder in 1882 there was one dental college started in the United States with the avowed object of giving only those men a dental education who had received the M. D. degree. I remember at Cincinnati in the old American Association Dr. Allport and others interested in that institution debated along the wisdom of such a course. The institution was projected in one of the greatest centers of dental education on the American continent and continued for about five years. The character of the medical graduate who was willing to go into dentistry was such that it was quite soon abandoned. The science of dentistry has so rapidly increased that when we come to analyze the dental school, adjust the curriculum, and especially in the great universities where there are both medical and dental students, it has been found, while they begin at first to train these dental students along with the medical classes in the fundamental branches of anatomy, physiology, chemistry, etc., that the dental sides of the question were of no par-
ticular interest to the medical student, and consequently it has been abandoned by Harvard University, the University of Minnesota, Iowa and other states, and now we have four classes of dental colleges in the United States, those that are manned—the faculties, from the dental profession; dentists teaching these fundamental scientific branches. Then we have dental departments of medical schools where the medical men teach these fundamentals, the dental men teaching the purely dental branches. Then we have some universities left yet, and there are only two or three in which the dental student takes his training with the medical student in the fundamental branches. Then we have, on the other hand, standing out prominently those university departments of dentistry where the fundamental sciences are taught by men who are giving up largely their lives to it; not merely practitioners who are devoting a few hours to teaching and a little time in the evenings for the preparation for that teaching, but men who are devoting their entire time to the sciences they are teaching. This gives you very clearly the distinction between the two. Some schools have adopted first one and then the other of these plans. Why did they abandon the joint schools? Because if they gave the instruction in the fundamentals with the medical class they would have to add from six weeks to three months to the course in medicine to adjust the course so as to give that part of it which was essential to the dentist. Therefore in the selection of dental schools those which give the fundamentals by the scientific men have decidedly the advantage.

Dental science has increased more rapidly than we think for. We are inclined to speak of these fundamental branches, the fundamental sciences that I have just spoken of, as being medical branches. I would like to correct that idea. Who is it that is making the discoveries that have revolutionized the practice of medicine? Were they physicians? Were they surgeons? Were they the doctors? No. Pasteur was a scientist, a chemist, Koch was a scientist. The work of
Dr. Willoughby Dellis was after he had abandoned the practice of dentistry and gone into Berlin University to become a scientist. Let us then claim for dentistry just as much right to anatomy, physiology, chemistry, as the medical profession has; then we will elevate our profession; then we will have an incentive for the scientific man to work. Do not expect us to turn out from our educational institution a set of orators, like our friend from South Carolina expressed yesterday a hope that we would do. You may teach a man to talk; many men can talk, but there are not many men that can do. There are not many men that can become scientists. God Almighty has not implanted in the body of every man a brain that is able to sift, to analyze, to thresh out, to weed out, and to develop a discovery.
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NOON SESSION.

FRIDAY, 12 o'clock M.

MEMORIAL, DR. VINES E. TURNER.


Dr. Vines Edmund Turner, a leading figure in his profession, not only in the state but in the whole nation, fell on sleep on May 11th, 1914, at 2 o'clock A. M.

Sick for only a few days his death came very unexpectedly to members of the profession away from Raleigh—though it was known there for several days that the end was approaching. In fact Dr. Turner himself seemed to anticipate that the end was not far.

In a conversation with him only a few days before he was taken sick, he expressed a wish to attend the Confederate Reunion in Jacksonville and from there to go on a visit to a sister living in Florida and he remarked that he had better not go—that he was not very strong and that there was a superstition in his family that the Turners died away from home.

Dr. Turner had spent the greater portion of his mature life in Raleigh. He was born in Franklin County, graduated in dentistry in 1858 at the Baltimore Dental College, and until the breaking out of the war practiced his profession at Henderson, N. C. At the beginning of the war he entered the Confederate Army as 2nd Lieutenant, being later promoted to Captain, and was serving on the staff of Gen. Walker at the end of the war.

He went through all the campaigns of the Valley of Virginia, being wounded only once—that at the battle of Cold Harbor.

Following the close of the war, he moved, in the early seventies to Raleigh, at which point he practiced his profession till the time of his death.

Throughout his entire professional career he has been an active figure in the advancement of his profession along all lines. Honors that have come to him have come unsought and have been worn most modestly. He was a charter member of this Society, was twice its president and for thirty-four years he was chairman of the Board of Dental Examiners of this state, and in 1901 was elected president of the National Association of Dental Examiners, president of Southern Dental Association in 1881, treasurer of the National Dental Association 1904-5-6, president of the Jamestown Dental Con-
vention 1907, and, as an honor crowning all others, was elected president of the National Dental Association in 1908.

In 1913 he was again honored in being appointed one of the three members of the United States Navy Reserve Board and was a member of that body at his death. In the social, religious and business life of his home city he was at all times a leader and was identified with many interests from which he will be missed.

