FAILURE OF FILLINGS DUE TO IGNORING THE HISTOLOGICAL STRUCTURES OF THE TEETH.

*By G. A. Brubb, D. D. S.

When your committee asked me to present a paper at this meeting they suggested that it cover some phase of the field of Histology, because of my connection with that department in the College, so I chose this topic, which I thought we as dentists might study together with profit.

There are two words in this title that may seem rather harsh, but after due consideration I could find no way to eliminate them. The word "failure" is the only word I could find that would express just what I wanted to consider, and the only substitute for the word "ignoring" I could find that would do at all is the phrase, "lack of knowledge." I choose the former as the less harsh of the two terms.

The lines of thought that I wish to present are not some new and startling discovery—they are ideas which I have gathered from several different sources and have compiled to fit the hour. Many of these have been garnered from such authorities as Drs. Clyde Davis, G. V. Black and Frederick Noyes.

The average practitioner sees many fillings that have proven failures or at least haven’t given the service that had been expected of them. The causes of these failures may be found in one or another or a combination of the following classes:

1. Faulty manipulation of filling materials.
2. Use of inferior grade of materials.
3. Ignoring the histological structures of the tooth.
4. Round or rolling seats instead of flat ones.
5. Too small body of filling material to withstand the crushing strain of mastication.
6. Failure to extend for prevention in cavity preparation, etc.

However, it is not my intention to inflict upon you a review of all these classes of failures, each of which would make a paper within itself. I intend, rather, to talk about failures due to ignoring certain rules in cavity preparation made necessary by the histological structures of the teeth, and mainly to the structures of enamel together with its relation to the dentine. At this point, I wish to announce so that there will be no misunderstanding the purport of this paper, that it has nothing to do with Black’s famous rule "Extenstion for Preven-
tion." It is rather a sub-division of Resistance Form in cavity preparation.

I believe there are many more of these failures than we think for because, usually, the patient does not return to a dentist until after recurrent caries has begun and it is so much easier to attribute the failure to some other one or more causes, unless the dentist is fully cognizant with the structural anatomy of the teeth.

To facilitate the handling of this paper in later parts wherein I shall use specific cases I wish at this point to outline briefly the anatomy of a tooth and the structural elements of one of its tissues, the enamel.

The dentine makes up the greater body of the tooth and gives shape to it. It is the only tissue which has each root, cusp ridge and groove indicated in it. This envelopes the pulp tissue. The dentine is covered in the root portion by cementum and in the crown portion by enamel. The structural elements of the enamel are the enamel rods and the interprismatic substance or cementing substance. These rods which are prism like are constant in diameter throughout their length. Each has one of its base at or toward the dento-enamel junction and the other at the outer surface of the tooth and are so arranged with respect to their plane with the dentine "as to give the greatest strength to the perfect tissue, and to furnish the greatest resistance to abrasion in the use of the teeth for mastication." The greater amount of area on the outer surface of the crown of the tooth as compared with the corresponding surface of dentine is taken care of in two ways: The outer ends of the rods are cut or shaped more obliquely than the inner ends—thus they can take care of more area. Second: There are short rods which are set between the full length rods and extend only a part of the distance toward the dento-enamel junction. These are not constant in diameter, but taper.

The enamel rods are much stronger than the cementing substance. This causes the enamel to split or cleave in directions parallel with the rods. It splits very much easier when unsupported by sound dentine. For convenience I shall use the following classification of failures:

1. Anchorage or Resistance form.
2. Undermined enamel margins.
3. Angle restorations.
4. Enamel walls.
5. Weak areas in the regions of cusps and ridges. This classification has its faults—in fact some over-lap each other so that there is scarcely any distinction. But it will serve as a working basis. I shall consider each in order.

Failure to provide ample anchorage often results in lack of service on the part of a filling. The tendency of enamel to split makes it of very little value for retention purposes. The dentine gives the elastic strength to the tooth and upon this tissue anchorage is dependent. A good rule to follow is to make sufficient anchorage in the dentine, so that, if the tooth be stripped of the enamel, there will remain ample retention form. This part of cavity preparation should not be con-
founded with convenience or starting points. The cavity should be so prepared that it will still have sufficient anchorage if these convenience points could be removed after the filling is completed.

**Undermined Enamel Margins.**

I think this class of failures are more numerous than we are inclined to suspect. Unless the undermined portion is large and spits away in a large piece, causing the patient to return at once with the report that they broke off a large portion of tooth substance or filling material, it is easier to lay the trouble to recurrent caries, when, in fact the latter is only a sequence of the gradual splitting away of enamel which has allowed the ingress of bacteria and their products. The remedy here is to allow no enamel walls unsupported by sound dentine to remain standing, especially in areas liable to receive stress.

