Adenoid Vegetations, H. M. CLANAHAN, M. D., 8
Introductory Address, DONALD MACRAE, M. D., 7
Physiological Action and Chemical Structure, A. C. STOKES, M. S., 11
Editorial, 16

Alumni Department, 20
Letter from R. V. Witter, 23
Personals, 25
Western Surgical and Gynecological Ass'n, 26
Nebraska State Building, 27

Official Journal of the Omaha Medical College, Medical Department University of Omaha, OMAHA, NEB.

Vol. 2. OCTOBER, 1898. No. 1

Contents.

THE O.M.C. PULSE

Omaha Medical College,
Medical Department University of Omaha.

The Eighteenth Annual Course of Lectures will begin Oct. 1st, 1898, and continue seven months. Instruction will be given in the following branches: Anatomy, Physiology, Chemistry, Histology, Biology and Embryology, Materia Medica and Therapeutics, Practice, Obstetrics, Surgery, Diseases of Children, Medical Jurisprudence, Neurology, Ophthalmology and Otology, Laryngology and Rhinology, Gynecology, Dermatology, Venereal Diseases, Pathology and Bacteriology.

Laboratory Courses at this College in Urinary Analysis, Chemistry, Histology, Pathology and Bacteriology, and Practical Work in Physical Diagnosis, Surgery, Practical Surgery and Practical Anatomy, and Demonstrative Obstetrics, are now included in the curriculum. The instruction is given by scholastic and clinical lectures, by recitations, and by practical manipulations by the student. The clinical advantages are in many respects unsurpassed.

Four years' course is now required.

For further particulars, address the Secretary,

E. W. CHASE, M. D., Continental Block, OMAHA.
Is Boro-Lithia the best Lithia Water?

For answer we refer to the testimony of those more competent to judge than ourselves.

Boro-Lithia Water

Retail at the following prices:

Half gallons, uncarbonated, 1 doz.
to case, per case........... $ 5.00
Quarts, 50 to case, per case, Effer-
vescent.......................... 8.50
Pints, 100 to case, per case, Effer-
vescent.......................... 10.50
Splits, 100 to case, per case, Efferv-
escence......................... 9.00

SOLE AGENTS IN OMAHA,

Sherman & McConnell
... Drug Company.

1513 Dodge St.

Middle of Block.

FROM A. M. CORWIN, A. M., M. D.

Demonstrator of Physical Diagnosis, Rush Med-
ical College; Attending Physician, Diseases of
Chest, Nose and Throat, Central Free Dispens-
ary, etc.

Boro-Lithia possesses the advantages of other
carbonated waters, and is the more agreeable
from its slightly acid reaction. I have found it
markedly diuretic and efficacious in combating
muscular rheumatism.

A. M. CORWIN, M.D.

FROM J. B. MURPHY, A. M., M. D.

Inventor of Murphy Button; Professor of Surgery.
Post-Graduate Medical School; Professor of
Clinical Surgery, College Physicians and Surge-
ons; Attending Surgeon Cook County and Chi-
icago Hospitals and Alvaron Brothers' Hospital
and Dispensary; Consulting Surgeon, Home for
Institute Crippled Children, President National
Association of Railway Surgeons; Member Inter-
national Medical Congress, etc.

The Boro-Lithia Water has been used exten-
sively by a large number of my patients. In
cases of the genito-urinary system it has produced excellent results. Cases of cont."n-
subacute and chronic rheumatism have been
greatly benefited by it. The combination of
these salts in such a nutritious and efficient bever-
age deserves commendation.

J. B. MURPHY.

FROM DR. GEORGE B. FOWLER.

Prof. of Medicine (Digestive and Uro-
logical) Post-Graduate Medical School and Hos-
pital; Visiting Physician to Bellevue Hospital;
Consulting Physician to French Hospital; Ex-
Health Commissioner, New York City; Author
of "Quantitative Estimation of Urea"; "Detect-
ion of Sugar in Urine"; "Chemical and Micro-
necropathological Examination of Urine"; "Biologic Value of Water"; "Digestion and Diet, their Relation
to Disease"; "Disorders of Digestion," etc.

I consider that in Boro-Lithia Water we have
admiringly combined three of the most useful
agents in the treatment of catarhal diseases of
the alimentary and urinary organs, and the rheu-
matic and gouty affections. Its palatability com-

diments it strongly as a table water.

GEORGE B. FOWLER, M. D.