Such are the salient features of his life, about as they appeared in the newspapers, but simply to read these facts and go no further would no more give you a picture of the man than "to point you to a few measures of grain and bid you behold a living harvest." A man of the most genial disposition, yet never weak nor vacillating, he made friends whose number was limited only by the number of his acquaintances. To him more than to any other man in the state is due the very existence of this Society. Probably Dr. Arrington was more active in early organization of the Society, but in keeping it alive his service to the profession does not compare with that of Dr. Turner. Dr. Turner was elected first vice president at the meeting for organization in 1875, but Dr. Arrington, the president, being absent at the first regular meeting in Greensboro in 1876, the duty fell on Dr. Turner to preside. He was elected president at that meeting and bears the unique distinction of having been a second time chosen president, this in 1888.

In an earlier effort at Society organization in 1866 at High Point Dr. Turner was chosen secretary, but that is only mentioned in passing, the organization only lasted two years. It was my pleasure to have talked to him only a few months before his death on the subject of the early struggles of Society organization but never once did he refer to his own work in the matter, and yet he was the only one of the fourteen charter members who had stood by the Society and retained his membership from its organization down to the present year. That is something of a record to be proud of and yet no one of you ever heard it mentioned by him—if by any one. It was not known till an examination of the old records showed it. As a member of the Board of Dental Examiners he was elected before even the law creating a board was passed. Elected in anticipation of its passage, he was made chairman from the first and it was a credit to the Society that he was successively re-elected up to the time of his death. His was a guiding hand there always. New men were constantly being added to the Board—men whose views were more or less radical as compared with the riper views of Dr. Turner, and it is to the lasting credit of these men that his riper views were allowed to prevail in their counsels. His services to the Society will be most missed there and his place cannot be filled.

As to war service no one of us ever heard him mention it unless it was to tell some humorous story connected with it, and we should not lose sight of the fact that he was at the front when he might
have been excused from war service on the ground that he was a physician, our Supreme Court having held that a dentist was a physician, in the true meaning of the term. His service was characteristic of the man.

To those of us who were thrown with him from day to day he will be missed more than by all others. The blow of his death comes to the members of the Raleigh Dental Society as a double grief—to us he was a father and an elder brother—and his loss is as great to us as to some soldier, "who in the self-same battle, has lost both his general and his chosen tent mate." As some of you know, it has been our custom to meet once a month, and following our meeting we have a little supper. He was the president of our local Society and by mutual consent he presided at our table, no matter in whose home we might be, and his keen sense of humor and his bright wit, free from any trace of sarcasm, were the life of our meeting.

Around our firesides, so to speak, we grew stronger in our attachments for one another and for our fellow practitioners everywhere. Somehow as we look back over his life, spanning as it does, the life of dentistry as a profession—as we look back over that and see what was accomplished in his life time—what he helped to accomplish for the profession, we can hardly help but feel that one of a superhuman company has been withdrawn.

His death has brought keen regret to thousands of dentists all over the nation. His acquaintance among them was as wide as that of any man, and he will be universally missed.

In closing this tribute to Dr. Turner I would like to read what some friend wrote of him the day he died. It is as follows:

"It is not a detraction from his public and professional services (for it is a noble satisfaction to a man to have a man's part in the constructive work of his state) if one wonders, when the balances are reckoned, whether the greatest thing he gave to his generation was not the spirit in which he met it? He believed in his fellow creatures, and helped them and stimulated them by the sheer force of that belief. He never cringed to any, neither sought preference nor was elated when it came unsought. He honored womanhood, he loved little children, he was deeply loyal to his friends and to his state, he was gentle to the unhappy and he withheld blame from the unfortunate. He had the instinct of comradeship, a quick sense of fun, a charm of manner, an unusual social gift, and an unfailing courtesy and geniality.

"He met life gallantly, with a smile on his lips and with faith in his heart. Some call this the spirit of knighthood, but in the South we still like to say 'a gentleman of the old school.' Their passing leaves us poorer. Yesterday the governor of the state spoke of Dr. Turner as 'the town's best loved citizen.' The phrase seems to sum up his whole life—for his name is written 'as one who loved his fellow men.'"
“It is only of his life in its wider aspect that it is fitting to speak. His home ties were peculiarly strong and tender, and his death makes the first break in the family circle throughout the long and happy years. To his wife and children sympathy goes out in silence.”

J. MARTIN FLEMING.

Raleigh, June 20th, 1914.