**Angle Restorations.**

It is not an uncommon occurrence to see an angle restoration with a wedge-shaped opening in the incisal edge between the filling and the remainder of the tooth. This is due to the fact that the edge has not been approached properly to withstand the strain which it is designed to bear. I like to use the wood pile as an apt illustration of the weakness of square enamel edges. Everyone knows, when the end support of a pile of cord wood is removed, how little stress from above is required to start the wood rolling. So it is when the margin of the filling is brought square out to the incisal edge. But, take this same pile of wood and instead of building it squarely, build it on a sloping plane. Then it is almost impossible to place load enough upon it to start the wood to rolling. To avoid having any such trouble in angle restorations the cavity outline as it approaches the incisal edge should curve toward the axial plane, the degree of the curve becoming greater the nearer the cavity outline approaches the axial plane.

**Enamel Walls.**

The neglect of properly finishing enamel walls probably record for more failures from a histological standpoint than any other cause. Such failures are quite numerous in occlusal cavities (class 1), proximal cavities (class 2), and angle restorations (class 4) as previously outlined. In occlusal and proximal cavities there is a great tendency to prepare the cavity with a burr without any reference to the line of cleavage, or, if the chisel is used, to prepare the wall in the line of cleavage. This always leaves a weak wall, especially in areas liable to receive great stress under the strain of which the margin is sure to break away. This breaking away process is usually slow enough to allow recurrent caries to play havoc with the tooth before the case returns for remedy.

I have pointed out earlier in this paper that strong walls demand that the roads which form the cavo surface angle must be supported by sound dentine. In addition to this these same roads must be supported by shortened enamel rods—notice I say shortened, not short—there is a difference—whose outer ends are covered by the filling material and whose inner ends are supported by sound dentine. This
means, that, unless the cavity extension to remove all affected portions cut the rods obliquely, the cavo surface angle must be beveled.

**Cusps and Ridges.**

Lastly I wish to discuss the inadvisability of laying cavity margins in the regions of cusps and ridges. As I said in describing the dentine, each cusp and ridge are indicated in the dentine. But, these dentinal cusps and ridges are not directly under the corresponding point of enamel but more toward the axial from them. While these regions on the surface of the enamel between points directly over the dentinal cusps and ridges and the corresponding enamel points are areas of great strength in the perfect tooth, they are areas of weakness for enamel walls.

For an example of the failure of fillings in the region of a cusp let us consider a superior bicuspid in which caries has begun in the mesial and distal pits. If the progress of caries has not reached the buccal dentinal cusp, the enamel cusp will retain its strength and the enamel wall may be left in the axial plane. If such a preparation cuts the enamel rods obliquely from the dento-enamel junction to the surface the bevel angle may be omitted. On the other hand if decay has reached the dentinal ridge and the enamel wall should be left parallel to the axial plane, the area of enamel between the cavo surface angle and the enamel cusp is a weak region because it is unsupported by dentine. This weak area should be removed to the line of cleavage which will necessitate the restoration of the enamel cusps with filling material.

To show the grief that will come to an operation for ignoring the histological structure of enamel in the regions of the ridges I wish to cite four specific examples.

First, take a cavity in the mesial pit of a superior bicuspid. The tendency of the operator is to leave the mesial wall in the axial plane. This is a safe procedure if decay has not reached the dentinal ridge. But, if decay has reached this point, to leave the mesial wall parallel to the axial plane is to invite failure, for this leaves that portion of enamel between the margin of the cavity and the enamel ridge unsupported by dentine, thereby increasing its liability to break away. This enamel should be removed to the enamel ridge following the line of cleavage.

Second, suppose caries has attacked the mesial of a bicuspid or molar at contact point. Dentists are inclined to treat these as simple cavities, especially where access does not require cutting to the occlusal. In so doing they usually leave the occlusal wall perpendicular to the axial plane with a resulting failure because it leaves a wedge-shaped piece of enamel unsupported by dentine. The line of cleavage is from 15 to 18 degrees centigrade occlusally from the horizontal plane. In such cases it is not enough to make the enamel wall below the line of cleavage, because the dentine gives very little support to the remainder of the enamel ridge. Consequently the ridge is likely to be broken off over to the occlusal groove. These cavities should be cut to the occlusal.
Third, take an incisor pit in a superior incisor. The usual procedure here is to remove all traces of decay and then to make undercuts for retention. This usually leaves gingeval ridge standing. This is a weak area because it has been robbed of its support. The gingeval wall should be cut to a horizontal plane and beveled, which will permit the restoration of the ridge with the filling material.

Fourth and lastly, take for consideration proximal cavities in the mesial and distal of incisors. These failures are very numerous. Unless caries has been extensive enough to remove the mesial or distal lingual marginal ridge the dentist is often tempted to let it stand. This leaves a weak area linguually from the filling which is certain of being broken off by the force exerted upon the lingual by the stress of lower incisors. The ridge or margin should be removed and restored by filling material.

In such a paper it is not necessary to demonstrate that there are failures. That is self-evident. I have shown that a large percentage of these are due to ignoring the histological structures of the teeth, and it is only a step to point out the remedy. If we as dentists will familiarize ourselves a little more with the histological structure of the teeth, and then stop ignoring those structures, and persist in preparing our cavities in light of that knowledge, it will materially lessen the percentage of failures and decrease the amount of grief to which the dentist is heir.