FROM I. N. DANFORTH, A. M., M. D.

Dean of Medical Faculty and Professor of the
Practices of Medicine and Clinical Medicine.
Northwestern University Medical School; Pro-
fessor of Medical Science, Northwestern Woman's
Medical School for Women; Honorary Physi-
cian to St. Luke's Hospital; Gentle-Urinary
Surgeon to Wesley Hospital, etc.

The Boro-Lithia Water is among the best of
the lithia waters. It is a delightful table
water, as I can testify from experience. The
addition of boric acid is commendable from a
therapeutic standpoint, and is especially valu-
able in all cases of kidney and bladder dis-
ease attended with suppuration. Patients of
sedentary habits, with gouty or rheumatic
tendencies, will always be benefitted by the
use of such waters. I have long recomman-
ed the waters of the Waukesha springs be-

cause of their great purity; that is, free from
organic matter and micro-organisms. The
Boro-Lithia Water fully sustains the reputa-
tion of the Waukesha waters in that regard.
In truth, it is an ideal water for that large
class of patients who are prone to the accu-
mulation of uric acid and its attendant evils and

dangers.

I. N. DANFORTH.
H. M. McClanahan, A. M., M. D.,
Professor of Diseases of Children, Omaha Medical College.
ADENOID VEGETATIONS.

By H. M. McCranahan, A. M., M. D.

The pharynx is the space situated behind the nose and mouth. The upper portion or vault only concerns us at present. This is bounded above by the basilar process of the occipital bone, behind by the bodies of cervical vertebrae and laterally almost entirely by the muscular tissue. In front the vault of the pharynx communicates with the posterior nares, and below it communicates with the mouth and opens into the oesophagus and larynx. This entire surface is covered by mucous membrane which is thickly studded with glandular tissue. The glandular tissue which lines the vault and posterior wall of the pharynx is very similar to that which occupies the faucial tonsils. It is sometimes called the third or Luschka's tonsil. The eustachian tubes terminate at either side of the upper part of the pharynx. In the natural condition the vault of the pharynx communicates readily with the posterior nares and in normal breathing the air passes through the nose into the upper portion of the pharynx and then on down through the larynx into the lungs. In this way the air becomes warm and absorbs moisture before reaching the air vesicles. When the glandular tissue becomes hypertrophied it occludes, either partially or completely, the vault of the pharynx, preventing the passage of air through the nose. The term adenoid vegetations is is given to this condition. This is frequently met with in children, and the importance of giving attention to this condition cannot well be exaggerated.

AETIOLOGY.

Adenoid growths are comparatively rare in infancy, although a few congenital cases have been reported. It is not usually observed until the third or fourth year of life, and is entirely a disease of childhood. It is seldom or never observed after puberty. Professor Holt states that the lymphoid diathesis is the one upon
which these growths most frequently depend. During childhood
the entire glandular system is functionally more active than at any
other period of life. This tissue, therefore, takes on a morbid
action more readily. Adenoids are observed in a certain number
of cases where there is no other evidence of a morbid condition.
Many cases, however, are the result of some of the infectious dis-
orders, particularly scarlet fever and measles. The catarrhal con-
ditions of the throat resulting from these diseases excites a hyper-
plasia of the glandular structure. It is not strange, therefore,
that adenoids are frequently associated with hypertrophy of the
tonsils and other glandular organs.

SYMPTOMATOLOGY.

Early symptoms, that is before the growths have occluded the
pharynx, are vague and indefinite. Those symptoms that usually
attract the attention of the parents are that the children breathe
with the mouth open at night, and that they snore during sleep.
As the pharynx becomes more nearly occluded these patients
breathe continually through the mouth. In a well developed case
the facial expression is almost pathognomonic of this condition.
The child holds its mouth open continually, the jaws are separ-
ated and the mouth and nose have a drawn expression, giving to
the face a stupid look. Whatever the explanation may be, the
fact is that these patients become mentally dull. They are unable
to fix the attention or to memorize, and are found to be behind
their classes at school. This mental dullness is not due to any
arrested development or imperfect formation of the brain, as is dem-
onstrated by the marked improvement when the adenoids are
removed. As time goes on the physiognomy of the face changes.
The palate becomes more deeply arched and narrowed. The face
is elongated, owing to the imperfect development of the bones
from lack of expansion of the sinuses normally in communica-
tion with the nose. Indeed changes in the chest sometimes
take place. The diagnosis can certainly be made from the symp-
toms enumerated. In the early stages when probably the child
is suffering from some catarrhal condition for which relief is
sought, and before there is much occlusion, an examination with
the finger will usually make the diagnosis positive. On passing
the finger into the vault of the pharynx it comes in contact with
these lymphoid growths, which have a soft, spongy feeling, and it
will generally be found upon withdrawing the finger that it is
tinged with blood. Children with symptoms of nasal catarrh, chronic in character, should always be examined for the presence of adenoids. It is strange, but true, that many of these cases go on for years unrecognized. That this condition is more frequent than we have been led to suspect is undoubtedly true. Dr. Chappel recently made the following statement:

"An examination of the records of the Manhattan Eye, Ear and Throat Hospital shows that for the five years preceding 1898, 437 infants under three years of age were brought to the hospital for treatment of the throat. One hundred and sixty-seven of these, or 40 per cent, had adenoid tissue in the naso-pharynx, the greatest number being from two to three years of age."

TREATMENT.

There is but one method of treatment worthy of consideration, that is removal of the growths by surgical means. Various instruments have been devised for this purpose. The forceps and the curette are the instruments most usually employed. My personal preference is for the curette. Whether an anaesthetic is to be employed will depend upon the age and moral stamina of the patient. Unless you are certain that the child will co-operate with you it is better to use an anaesthetic. Where an anaesthetic is employed the same precautions as to dieting should be used as in other surgical operations. Some writers recommend chloroform, others ether. Both have the weight of good authority. The danger to be guarded against when an anaesthetic is used, aside from that due to the administration of the drug, is to prevent the blood flowing into the larynx and causing suffocation. To obviate this danger the child's head should be drawn over the edge of the table and firmly held by an assistant, with the head lower than the body so that the blood will flow out of the nose and mouth rather than downward into the oesophagus and trachea. Some writers recommend that after the child is under the influence of the anaesthetic it be placed in the lap of the nurse in an upright position and the operation performed, then the child tilted forward in order that the blood may flow out of the nose and mouth. This seems to me more dangerous, on account of our inability to exactly time the rush of blood. Profuse hemorrhage following the operation is a very rare accident, and yet it is one for which the operator should always be prepared. The treatment in case of this accident is to firmly plug the vault of the pharynx. For
this purpose the Balloch canula or a soft rubber catheter can be employed. Whichever instrument is used, it is passed through the nose down the pharynx into the mouth. The end is then grasped by a pair of dressing forceps and drawn forward. Through the end is passed a needle armed by a stout silk thread, to which is attached a pledget of cotton or gauze. The thread is quickly tied into the end of the catheter or canula, when the instrument can be withdrawn, bringing the thread with it. Having hold of the thread by one hand, the finger of the other is passed into the mouth, tension made upon the thread and the pledget of cotton or gauze firmly packed up behind the palate so as to occlude the space between the palate and the vertebral column. The anterior nares can then be plugged, and the thread, which I neglected to say should be double, can be tied around the same. In this way the space from which the hemorrhage comes can be completely occluded. In operating with the curette, it is important to carry the instrument well up to the vault of the pharynx, then by pressing the cutting edge firmly against the vault it is carried backward, and then downward along the spinal column and the growths are shaved off. Usually three or four applications of the curette are sufficient. Where the pharynx is so filled by the growths as to make it difficult to introduce the curette, I have found it best to first carry the finger up into this space and to loosen the growths, after which the curette can be introduced. In every case the finger should be introduced into the vault of the pharynx after the operation and the cavity thoroughly explored. Small pieces and shreds of lymphoid tissue may be removed by the finger nail. The operation is not complete until the space is free from the growth, as evidenced by the exploration of the finger. After the operation I am in the habit of thoroughly irrigating the pharynx with a hot solution of boracic acid. Usually no further treatment is required. In children showing a tendency to lymphoid diathesis some after treatment is necessary. As an alternative in these cases there is perhaps no remedy equal to the syrup of the iodide of iron. The remedy should be given in full doses for weeks, and even months. There is no minor operation in which the results are so satisfactory. The improvement, both mentally and physically, is gratifying alike to the physician and the parents.
Mr. President, Ladies and Gentlemen: The beginning of a session to you, students, and to us, teachers, is a good deal like the first of the year to the general public and the man about town. It is a time of good intentions, a time of giving up bad habits, a time when the smoker quits smoking, the drunkard will drink no more, the student intends to bone for all that's out. He will eschew all frivolities and earnestly and wholly devote himself to the work in hand, the work which is the preparation and groundwork for his whole after life. I hope that you all have made good and firm resolutions and that you will stick to them. It is in order to assist and help you to carry these resolutions, that the few words which I offer you tonight are given in all earnestness. Advice, even good advice, is not worth very much perhaps. It can never take the place of actual experience. After all, the only experience worth anything is our own experience, and as a general rule our experience is valuable only in proportion to its cost. Not so much its cost in money, as its cost in effort and worry and hard­ship and work. Good advice, if acted upon may, however, reduce this cost and it is with this hope and this object in view that I give these hints and suggestions.