Dr. Davis:

Mr. President: Having known Dr. Turner as a true friend for many years, I should feel recreant to duty if I did not say something on this occasion and add a few words to the memory of one of the leading men of our profession. He was not only a leader but a great man; as is usual with great men he had faults, was misunderstood, and his motives misconstrued. Those who knew him best loved him for his sterling character, for his warm, generous heart, his kind, loving disposition, as well as for his firm and unwavering loyalty to his friends. In all walks of life he was respected and his patriotism was of that high order that should characterize every professional man. He should be classed as one of the nation’s noblemen, a man of whom the entire profession may feel a just and honorable pride, one whose memory will ever fondly be cherished. The dental profession of our nation claimed him as one of its great men; his life and work belonged to them, as well as to our Society.

We honor ourselves today by meeting here to show our respect, love and admiration for the life and achievements of our distinguished and departed friend, Dr. Vines E. Turner. As a friend and warm admirer of this leading son of our profession, I humbly place this wreath to his memory.

Dr. D. L. James: Dr. Fleming has touched every phase of Dr. Turner’s life. I have known Dr. Turner 30 years, for it was just 30 years this month when I joined this Society, and before joining that I came up before him for examination, and from that time I loved him. I believe that we can always say that he felt that charity for every student and for every man as Dr. Fleming has described, and we feel like we owe
to members of the Society that we can hardly let the opportunity pass without saying something for Dr. Turner—not to speak alone of his professional life, but to speak of him as a man, and that is how I knew him better; as a man. And I believe the remark that he truly loved his fellowman was as well said of Dr. Turner as any man it has been my good fortune to know. I am an old man; I have passed the 50 mile-stone of my life and have turned my face toward the setting of the sun. I have seen in my life many beautiful and many grand sights, but, fellow-practitioners, the most beautiful sight, the grandest creation, the manifestation of God's omnipotence, I have seen in a man like Dr. Turner, who loved his fellowman; a man who visited the sick and filled the room with a radiance as bright as the new day; a man who could dispel the darkness as sunshine dispels clouds of a summer day. And, my friends, if we but live and imitate the example of Dr. Turner, when we grow old, and when we come to pass under the tree of old age, we will hear amid its tuneful branches the birds of fondest memory sounding their sweetest chorus to deaden the roar of the river of death.

Mr. F. O. Foster, of Atlanta: Dr. Turner was a man of whom I was very fond. I recall him as a man of a great deal of affection. I remember one time he said to a graduating class: "You will have a great many objects in life; you will attempt to attain them; there will be before you certain prizes that you would like to reach; all your effort will be bent in those directions; I wish you success; however, if you would be supremely successful, remember that whatever heights you attempt to attain, always be kind." To me Dr. Turner was an exemplification of kindness, a quality that stood out supreme in his household, in his family relations, in his professional attainments—always to be kind and gentle. When I heard of his death it came as a shock to me. He has departed, yet what a splendid man! When you see this Society
honoring him; when you think of his influence; when you think of what he has been to the dental fraternity of the state of North Carolina and to the United States, what a splendid man! I love to think of that man and I hate to think he is gone.

Dr. Wheeler: I just want to add a flower to the bouquet we are building to the memory of this great and good man. I knew him first in 1894 when I came up before him for examination. I knew him best in the seven years that I served with him on the State Board of Examiners. I said at the Raleigh meeting when we re-elected him two years ago that North Carolina did not honor Dr. Turner but it honored itself in having the privilege of re-electing such a man to succeed himself on this Board of Examiners. The phase of Dr. Turner's life that has dominated my thought in regard to him seems to have dominated your thought—the great warm pulsating heart of the man for its fellowman. I love to think of him in connection with Leigh Hunt's little poem:

"Abou Ben Ahdem (may his tribe increase),
Awoke one night from a deep dream of peace,
And saw within the moonlight in his room,
Making it rich and like a lily in bloom,
An angel writing in a book of gold.
Exceeding peace had made Ben Ahdem bold,
And to the Presence in the room he said
'What writest thou?' The vision raised its head
And with a look made of all sweet accord,
Answered, 'The names of those who love the Lord.'

'And is mine one?' said Abou. 'Nay, not so,'
Replied the angel. Abou spoke more low,
But cheerily still, and said. 'I pray thee then,
Write me as one that loves his fellow-men.'
The angel wrote and vanished. The next night
It came with a great awakening light,
And showed the names of those whom love
Of God had blessed,
And lo Ben Ahdem's name led all the rest."

Dr. J. S. Spurgeon: I do not think it would be improper to relate a personal conversation with this good man. First,
however, even as a boy he was more of a father to me probably than any man I knew, and I have had that feeling for him for nearly 30 years. I will relate an incident that occurred in his home some years ago. We were talking of the plans of life, the different phases of life, the education of children, what influences were best to be brought about them; and he related this incident. He said, "When my oldest son Charles was preparing to go to the University I had not thought much about it, but the night before he was to go we were sitting by the fire, and my wife said, 'Perhaps the rest of us had better go upstairs, perhaps you would like to talk to Charles.' I said, 'Perhaps I would.' " So after the family had retired he began to think what he should say, and he said, "The more I thought, the less I could think of anything that would be appropriate to say. So finally I says, 'Charles, you have been living with me for 17 years, if you haven't found out what kind of a man I'd like you to be, it is too late for me to talk to you now.'"