NEW STANDARDS IN ROOT-CANAL TREATMENT.

Opening the Canals.

In single-rooted teeth it is usually a simple matter to find and enter the root-canal. With multi-rooted teeth, however, there is frequently difficulty in locating the orifices of the several canals. The cavity is washed with alcohol and dried by the air-blast. As the sub-pulpal wall blanches into dryness, the minute openings of the canals, not drying so quickly, may often be seen, and the clue easily followed up.

Before leaving the pulp chamber proper, let me suggest great caution in preserving the natural landmarks of the sub-pulpal wall, since they are important guides in tracing canal orifices. For this reason the bur should never touch the sub-pulpal wall; its use ends with the removal of the pulpal wall in uncovering the pulp. Hand instruments only should be used in exploring for orifices. A delicate hatchet blade on a conveniently bent shank is very useful in "nibbling" into likely corners, and is safe as any instrument for that purpose.

At this point it is necessary to consider a means of exploring and enlarging the canal, often of extreme fineness in caliber and filled with toxic substances, in such a manner that the true lumen may be followed and its contents removed without any mechanical violence sufficient to force the poisonous material toward the apical foramina. Our greatest help here is Shrier's paste of metallic sodium and potassium.
Minute particles of this paste, clinging to a barbed or twisted broach, on coming in contact with the organic contents of the canal produces a rapid destruction by oxidation, whether the tissue be dead or living. In this way the minutest organic filament is traced and destroyed, and the liquid by-products are removed either with the broach or by bibulous paper. The true canal is thus discovered and emptied, and the sodium and potassium paste in attacking the contents of the dentinal tubuli, further breaks down the surface in immediate contact, thereby enlarging the canal. Complete sterilization is produced within the zone of action. Following this treatment the canal should be irrigated with hydrogen dioxid, 3 per cent., dried with sterile paper points, then flooded with alcohol and again dried. The great advantage in this method lies in the fact that the opening is effected through the removal of organic contents of the canal, hence in clearing the true canal, whereas in the use of sulphric acid, as suggested by Dr. Callahan, the inorganic structure is attacked, and the operator may easily depart from the real clue and work into a ‘false pocket.’ The sulphuric acid method, however, is a valuable aid in cautious hands.

Any and every root-canal should be opened with a view not merely to removing its dangerous contents, but to leaving the canal so shaped that the filling operation may be executed with the greatest ease and certainty. This means an opening to and slightly through the apex of the canal of sufficient caliber for the filling substance to pass, and tapered from a liberal pulpal orifice without shelves or inequalities along its walls on which an instrument may trip or catch. The progress made should be determined by placing a sterile fine gold wire in the canal with the end bent to insure easy removal. Two or three roentgenograms may be needed before the wire is shown to touch the periapical tissue. The canal walls should be filed smooth with the barbs of a sharp broach so that the instrument can find only a continuous surface from orifice to apex. Such a canal may be filled with certainty for the simple reason that the filling and filling instrument can only go in one—the right—direction. This shaping of the canal may be done without unduly weakening the root. Revolving reamers should be used as little as possible. They are convenient in making a free orifice, but further in the canal become dangerous from the likelihood of leaving the canal proper and perforating the wall, or in creating shoulders of detin not easily removed, which if left will ‘snag’ the filling instrument and interfere with correct technique. There is nothing safer than a new barbed broach, operated by skilful fingers, backed up by the almost infinite patience this work requires.

Perforation of the canal wall is an unfortunate accident, but one which may happen in the best-regulated dental practice. When this occurs, the canal should be rinsed of all debris and a dressing made of a non-irritating antiseptic—such as a mixture of oil of cloves and wood creosote, the teeth closed and allowed to rest for several days. This dressing may be changed several times until it is possible to dry the place of perforation by means of alcohol and warm air. If this spot is then wetted with oil of cajuput, or better still, Dr. Callahan’s solution of rosin in chloroform, the excess of liquid removed, and a small thin
wafer of slightly warmed gutta-percha be applied thereon and gently carried to place with a suitable plunger, this awkward point of weakness should be permanently protected. Of course the foregoing presupposes that the opening is accessible and visible. A perforation near the apical end of the canal is difficult of treatment, and requires the most delicate skill and good judgment. Under strict asepsis, the gutta-percha filling should obliterate that point of weakness.—Dental Digest.

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DR. AND MRS. MESERVEY ON "HONEYMOON."
(From the Kearney Morning Times.)

JUST MARRIED.

Our popular young dentist and his brunette bride
Are leaving us to journey to the ocean's tide.
Show them a good time and you will not go amiss.
They are a jolly young couple and will enjoy this.

You will find them in the Pullman, or almost anywhere
Spooning, always spooning, without a thought or care.
Strangers, treat them kindly, for as you must know
It is rather embarrassing to be the whole d— show.