The careless and indifferent student, the person who does not study, the young man or woman who does not intelligently follow the lines of thought and work which are laid down here will have bitter cause to regret their thoughtlessness and inaction in all their after years. The study of anatomy can only be learnt in school. What you remember of chemistry has been acquired in your class and the same can be said of most of the other branches which go to make up the earlier curriculum required in a first-class medical college.

The preliminary branches are all important and require months and months of study in order to fit you for the proper conception of the higher and more practical subjects which you will be required to grasp in the later years of your course. If you fritter away your time now, not only yourselves individually but
your unfortunate patients, if you ever have any, will suffer the consequences; and the worst of it is you can never properly gain the knowledge which in your college career it was easy enough to acquire and profit by.

The subject of your study is that wonderful thing, the animal body, and more particularly the human body, its construction and qualities, its actions and sufferings, its derangements, its decay. It is therefore most important that you give your whole mind to all your studies. One particular study or course of lectures may be the most interesting to you; you may have made up your mind to pursue some specialty in order to make it your life work. But I must remind you that in the study of medicine and surgery there are no specialties. Every specialist must be a good general practitioner before he can ever be a good specialist. The arrangement as to what is medical and what is surgical must in great measure depend on custom, not on fixed and permanent rules. The paths of the practical surgeon and physician are distinct to a certain extent, but in their course they must often cross each other, and this applies to other specialties as well. There is no more dangerous man than the so-called specialist who sees nothing but his own narrow specialty and does not recognize the interdependence between the more local ailment and the general condition of the system at large. Most of you, I presume, are ambitious to succeed in life, but it is only in rare exceptions that this ambition is more than the dreamiest kind of a wish, and ambition counts only when it is actually reduced to work. It is the greatest mistake in the world to think that much time is required for recreation and rest. The very best kind of relaxation is found in a change of work, not in changing from work to play. When you are tired of one study you will be astonished to find how much relief there is to be found in turning to another. When you sit down to study of an evening you should have your entire work mapped out, an hour assigned for this, another for that and so on. Don't study too many hours but put your whole soul in your work. Three or four hours of such application is worth a whole week of trying to work. Of course, there may be some difficulty in spending every evening in work and study, but most successes in this world are manufactured wholly out of difficulties and the young man or woman who finds that spending three or four hours a night in study is too great a tax will meet a tax farther along in life which he will never be able
to pay. It will always take a great deal of plodding and lifting of bricks to get far enough up the ladder of fame, even to see the heads of our fellows.

And don't relax your efforts and think that a post graduate course will put you all right and make you a good practitioner. Post graduate courses are all right in their way, but I am satisfied that they are over-estimated. A good, conscientious and thoughtful doctor is immensely benefited by observing clinics and taking special studies, but a poor practitioner is simply rendered more dangerous. When a train comes into the station, the first man to get off is usually the conductor. He does so frequently while the train is still going at considerable speed. The bumpkin who has seen how easily and gracefully the thing is done, attempts the same feat. The result is that he either tries to plough up the platform with his nose and chin or falling inwards he is ground under the car wheels. So with the ignorant doctor. He forgets the many years and the many occasions in which the expert has practiced his art; he confounds dexterity with ease and thoughtlessly attempting to follow his example he fails deplorably with the most disastrous results to his patient and himself.

Your teachers no doubt feel the great responsibility under which they attempt to teach you. The subjects with which we have to deal are not matters of mere speculative curiosity or intellectual amusement, to be taken up today and dismissed with unconcern, perhaps, tomorrow, but they involve questions of life and death. The opinions you are now to form or embrace, are for the most part the opinions upon which in after life you will confidently and constantly be acting. The comfort or misery of many families may probably hang upon the notions that each of you will carry from this place. Therefore it is that we feel ourselves to be engaged in a very serious undertaking. Doctrines and maxims, good or bad, flow abroad from a public teacher as from a fountain, and his faulty lessons may become the indirect source of incalculable mischief and suffering to hundreds who have never even heard his name. These facts give us an almost painful sense of the obligations imposed upon us, of closely sifting the facts and of carefully examining the principles to be derived from these facts which they employ for your instruction and guidance.