I feel like he left that impression on every young man with whom he came in contact. Without laying down any formula, his influence, his life was such that it was not hard to find out what kind of a man he would like not only his son to be, but what he would like his friends to be. It is useless for me to say how much I will miss him, how much I regret that he is gone.

Dr. J. C. Watkins: As Aycock once said of William Jennings Bryan, "If a man needs a eulogy he doesn't deserve one, and if he deserves one he doesn't need it." It isn't my purpose to eulogize Dr. Turner, he needs no eulogy, but I would like in just a word to record a tribute to his memory.

It was my privilege to attend the funeral, and I with hundreds of others shared the grief which the loss of a dear friend ever brings.

Seldom has a man of our profession achieved such honors as came to Dr. Turner, and never has honor been more richly
deserved. Too much cannot be said of the influence and inspiration of this man's life. He was the personification of courtesy, generosity and honesty. His life constitutes a life of success and achievement and the memory of his name will ever prove an inspiration to the members of our profession.

DR. F. L. HUNT: It seems to me that words are inadequate to express our feelings on an occasion of this kind. Dr. Turner has always been one of the greatest inspirations of my life, and I have lost that inspiration. I do not feel that there is another man that can take his place in my life. I could not say many things that would add to what has already been said, but I can tell of one little incident which will show the way the man was loved and honored by the members of the profession at large, not only in our state. At the Boston meeting when Dr. Turner was elected president of the National Association, that grand, noble, modest man did not really want to be elected president at that time, but his friends felt that it would be an honor to the profession of dentistry at large if he could be made its presiding officer; and I do not think that any of those men thought at that time that they were trying to honor Dr. Turner, but his friends rather insisted that he accept that high office and they had endeavored to secure his election, but he told them he did not want it; he did not think that he was competent; that there were other men who were more competent, and finally his son Charles went to him and entreated him to accept the place, and Dr. Turner said, "Charles, do you really want me to do it? I feel it is a task and that I am not thoroughly competent." Charles said to him that he really would like to have him do so, that he wanted him to accept it if he felt that he could possibly do it. So after all his friends, including his son, had gone to him and insisted, he consented. He was beloved not only by the members of the profession but by all those who knew him well.
Dr. Simms, of South Carolina: What has been said here about Dr. Turner fills me so full that I can hardly say more that I am proud to live and have been born in an adjoining sister state where a man has been brought up and lived the life that Dr. Turner has lived, and lived and died in the esteem that he has lived in. In knowing him, like every one else, it was but to love him. I can only think when I think of him as a great man.

Dr. Jones: So much has been said and so well said in regard to our friend, Dr. Turner, that I feel I cannot express myself like I would like.

I knew Dr. Turner probably as long as any man here. I was with him at the first meeting of the North Carolina Dental Society in Greensboro, he presiding. Dr. Turner was not only a good man, he was a man that was devoted to his profession. There was one thing in his life that always struck me as being something to imitate, and that was that with my long connection with him I never knew him to do anything except for the benefit of his profession. He had been president of the Board of Examiners for many years before I was made its secretary. He was a man that not only thought well of his profession but of its members I do not know that he had an enemy in the Society. He always had a cheerful disposition. Our meetings were oftentimes enlivened by his wit, and he was a hard worker. We can certainly imitate Dr. Turner in his great love for his profession and his great desire for its advancement and his love for his fellow-practitioners.

Dr. J. N. Johnson: It has been my pleasure to be closely identified with Dr. Turner ever since becoming a member of this Society, especially so during the past seven years when we served upon our Examining Board together.

Dr. Turner is now gone, and it is my wish and my prayer that when I come to face the great and omnipotent P.
the universe that I may go as Dr. Turner has gone, and that up to the time of my going I may still be young in my thoughts and my reason, and keep in touch with my work and my people.

Dr. H. W. Morgan: Indeed a nobleman has fallen from our ranks. It is utterly impossible for me to add anything after the eloquent outline of his life by Dr. Fleming and the beautiful tributes that have been paid to the memory of Dr. Turner—far more eloquent than the words, the choked voices, the dim eyes and the trembling hands.

Dr. Turner has disappeared, but he is not gone. The Master of all good workmen has "put him to work anew." Where "he shall work for an age at a sitting and never be tired at all!"

"And only the Master shall praise, and only the Master shall blame. And no one shall work for money, and no one shall work for fame!"