With the foregoing poster to announce them, a shower of rice, wishes of good luck and good-by, a blushing bride and groom took a fast train east yesterday evening. Every effort was made to elude their persistent friends, who gathered about twenty strong, but to no avail, even the Pullman porter being persuaded to make the affair complete by a good sized tip. The bride and groom in question was Doctor and Mrs. E. A. Meservey, who some fifteen years ago experienced a sensation very much the same.

Friends of the couple gathered at the depot a short time before the train arrived and planned their coup well. When the train arrived the rice began to shower and the couple began to seek shelter. The passengers on the train, eager to see the bride and groom, crowded upon the platforms and joined in the shouting of congratulations.

Doctor Meservey in his effort to explain to the unsuspecting that he was not a newly married man, called in vain for his children to recognize their father. All to no avail, however, and the train carried a newly married couple as far as the passengers were concerned. Flowers and candy were gifts for the bride.

When last seen congratulations were being offered on the observation platform and an obliging gentleman in a palm beach suit was attempting to kiss the bride.

Doctor and Mrs. Meservey will be on their "honeymoon" for three weeks and will take in all points of interest on the Atlantic coast, ending their trip with a voyage down the St. Lawrence before returning to Kearney.
NOT INFORMED.

"Where, save in medical circles, do men travel long distances, and sacrifice time and money to attend scientific meetings, to get perchance some small increase in knowledge and usefulness? Where else do men so eagerly seize any chance, even at great cost to themselves, to improve their scientific acquirements? * * * Do lawyers or ministers or dentists or architects or engineers do this? No, indeed; they may and do learn much after they graduate and get licensed to pursue their avocations; but they learn in the course of their life's work and get paid while they are doing it."

This little literary gem appeared in the Medical Economist and was clipped by the Dental Digest. With bar associations, ministerial associations, and dental societies existing in every state of the Union, it will hardly be necessary for the writer of this article to treat his delusion by coming out to Nebraska, where eighty per cent of the dentists are members of the state society, and where ninety percent of the membership are regular attendants at the meetings. The medical associations are undoubtedly doing a great work, the same as our societies are doing, and because of the close relationship of the two professions we take more than a passing interest in this advancement; however, there are other organizations whose members attend "scientific meetings," and these meetings are attended with the sacrifice of the same amount of time and money.
The National meeting for 1917 will be held in New York city.
Dr. Cressler’s assistant spent Sunday in Gothenburg recently.
Dr. H. F. Murphy has just returned from an auto trip to Illinois.
Dr. C. C. Farell of Gothenburg, is driving a fine new Studebaker.
Mr. R. W. Victor was scouting around Lincoln the latter part of July.
Dr. C. A. Spellman and family of Beatrice were recent visitors in Lin­coln.
Miss Lucile Bruce has been in Hastings, the guest of Dr. and Mrs. G. H. Hunt.
Dr. F. W. Webster spent the week end with Dr. Ferdinand Griess of Sutton.
Dr. W. H. Stryker of Beatrice attended the National Elks Convention in July.
Dr. Clyde Davis’ mother passed away in July. The Journal extends its sympathy.
Dr. Cressler has been in Chicago where his wife was to undergo an operation.
Dr. James Pierce and family spent two weeks visiting friends at Table Rock, Neb.
Dr. B. S. Hooper reports from Kansas City that he is very happy in his new work.
Dr. C. A. Spellman autoed to Humboldt, July 16th, and spent the day with friends.
Dr. B. L. Spellman spent a week in July in Canada, where he had some land interests.
Miss Ella Downing, of David City, is now assistant to Dr. H. C. Brock of North Platte.
Dr. M. H. Dunham returned August 11th from a trip through the east in his Ford twin six.
Dr. C. R. Buckley, Beatrice, is spending a couple of weeks around his old home in Iowa.
Mrs. J. H. Fowler of Kearney, who came to attend the assembly, will return home Tuesday.
Dr. L. L. Barber, Toledo, Ohio, was elected president of the National for the ensuing year.
Dr. H. R. Hatfield, Grand Island, is an all auto trip to Estes Park and other Colorado points.
Dr. G. E. Souders and family, Nebraska City, is spending his vacation at Pelican, Minnesota.
Dr. C. H. Gietzen has closed his office until the 15th of August and is away on a vacation trip.
Dr. and Mrs. R. F. McCreery and Robert and Mr. and Mrs. P. P. White autoed to Omaha Tuesday.
Dr. L. A. Chamberlain of Curtis, got pinched for illegal fishing. He had lots of pull so is free.
Dr. R. F. McCreery, Wahoo, and Dr. Vance met at Estes Park, Colorado, and exchanged notes.
Dr. and Mrs. R. S. Sturdevant of Lincoln, were guests of Mr. and Mrs. Elmer Johnson last Sunday.
Dr. E. A. Meservey is attending the National at Louisville after which he will continue a trip east.
Dr. R. J. Brigham, L. D. C., '16, has gone to Hartford, Conn., to practice dentistry with an uncle.