But amid all the responsibilities, ladies and gentlemen, both of teacher and learner, the profession which you and I have chosen
is a noble profession, and worthy the devotion of a life time. If
you fit yourselves now for its high functions, and pursue it here-
after in earnestness and truth, it will probably conduct you to an
honorable competence and it will assuredly prove a salutary school
of mental and of moral discipline. Trials, no doubt, belong to it,
and difficulties, but it has also privileges and immunities peculiar
to itself. Affording ample scope and exercise for the intellect, it
is conversant with objects that tend to elevate the thoughts, to
temper the feelings and to touch the heart. It brings beneath our
minute and daily notice that most remarkable portion of matter
which is destined for a season to be the tabernacle of the human
spirit, and which apart from that singularly interesting thought,
excites increasing wonder and admiration the more closely we in-
vestigate its marvelous construction. The sad varieties of human
pain and weakness with which our daily vocation is familiar,
should rebuke our pride, while they quicken our charity. To us
are entrusted, in more than ordinary measure, opportunities of do-
ing good to our afflicted fellow-creatures, of showing love towards
our neighbor. Let us beware how we neglect or selfishly abuse a
stewardship so precious yet so weighty. The profession of med-
icine, having for its end the common good of mankind, knows
nothing of national enmities, of political strife, of sectarian div-
isions. Disease and pain, the sole conditions of its ministry, it is
disquieted by no misgivings concerning the justice or honesty of
its client’s cause; but dispenses its peculiar benefits, without stint
or scruple, to men of every country, and party, and rank and re-
ligion, and to men of no religion at all. And like the quality of
mercy, of which it is the favorite handmaid, “it blesseth him that
gives, and him that takes,” reading continually to our own hearts
and understandings, the most impressive lessons, the most solemn
warnings. It is ours to know in how many instances, forming in-
deed a majority of the whole, bodily suffering and sickness are the
natural fruits of evil courses, of the sins of our fathers, of our own
unbridled passions, of the malevolent spirit of others. We see
too, the uses of these afflictions, which are mercifully designed to
recall men from the strong allurements of sense and the slumber of
temporal prosperity, teaching that it is good to be sometimes
afflicted. Familiar with death in its manifold shapes, witnessing
from day to day its sudden stroke, its slow but open siege, its
secret and insidious approaches, we are not permitted to be mind-
ful that our own stay also is brief and uncertain, our opportunities fleeting, and our time, even when longest, very short, if measured by our moral wants and intellectual cravings.

Surely then, ladies and gentlemen, you will not dare, without adequate and earnest preparation, to embark in a calling such as this, so capable of good if rightly used, so full of peril to yourselves and to society if administered ignorantly or unfaithfully. And even when you have made it, as you may, the means of continual self-improvement, and the channel of health and of ease to those around you, let not the influence you will thus attain beget an unbecoming spirit of presumption. But remember that, in your most successful efforts, you are but the honored instruments of a higher power, that after all “It is God who healeth our diseases and redeemeth our life from destruction.”

PHYSIOLOGICAL ACTION AND CHEMICAL STRUCTURE.

A. C. Stokes, M. S., Professor of Chemistry, O. M. C.

Science is a study of relations. They must be relations of detail, otherwise our knowledge is of no value. The more detailed our information the more thorough our knowledge. The classification and co-ordination of knowledge brings cosmos out of chaos and truth out of superstition. Superstition, prejudice and mystery disappear before the onward march of knowledge. The wonderful is converted into the natural. Development becomes a servant of law. Function the product of environment. Position the result of energy and judgment. Gradually, but steadily, the rays of knowledge are dispelling the clouds of ignorance and error, and with the progress of the years knowledge is gaining grandeur and dignity in the hearts of the multitude.

No branch of science has been more discouraging in its development than physiology. Opposed by church and state; retarded by imperfect apparatus; impeded by difficult problems and imperfect means of solution, it has been among the last to come out of the cloud of darkness. Not until the great Darwinian theory was enunciated and scientific men had grasped its meaning, was there any idea of a comparative physiology, and even now but few physiologists have grasped the value of comparative study, and still fewer have the opportunity and courage to leave the taking
of blood pressure and contraction wave for new ideas and methods of physiological experimentation and investigation.