Dr. Turner had learned that lesson, that the greatest, the most august and sublime worship of the Almighty God was service to humanity, and in his devotion to his profession he has been an example for all of us to follow. While he has disappeared, his spirit is here today, and will live in the North Carolina Dental Society and give guidance and direction to the wisdom that is at the helm.

Dr. S. W. Foster: I will not attempt further to eulogize the life and character of Dr. Turner which has been so beautifully given this morning, but I rise to express my appreciation. I can say since my earliest professional experience Dr. Turner was my friend. I am glad to say this morning that I have lived under the influence of the life and character of this great man.

In the death of Dr. Turner we have lost one whose place will not be filled in the dental profession and it is an irreparable loss.

Dr. A. H. Fleming: There is nothing I can say that will add to what has already been said about Dr. Turner. A
grand old man has finished his work and crept soundly to rest. The man is gone, his work and his influence are still with us, and while we have lost a great deal to the Society our loss is more than overbalanced by the fact that we had the honor of keeping him so long. His death came as a great shock to us all. He was a man that everybody loved, a man that in any position exhibited that air of accustomedness that few men in or out of the profession have. His influence in the Society was monumental and it will be a long time before we have any one else that can take his place.

**Dr. Reed:** The fact that we do not die but live on is manifest I think in noble men like Dr. Turner—loved greater after death than before. While Dr. Turner lived to a ripe old age, I could not help but think when I read of his death, of the comparison that Dr. Turner was the same to dentistry as Governor Aycock was to the world of education.

**Dr. Everitt:** I would like to pay a tribute to Dr. Turner, but I am unable to do it. Thirty-nine years Dr. Turner and myself lived on the same block. We met nearly every day and never a word of discord between us.

**Dr. Patterson:** I feel I cannot let this occasion go by without saying a word and ask the question, Is it worth while? In sitting here and listening to the remarks that have been made about our deceased brother, I ask myself the question, Is it worth while? I answer that question that it is worth while that we all might strive to emulate this brother in our profession. The beautiful character that he established while here is enough to make any man ask the question, Is it worth while to try to emulate this great man? I met Dr. Turner first, personally in 1888. He was my personal friend through all my trials in the profession. He always gave me a welcome hand, and I shall always have a kind remembrance of him. I think he has left a beautiful character and I hope that we may all emulate that character.
A portion of a letter from Dr. Tucker was read and ordered published as follows:

"I would so love to be with you today and offer with you my tribute of friendship and love to the memory of my dear friend, the state's splendid citizen, the profession's distinguished practitioner, our own cultured and true nobleman, Dr. V. E. Turner. We were friends, an honor I hold dear. With the hope of the best meeting in our history, I am,

Fraternally,

E. J. TUCKER."

Resolutions of the local Dental Society of Raleigh read by the secretary and ordered spread upon the minutes.

RESOLUTIONS.

Raleigh, N. C., May 11, 1914.

Whereas, in the providence of an All-Wise Creator, our esteemed president, Dr. Vines E. Turner, died May 11, 1914; and

Whereas, his record as an examiner, his indefatigable energy, and his skill as an organizer and developer of the organizations that stood for scientific research and the uplift of the dental profession have combined to place him among the most eminent dentists in our country and without a peer in our state; now therefore be it

Resolved, That we, the members of the Raleigh Dental Society, deeply deplore his loss, and express our appreciation of his fatherly council and cheerful spirit, fully realizing that a link of inestimable friendship has been snapped in the affairs of society relationships; and be it further

Resolved, That a copy of these resolutions be sent to his bereaved family.

D. E. EVERETT,

Vice President,

NORWOOD J. CARROLL,

Secretary.

On motion of Dr. J. M. Fleming it was ordered that, as a further mark of respect, the picture of Dr. Turner be published on the fly leaf of this year's Proceedings.

Motion by Dr. Everitt that a copy of the memorial paper be furnished Dr. Turner's family. Carried.

The Society then adjourned till the night session, the afternoon being given up to clinics and an automobile ride provided by the town.
NIGHT SESSION.

Friday night, June 26th, 8:30.

Applications for membership received from B. F. Hall, Asheville; W. G. Wagoner, Vox, and they were elected.

Report of Auditing Committee received and adopted.

AUDITING COMMITTEE.

The committee appointed to audit the treasurer's books find them correct.

R. H. JONES,
D. K. LOCKHART.

Report of Committee on the President's Address adopted.

REPORT ON PRESIDENT'S ADDRESS.

Your committee appointed to report on the president's address beg leave to report that we have carefully considered his paper, and find it overflowing with good suggestions requiring much thought that should be carefully read by every member of the Society when it appears in the published proceedings of our Society.

D. L. JAMES,
J. H. DAVIS,
A. H. FLEMING.

Committee on establishing a home for aged and infirm dentists made no report, but a new committee composed of Drs. Wheeler, Hunt and Stanly was appointed to report next year.

TREASURER'S REPORT.