The Journal extends sympathy to Dr. J. M. Prime of Omaha. Dr. Prime’s mother passed away recently.

Dr. S. D. Greene, L. D., '16, who is associated with Dr. E. R. Truell of Lincoln, made a trip to Chicago.

Dr. C. S. Greusel, L. D. C., '16, has formed an association with his uncle, Dr. L. P. Davis, of Lincoln.

Nebraska was better represented at the National than other Western states. Hurrah for Nebraska.

Mrs. C. M. Brookman has returned to her home at Guide Rock after visiting in North Platte and Lincoln.

Dr. F. W. Riley of Verdigre, Neb., has repurchased his office at Seneca, Kans., which is Mrs. Riley’s home.

Dr. and Mrs. L. R. Fritz of Wymore left July the 25th for several weeks vacation to be spent in Wisconsin.

Dr. Carl Miller, who is associated with Dr. Bruening, has been quite ill. We are very glad to announce his recovery.

Dr. J. L. Ubel, Ashton, spent a week by auto in Lincoln and Omaha, about the time of the Omaha auto races.

Dr. and Mrs. Wright Newman visited Dr. and Mrs. O. M. Newman at their camp at Sloniger’s near Lushton Sunday.

Dr. and Mrs. M. A. Miller and daughters and Miss Deveda Black are taking a three weeks’ outing at Brainard, Minn.

Dr. E. X. Crowley of Lincoln bought an old automobile (Oldsmobile) recently. You should see doctor burn the gasoline.

Dr. Geo. H. Ball of University Place has gone on one of those vacations you hear about—taking along his rod and gun.

Dr. J. A. Colfer of Chadron has sold his office to Dr. Walters, this year’s Creighton graduate, and is now located at Hastings.

Dr. E. X. Crowley and family visited at Sioux City, Ia., and Hower, Neb., for a couple of weeks during the month of July.

Dr. McElhinney of Lexington, while out driving his new car skidded into the ditch and tried to join the Methodist church.

Dr. H. G. Harris, Auburn, is spending a vacation with his brother-in-law’s farm near York, Nebraska.

Drs. L. S. Moore and J. R. Moore, father and son, of Grand Island, have had their offices remodeled by Hettinger Brothers.

Dr. W. A. McHenry is spending a month in the woods among the lakes of Wisconsin. He is enjoying his vacation immensely.

Drs. Carroll and Despecher, both of Omaha and Dr. Wallace of Oakland, are on a trip in the east. The three met in New York.

Miss Morse, assistant to Dr. E. A. Meservey, made a very pleasant visit to the office of Drs. Shearer, Prime and Davis in Omaha.

Dr. E. R. Gardner, L. D. C., ’16, has been taken under the protecting wing of his brother-in-law, Dr. Thomas Trumble of Lincoln.

Dr. Walter Kohler of Lexington, spent a few painless hours in Gothenburg with Dr. F. H. Welden under the influence of novocain.

Dr. Victor Coulter, L. D. C., 1916, is paddling his own canoe. He has opened an office in Lincoln. Success to your undertaking “Vic.”

Dr. H. Neff, formerly manager of the L. D. Caulk laboratory at Huntington, W. Va., is now in the gold department of the Billings laboratory.

Robert Raymond arrived Saturday, August 5th, 1916, at the home of Dr. and Mrs. J. E. Ruzicka, Plainview, Nebr. Congratulations, Doctor.
A good many Omaha dentists are expecting to move into the new First National Bank building which will be ready about the first of the year.

Dr. P. T. Barber has returned from his vacation trip in Northern Wisconsin, wearing a grin, a pair of palm beach trousers and a coat of tan.

Dr. Frank O. White of Wayne is seeking the address of some dentist who wants to go camping in Colorado or north in the wilds of Minnesota.

Dr. D. A. Finch of Grand Island, has remodeled and enlarged his office, so as to take Dr. A. L. Rousey into his office. Hettinger brothers did the job.

Dr. W. L. Shearer left August 2nd for Cumberland, Wis., where he will spend a month on a fishing trip. Mrs. Shearer and her father accompanied him.

Dr. and Mrs. R. S. Sturdevant entertained Mr. and Mrs. Elmer Johnson at dinner Monday evening Mr. and Mrs. Johnson motored to Lincoln from Wahoo.

Drs. Clyde Davis, M. E. Vance, L. P. Davis and Mr. H. T. Folsom of the Metaline Co., were the Lincoln representatives to the National at Louisville, in July.

Dr. Robert W. Casper and Miss Edna Bell Call were married in April. Dr. Casper is a graduate of L. D. C., '14, and practices his profession at St. Edwards.

At the last regular meeting of the Dental Board Dr. J. H. Wallace was elected president, Dr. Ferdinand Griess, vice-president; Dr. S. A. Allen, secretary.

Mr. and Mrs. B. P. Billings motored to Cumberland, Wis., on a fishing trip, but so far we have had no fish as promised—maybe they did, but that's another story.

Dr. R. V. Alldritt of Columbus took a couple weeks' vacation, which he spent in Omaha and Lincoln, with his father and mother and his brother, Dr. E. C. Alldritt.

Drs. Ferdinand Griess of Sutton, and S. A. Allen of Loup City, were in Omaha July 13 and 14 attending a special meeting of the State Dental Examining Board.

Dr. P. J. Morton and family, consisting of wife and son, Perry, left Lincoln August 6 for a month's vacation, which will be spent at and near Grand Lake, Colo.

The genial face of our president, Dr. H. J. Porter, is often seen on the streets of Omaha and there is always a welcome handshake and a broad smile to greet you.

Dr. and Mrs. W. R. Clark left yesterday morning for Colorado where they will spend a month. They will first visit Colorado Springs and the rest of the time will camp.

The House of Delegates of the National Association voted to hold the meetings during the ensuing year during the month of October hereafter to avoid the hot weather.

Some of Nebraska's dentists around in the neighborhood of Fremont are still telling why Stecker "didn't throw his man," also are minus a few greenbacks on the results.

We see Dr. M. O. Johnson in Lincoln often these days. Mrs. Johnson is in a Lincoln Hospital for an operation, and is doing fine. Everything indicates a rapid recovery.

Dr. and Mrs. O. H. Cressler have been in Chicago for a month, where Mrs. Cressler has been in a hospital. We are very glad to learn that Mrs. Cressler is doing very nicely.

Dr. J. F. Cole of Aurora is taking a month's vacation from both jobs—from his job as City Commissioner and Dentistry as side line. Dr. Cole is in Wyoming by the auto route.

Dr. T. A. Trumble spent ten days at Andrus Lake, South Dakota, while his offices in the new Security Mutual building were being finished. Come, give us your fish story, Doctor.

The National Dental Journal is to become a monthly publication as opposed to a quarterly as it has been in the past. This will give us more of the findings of our research men.
Dr. Herbert Wiesel, whose home is Fairbury, is to be associated with Dr. Geo. M. Byrne, as soon as the suite can be remodelled to enable same to accommodate the new arrangement.

Drs. Cressler and Meservey were delegates at large of Nebraska at the national. Nebraska may have had other representatives at the national, but if so we have not been duly informed.

Dr. E. A. Thomas of Hastings and family passed through Omaha on an auto trip to Kansas City. The Doctor is busy planning a new office and was getting some new ideas en route.

Dr. W. R. Clark is away to California as is his yearly custom. Dr. W. T. Humphrey also flies away with Mrs. H. for a visit to his mother-in-law in California for most of July and August.

Dr. L. P. Davis is again on the job after a spell of sickness which he certainly is not accustomed to. He lost a few pounds in the experience, by his looks, but expects to regain them promptly.

Dr. and Mrs. P. J. Bentz, Lincoln, and Mr. and Mrs. G. H. Bentz and daughter Fern and son, Kenneth, of Fairfield, left Monday for a three weeks’ trip to Lake Okoboji and Spirit Lake, Iowa.

Dr. C. E. Caukins started on a two weeks’ auto trip the last of July to Northwestern Nebraska to sell some of his land. We did not know that you were such an extensive land owner, Doctor.

Miss Elizabeth Eissler, assistant to Drs. Vance and Grubb, is taking a two weeks’ vacation. With Dr. Vance in Colorado, Dr. Grubb is fighting it out alone with the aid of Miss Eissler’s sister, Helen.

Dr. T. L. Cartney, Filer, Idaho, an old Creighton graduate, passed through Omaha with his charming bride from Wymore. The bridal party was accompanied by Dr. and Mrs. Feese of Wymore.

Dr. A. B. Kerns of Elgin has sold out to Drs. Scace & Spanton, both Lincoln graduates this year. “Red” is taking a three months’ vacation till he can make up his mind where he wants to live.

By the way, talking of state board doings, weren’t you sorry to see the page for the secretary discontinued in the Journal? The editor of these columns looked with a great deal of interest for his page.

Dr. E. A. Thompson of Hastings was an Omaha visitor the early part of August and reports that he is putting in one of the latest equipments on the ground floor in the annex to the Clark hotel at Hastings.

Dr. M. E. Vance was honored, Nebraska was honored and the National Dental Association was honored by the election of Dr. Vance to the vice-presidency of the National Dental Association for the West.

Dr. W. A. McHenry of Nelson, Nebr., on his return from his vacation at some of the Wisconsin lakes, stopped over a day in Omaha and visited as many of the offices as he could get around to during that time.

Dr. and Mrs. C. E. Brown, University Place, drove to Omaha, from which place Mrs. B. took a train to Illinois. The Doctor will follow in a week, and they will spend a couple of weeks in and around Chicago.

Dr. M. O. Johnson, Crete, is teaching Mrs. Johnson to drive the car. Mrs. Johnson put the new car to the test. A large tree in the yard balked and refused to budge. The car required a new fender and headlight.