RECEIPTS.

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DISBURSEMENTS.

Paid Supervisor clinics last year...................................... $ 16.39
Janitor last year..........................................................  5.00
Stenographer last year..................................................  60.00
Membership fee returned.................................................  10.00
Editing proceedings....................................................  25.00
Postage on same..........................................................  10.40
Printing proceedings.................................................... 345.00
Prosecuting ..............................................................  83.70
Treasurer bond and receipt books.................................  360.87
Note and interest.......................................................  109.57
Secretary's salary and expenses.................................  103.25
Treasurer's salary and expenses.................................  36.25

Total ............................................................................... $1,070.18
Balance on hand............................................................  55.26

$1,126.60

R. M. MORROW, Treasurer.

Hendersonville, N. C., June 26, 1914.

REPORT OF COMMITTEE ON ESSAY.

Your committee appointed to consider the Annual Essay, beg leave to report: We find the Essay to be a production of excellent merit, being a concise and clear eulogy on the life of Dr. John Hunter. It will be easily seen the essayist spared no pains or labor in its preparation, and the paper as a whole will be of great historical value to the dental profession.

J. A. SINCLAIR,
R. T. GALLAGHER,
P. E. HORTON.

REPORT OF SUPERVISORS OF CLINICS.

Your Supervisors beg to report to the Society a most successful clinic.

We beg to advise you that the members we asked to clinic were very prompt in replying to our request, and twenty-seven volunteered to clinic.

Out of the twenty-seven, several could not attend the meeting, though a large per cent. was present and gave to the members intensely interesting clinics, a great many things that we had heard about but had not seen.

On the whole the clinic was a great success and the committee wishes to thank:

Dr. L. V. Henderson, "Nitrous Oxide and Oxygen Analgesia."
Dr. W. A. Ray, "Some Uses of the Gilmore Clasp."
Dr. E. H. Chamberlain, "Method of Anchoring, getting wax form, Cavity Preparation in Anterior Teeth, showing no Gold."
Dr. Robt. S. Booth, "Cast Gold Filling in Anterior Teeth."
Dr. G. W. Whitsett, "Weston Metal Crowns."
Dr. J. G. Reid, "Synthetic Cement Filling."
Dr. J. H. Wheeler, "Utilizing the Indirect Method for Direct Casting."
Dr. J. S. Spurgeon, "Gold Inlay with Enamel Facing."
Dr. J. A. McClung, "Removable Bridge-work using Goslee Teeth."
Dr. L. G. Coble, "Taking the Bite in Bridgework."
Dr. J. C. Watkins, "Root Canal Filling."
Dr. J. N. Johnson, "Showing Surgical Correction in Adult Malocclusion due to Mouth Breathing in Childhood."
Dr. William Chisholm, "Manipulation of Porcelain."

J. A. SINCLAIR, Supervisor,
W. F. NICKEL, Assistant.

The treasurer reported the following names as suspended for non-payment of dues:

Dr. Fred Anderson, Dr. F. R. Anders, Dr. R. S. Booth, Dr. Z. V. Parker, Dr. F. H. Pittman, Dr. S. P. Purvis, Dr C. W. Regan, Dr. W. W. Rowe, Dr. J. T. Underwood, Dr. T. D. Webb, Dr. Geo. F. Whitfield.

Dr. D. L. James, chairman of the Executive Committee, made the final report for his committee in which he thanked the citizens of the town of Hendersonville for their cordial hospitality; Mr. Willcox for his splendid welcome; the hotels for their reduced rates and general courtesy; Dr. W. F. Nickel for his untiring work in making the meeting a success —and the dentists who took part in the programme. He also recommended that the janitor be paid $5.00 for his services.

On motion the report was adopted.

ELECTION OF OFFICERS.

President—Dr. J. A. Sinclair, Asheville.
Vice-President—Dr. R. T. Gallagher, Washington.
Second Vice-President—W. F. Nickel, Hendersonville.
Secretary—Dr. R. M. Squires, Wake Forest.
Treasurer—Dr. R. M. Morrow, Burlington.
Essayist—Dr. J. A. McClung, Winston-Salem.

Drs. J. N. Johnson and C. A. Thompson were re-elected as members of the Examining Board.

Dr. Wheeler and Dr. Stanley were named as delegates to the National Convention. Alternates, Dr. Sinclair and Dr. Hunt.

The officers were then installed and the president appointed the following committees:

Executive Committee—Drs. D. L. James, Dr. C. F. Smithson, Dr. J. S. Spurgeon.

Ethics—Dr. P. E. Horton, Dr. L. V. Henderson, Dr. J. M. Parker.


Auditing Committee—Drs. P. R. Falls, S. R. Watson, T. A. Apple.

Publishing Committee—Dr. J. Martin Fleming.