Dr. E. B. McQuillen who has passed the state board is opening very nice offices in the World-Herald building, Omaha, where he will practice oral prophylaxis. Dr. McQuillen has taken special work in this department.

The stunt that Dr. Victor Coulter pulled off was not a shocking surprise to all of his friends because they had known for some time that Doctor was some politician. (A politician is noted for keeping things to himself.)

Dr. Chas. Yungbut of Lincoln, in his new white uniform and in his swell new office—appears to be one of the happiest men in town. And he ought to be. A visit to see him and his new office should delight anyone.

Malcolm Woodard, of the Billings D. S. Co., Lincoln branch, is now married to the finest girl in the country—he is quite sure. Here’s our wish that with very short lapses—he will ever feel that way. Our best wishes to him.

Dr. E. W. Fellers, wife and daughter, together with father and mother,
spent his two weeks vacation in an auto. The trip covered eleven hundred miles in Kansas and Western Nebraska, where the Doctor has extensive land interests.

Dr. A. W. Orr and daughter, Miss Julia Orr, were at the National. Dr. Orr has been a regular attendant at the National for twenty years. Anybody that desires to compete with the Doctor for such a record, hold up your hands.

Dr. A. P. Taylor, Lincoln, has been keeping "bachelor's quarters" for three months. His mother has been at Phoenix, Arizona. We would advise Mrs. Taylor to make her visits shorter, or it may drive the Doctor to do something irrational.

Dr. H. A. Nelson of Omaha, the young neophite in the matrimonial game, is seen on the streets wearing a broad grin, (something very unusual for a man of his disposition). Says he likes it and advises every one of his friends to "Go and do likewise."

Dr. G. H. Hunt is opening his office in Hastings very soon. He plans to have an office that it will be a pleasure to work in, and will impress the patient with what he thinks of himself and his profession, and Hastings is pretty sure to appreciate that, too.

Dr. and Mrs. J. E. Wallace of Oakland have left to attend the meeting of the National Shrine Council at Buffalo, N. Y., after which they will take a trip to the Thousand Islands, visiting New York, Philadelphia, Boston, Washington and other Eastern points.

Dr. C. A. Reynolds, M. D., of Lincoln, and Dr. G. A. Grubb and families, visited the State fisheries just across the river from South Bend by auto. They made the trip going by Ashland and returning by Louisville. It is a very pretty drive down the river.

Professor Von Blitzen is on his vacation trip, so his department will have to lay idle for a month. We are glad that the Herr Professor can take a vacation, but we shall miss his interesting remarks very much. It is one of the departments that helps give spiciness to the Journal.

The boys from Lincoln Dental College are slowly and carefully finding themselves satisfactory locations. They are figuring it out statistically now—figuring the amount of deposits in the local banks, population, etc., as well as looking over the ground to see if it appears to their liking.

"Big Bill" Ludden of Idaho stopped off in Omaha for a few days, having been called to his old home at Osceola, Neb., on account of the death of his mother. Bill has that same old hearty way which caused him to be made president of his class when he attended Creighton a few years back.

Dr. and Mrs. Cressler of North Platte passed through Omaha on their way to Chicago where Mrs. Cressler underwent a very serious operation. Last reports state that she responded quickly to operation and was resting comfortably. Their many friends hope for a complete recovery soon.

Dr. Ladd's family is spending a couple of months at Author's Point, Minn. The Doctor himself was there for a couple of weeks in July, returning to his practice the last week of July and the first two weeks of August. He will spend the remainder of August with his family in Minnesota.

Dr. R. W. Ludwick, Lincoln, spent two weeks among the lakes near Minneapolis. He has some fish stories to tell (all who believe to stand on your head). The doctor thinks it's some place to take a real vacation and the doctor's complexion when he returned led us to believe he is right.

Dr. J. H. Wallace is a life member of the Carter Lake Club, owns a lot out there and takes his friends out in his new Maxwell and treats them to a dip in the waters. He took Dr. Griess and Dr. Allen out, but no amount of coaxing would induce Ferd to go down the slippery slide on his tummy.

Dr. M. E. Vance, who attended the National Dental association reports that it was a very strenuous meeting. After his return, he took a couple of days rest at the home of the parents of Mrs. Vance, at Tecumseh, before he went on his month's vacation, which he is spending at Estes Park, Colo. Mrs. Vance accompanied Dr. Vance on his vacation trip and also his daughter, Sarah, who, while Dr. and Mrs. Vance were at the National, had to stay with "grumma."
Dr. G. B. Baird of Fremont, with his son Teddy, came down to Omaha the early part of August and was seen about town tacking up posters on the telephone poles which line 16th street on each side, advertising the Tractor Show at Fremont. It was noticed that little Teddy had to carry the tacks.

O. D. Thomas, of Havelock, has invented a machine that will grind out nitrous oxide gas from pure air. This gas is used by dentists to produce anesthesia. If Mr. Thomas will now invent a machine that will consume some of the "hot air" used by so many dentists he ought to get rich quick.

Dr. T. A. Trumble is taking a forced vacation, while his rooms in the new Security building are being finished and decorated. The doctor says that he has a chair in his room without wall connections so that by the use of a foot engine and visiting his dental friend's laboratory he takes care of the necessary work.

Dr. C. F. Patton and Dr. Walter Sorenson have gone into partnership in a new venture, that of backing musical vaudeville stars for the Orpheum circuit. They take on none but those capable of earning a thousand dollars a week, the managers to receive ninety-five per cent of all that is earned. Applications are in order.

Dr. O. L. Beeson starts a month's vacation about the middle of August. The first objective point will be Saratoga and Wyoming where he and his party will build two boats or rafts, on which the expect to slowly float down the river for a hundred miles or so. They expect to do much fishing and camping on this raft trip.

Dr. and Mrs. M. E. Vance will leave today for Louisville, Ky., where Dr. Vance will attend the meeting of the national dental association. They will visit in Kansas City and St. Louis on the way. Doctor Vance is secretary of section 2 of the society and also goes as representative of Delta Sigma Delta, being one of the deputies.

One of our reporters on our news gathering staff reported that Dr. J. R. Shannon of Weeping Water, who had been very ill, was well along the road to recovery, but before we got to press the Doctor had a serious set-back, and we regret very much to announce his loss to the profession. The deceased was a brother to our Doctor "Henry" Shannon of Lincoln.

We have broken over a rule this month and given a full account of the wedding of Miss Myrtle Kempton. Miss Kempton was clerk of the Lincoln Dental College for many years, and is known by not a few Nebraska dentists, who will be surprised and pleased (we say pleased advisedly) to learn of her marriage. They will declare unanimously that, "We didn't think it."

The Dental Summary has asked to be allowed the privilege of printing the papers presented at our State meeting. Such a procedure would reduce the Nebraska Journal to just enough space to care for editorials and news items, which would reduce the expense of publication quite materially. Before such a plan is adopted it should be ascertained how it will effect our advertising income.

Dr. Scott Covalt of Council Bluffs is still in the chicken business and going some with his Single Comb Rhode Island Reds. Dr. Covalt has sent chickens to China, Argentine Republic, other South American points, all over the U. S. A., and he is mighty popular in his own home town. The prices he gets are sure high, which Mr. Covalt says shows the reason why he has so many blue ribbons.

Dr. and Mrs. Meservey of Kearney are on a two months trip east to the girlhood home of Mrs. Meservey. They are going via Louisville, where the Doctor is a delegate to the National Convention. Their friends at Kearney gave them a rousing send-off in the way of rice parties, hand bills, etc., telling the public they were just married, but it was good fun for a fellow who has been married 15 years.

Dr. G. A. Grubb hasn't an automobile but the next best thing to it. He has a friend in the person of Dr. C. A. Reynolds, who has a car and who is very generous with it. He takes both families with a picnic supper for a long drive almost every Sunday. One delightful trip was to the woods along the Missouri river just above Nebraska City. Another was to Bever Crossing, where they have a municipal swimming pool. Both Doctors and their wives take to the water like ducks.
Burlington, la., Hawkeye: Thursday evening at 8:00 o'clock at the home of the bride's parents, Mr. and Mrs. J. C. Sauter, of Prospect Hill, occurred the wedding of their daughter, Vera Nita, to Dr. Logan A. Clopine. The groom is a resident of Franklin, Neb., and is a graduate of the Franklin academy and the Franklin conservatory of music. Following this he completed the course in dentistry at the University of Nebraska. The bride and groom will be at home at Franklin, Neb., after August 1.

Dr. Clyde Davis went to Cleveland to do some research work at the National Association Institute, but quickly returned after finding that their facilities would not answer, despite his hope to the contrary. Soon after his return, he was unfortunate in losing his mother, although a man who has his mother up to seventy-eight years is a fortunate one. She had also passed her 54th wedding anniversary, and raised a family of two boys and a girl. Although we sympathize with Dr. Davis in his loss, we congratulate him in the fine memories of his dear mother. His father still survives and is with him.

Following is a partial list of Creighton graduates who have located this year: J. F. Albers, Humphrey, Neb.; J. A. Cullen, Bloomington, Neb.; J. B. Cullen, Sauk Rapids, Minn.; L. A. Donahue, South Side, Omaha; D. A. Deines, Clay Center, Neb.; H. C. Dallam, Wakefield, Neb.; Tom English, Anselmo, Neb.; Davis & Felixen, Oxford, Neb.; M. P. Kane, O'Neill, Neb.; J. A. Lyons, Valparaiso, Neb.; Frank Hemphill, Blair, Neb.; A. R. Todd, Reva, S. D.; H. C. Miller, Omaha; Frank Voight, Wayne, Neb.; H. C. Weaver, Pleasanton, Neb.; J. A. Schall, World-Herald Bldg., Omaha.

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