Prosecuting Committee—Dr. S. R. Horton.

Legislative Committee—Dr. I. H. Davis, Dr. F. L. Hunt, Dr. J. N. Johnson.

Wrightsville Beach was selected as the place of meeting next year; Raleigh second choice.

Supervisor of Clinics, if the meeting is in Wrightsville: Dr. W. T. Smith. If in Raleigh, Dr. E. B. Howle.

A rising vote of thanks was tendered Dr. W. F. Nickel for the courtesies shown and for his services in providing clinical material.

There being no further business the Society adjourned sine die.
List of Presidents of Society since its organization.

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*Dead.
List of life members by virtue of having paid dues for twenty-five consecutive years:

Alexander, C. L. ............................................Charlotte, N.C.
Bryan, N. L. ..................................................Newton Grove, N. C.
Carr, I. N. ..................................................Durham, N. C.
Conrad, W. J. .................................................Winston-Salem, N. C.
Everitt, D. E. ..................................................Raleigh, N. C.
Hillard, S. P. ..................................................Rocky Mount, N. C.
H. V. Horton ..................................................Winston-Salem, N. C.
James, D. L. ..................................................Greenville, N. C.
Little, J. B. ..................................................Newton, N. C.
Livermon, A. C. .................................................Scotland Neck, N. C.
Lynch, Wm. ..................................................Chapel Hill, N. C.
Matthews, J. E. ...............................................Wilmington, N. C.
Patterson, G. B. ..............................................Fayetteville, N. C.
Spurgeon, J. S. ...............................................Hillsboro, N. C.
Whitsett, G. W. ...............................................Greensboro, N. C.
Wyche, J. E. ...............................................Greensboro, N. C.

Names of applicants who passed the examination given by the North Carolina State Board of Dental Examiners, June, 1914:

Adams, A. J. ..................................................Swansea, S. C.
Bell, Wm. Forrest ...........................................Asheville, N. C.
Bell, John Gaskill ..........................................Morehead City, N. C.
Bingham, James Pearl ......................................Deutzon, N. C.
Bone, Arthur Cutchin ......................................Rocky Mount, N. C.
Carter, Eva Carroll .........................................Riverton, Va.
Chamberlain, Clifton Henry ..............................Yadkinville, N. C.
Dietz, Clinton Smith .......................................Conway, N. C.
Fields, Paisley ..............................................Boardman, N. C.
Foster, Harvey Kemp ........................................Liberty, N. C.
Foster, Harley Banner ......................................Liberty, N. C.
Fulton, Joseph .............................................Asheville, N. C.
Gibbs, Wallace D. ..........................................Washington, N. C.
Hachman, Elmer E. .........................................Grantsville, Md.
Hollingsworth, Wm. M. .....................................Mount Airy, N. C.
Hull, P. Carter .............................................Rutherfordton, N. C.
Kibler, Wm. L. ...............................................Lexington, N. C.
Lineberger, Henry Otis ...................................Gastonia, N. C.
McKinney, John Y. ..........................................Horse Shoe, N. C.
Murphy, Robert Hulin .....................................Mebane, N. C.
Olive, Robert Milton ......................................Fayetteville, N. C.
Peeler, Cleveland McClure ..................................Casar, N. C.
Spence, Ebern Pearsall ...................................Goldsboro, N. C.
Proceedings North Carolina Dental Society

Spoon, Thomas Luther --------------------------Hartshorn, N. C.
Springs, Wm. J. --------------------------------Mount Holly, N. C.
Stevenson, Ralph E. ---------------------------Camden, N. C.
Taylor, Wm. Comfort --------------------------Salisbury, N. C.
Taylor, James Anderson -----------------------Ararat, N. C.
Taylor, Richard T. ---------------------------Cincinnati, O.
Taylor, B. Clay --------------------------------Stratford, N. C.
Truxler, E. A. -------------------------------Spartanburg, S. C.
Vander Linder, Wm. Harrison--------------------Hendersonville, N. C.
Wagoner, Wm. G. --------------------------------Vox, N. C.
Wallace, Wm. Henry (colored)-------------------High Point, N. C.
Whitson, Wm. Keith ----------------------------Asheville, N. C.
Worsham, Adolphus Erle ------------------------Ruffin, N. C.
Yarborough, John Archibald---------------------Cary, N. C.

List of those suspended for non-payment of dues, 1914:

Anderson, Fred.
Rowe, W. W.
Underwood, J. T.
Webb, T. D.
Whitfield, Geo. F.
Anders, F. R.

Booth, R. S.
Parker, Z. V.
Pittman, F. H.
Purvis, S. P.
Regan, C. W.
New members elected 1914:

**Honorary.**

Carter, Eva C. ........................................ Riverton, Va.

**Active.**

Adams, A. J. ........................................ Durham, N. C.
Baird, C. D. ........................................ Franklin, N. C.
Bell, Wm. F. ......................................... Asheville, N. C.
Bell, Jno. G. ......................................... Morehead, N. C.
Chamberlain, C. H. ................................. Yadkinville, N. C.
Cobb, Whitfield ...................................... Winston-Salem, N. C.
Evans, Geo. J. ...................................... Asheville, N. C.
Fields, Paisley ..................................... Boardman, N. C.
Foster, H. K. .......................................... Liberty, N. C.
Fulton, Joseph ...................................... Asheville, N. C.
Hall, B. F. ........................................... Asheville, N. C.
Hicks, R. C. ........................................ Lawndale, N. C.
Kibler, W. L. ......................................... Lexington, N. C.
Levy, Sam ............................................. Charlotte, N. C.
Lineberger, H. O. ................................. Raleigh, N. C.
Maddox, N. P. ...................................... Asheville, N. C.
Oliver, R. M. ......................................... Fayetteville, N. C.
Peeler, E. M. ....................................... Casar, N. C.
Springs, W. J. ...................................... Mount Holly, N. C.
Taylor, W. C. ....................................... Salisbury, N. C.
Truxler, E. A. ...................................... Spartanburg, S. C.
Wagoner, W. C. ........................................ Vox, N. C.
Worsham, E. W. .................................... Ruffin, N. C.
Young, J. A. ........................................ Newton, N. C.
Zimmerman, J. W. .................................. Salisbury, N. C.

**HONORARY MEMBERS:**

Adair, R. B. ........................................ Atlanta, Ga.
Banner, C. W. ...................................... Greensboro, N. C.
Beadles, E. P. ........................................ Danville, Va.
Bland, C. A. ........................................ Charlotte, N. C.
Bland, M. A. ......................................... Charlotte, N. C.
Bogle, R. B. ......................................... Nashville, Tenn.
Campbell, H. W. ................................... Suffolk, Va.
Carroll, Delia Dixon ............................. Raleigh, N. C.
Carter, Eva C. ...................................... Riverton, Va.
Collins, Cara C. .................................. Atlanta, Ga.
Cowardin, L. M. .................................... Richmond, Va.
Chisholm, W. W. ..................................... Anderson, S. C.
Proceedings North Carolina Dental Society

Crenshaw, William .................................................. Atlanta, Ga.
Cuthbertson, C. W. .................................................. Washington, D. C.
Dale, J. A. ............................................................ Nashville, Tenn.
Eby, Jos. D. ............................................................. Atlanta, Ga.
Foster, S. W. ............................................................. Atlanta, Ga.
Goldberg, E. H. ......................................................... Bennettsville, S. C.
Gorman, J. A. ............................................................. New Orleans, La.
Heatwole, T. O. ......................................................... Baltimore, Md.
Hinman, Thos. P. ......................................................... Atlanta, Ga.
Holland, Frank ........................................................... Atlanta, Ga.
Holliday, R. S. ........................................................... Atlanta, Ga.
Huff, M. H. ............................................................... Atlanta, Ga.
Hughes, C. N. ............................................................ Atlanta, Ga.
Lambright, W. E. ......................................................... Atlanta, Ga.
McCullough, F. R. ......................................................... Atlanta, Ga.
Moore, S. W. .............................................................. Baltimore, Md.
Morgan, H. W. ............................................................. Nashville, Tenn.
Rominger, C. A. ........................................................... Zion City, Ill.
Rutledge, B. ............................................................... Florence, S. C.
Simpson, R. L. ............................................................ Richmond, Va.
Smith, B. Holly ........................................................... Baltimore, Md.
Spratley, W. W. ......................................................... Richmond, Va.
Strickland, C. D. .......................................................... Anderson, S. C.
Teague, B. H. ............................................................ Aiken, S. C.
Thompson, J. S. .......................................................... Atlanta, Ga.
Turner, M. E. ............................................................. Atlanta, Ga.
Visanska, S. A. ............................................................ Atlanta, Ga.
Whitaker, Joel D. ........................................................ Raleigh, N. C.
White, J. A. .............................................................. Williamson, N. C.

ROLL OF ACTIVE MEMBERS:

Adams, A. J. ............................................................... Durham, N. C.
Alexander, C. L. .......................................................... Charlotte, N. C.
Allen, R. T. .............................................................. Lumberton, N. C.
Allen, T. B. ............................................................... Four Oaks, N. C.
Anderson, R. P. ........................................................... Mocksville, N. C.
Apple, R. O. .............................................................. Winston-Salem, N. C.
Apple, T. A. .............................................................. Winston-Salem, N. C.
Ashburn, T. F. ............................................................ Randleman, N. C.
Bain, E. D. ............................................................... Dunn, N. C.
Baird, C. D. ............................................................... Franklin, N. C.
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