The rapid advance in organic chemistry and the study of comparative physiology are the two factors which are turning the minds of physiologists toward a new field. They begin to perceive that the explanation of physiological phenomena must be somewhere within the bounds of chemistry and physics. The question of pleasure and tendency must be ruled out. The fact that the long axis of a tree tends to turn into the direction of the sun's rays cannot be explained by saying "The sun draws it." The truth lies deeper—it is a cellular change and as such must be regarded. The cellular change must first be determined and then the fact may be explained. We must pass from the individual to the system rather than from the system to the individual.

Certain things in physiology are very accurately determined; they are mostly of a mechanical nature and the mechanics of the blood pressure, pulse wave and muscular contraction are developed to a degree of accuracy that would astonish the uninitiated. But this work has been well done and we must leave it for new fields.

Physiological chemistry is rapidly progressing. The chemistry of the liver has been nearly completed; the chemico-physiology of the ductless glands is nearing some very important truths, and we are now making much use of thyroid extract and extract of superrenal capsule and much study is being made of the spleen. The chemistry of the internal secretions is rapidly progressing. Through this avenue we must look for the explanation of much of our therapeutics, i.e., through chemical activity. At present our knowledge is fragmentary, but little by little we are gaining system in experimentation at least. A few facts at present will be of interest.

First. The chemical structure may bear some relation to physiological effect. Says T. Lander Brunton: "The physiological action does not depend entirely on its chemical composition nor yet on its chemical structure so far as that may be indicated by graphic formulae, but upon conditions of solubility, unstability and molecular relations which we hope to discover in the future, but with which we are at present imperfectly acquainted."

The introduction of chemical groups are of interest. Let us look for a moment at the Marsh gas series. Starting with CH₄,
C₂H₆, C₃H₇, C₄H₈, C₅H₁₀, we find the first three are gases and the fourth and fifth liquids at ordinary temperature. They are all poisonous, being largely depressants and causing asphyxia. Let us now replace in each one atom of H by the hydroxyl group; we will then have a series of alcohols; thus:

CH₃OH = Methyl alcohol—Poisonous, but not so poisonous as CH₄.
C₂H₅OH = Ethyl alcohol—A depressant poison in doses above ½ ounce.
C₃H₇OH = Propyl alcohol—A depressant poison and a liquid of unpleasant taste.

Let us now replace two atoms of hydrogen by the OH group. Of the first there is no dihydroxy substitution product. Of ethyl we have:

CH₂OH—CH₂OH = Glycol, a syrupy liquid of sweetish taste, and is not poisonous in quite large doses.
Of propyl we have:

CH₂OH—CH₃—CH₂OH = Propylene glycol, and is a sweetish tasting compound not poisonous in large doses.

We may now speak of the tri-substitution products. Of propyl we have:

CH₂OH—CH₂OH—CH₂OH = Glycerine, in which we have three OH groups. Glycerine has not been shown to be poisonous to man—not even in doses of one ounce or more. These are the general experimental facts relative to the fatty series. We observe that as we pass from C₃H₈ propane first to glycol then to glycerine that the toxicity is very much reduced.

1. In relation to this we observe that we introduce sixteen units into the molecule, hence we have a higher molecular weight.
2. We have a different chemical structure and composition.
3. A different solubility the miscible increasing from C₃H₈ to C₃H₅(OH)₃, glycerine being the most soluble.
4. Osmosis must also be spoken of. In this case it varies in an inverse ratio to solubility and molecular weight. C₃H₈ dialyzes very rapidly through animal membrane. Glycerine more slowly.

If we look at the aromatic or benzene series we find much the same facts, notwithstanding that it is claimed to the contrary. Thus we find:

C₆H₆ an ethereal smelling liquid rapidly dialyzing and entering the system and producing death.
C₆H₅—OH phenol in which one atom of H is replaced by OH, a very poisonous compound and a solid at ordinary temperature. C₆H₄(OH)₂ resorcin, a compound very much less poisonous than phenol.

C₆H₃(OH)₃ pyragallol, probably less poisonous than the preceding, but not greatly different. The aromatic series is, therefore, very similar as far as we have gone. Much experimental data is wanting, but we may, perhaps, be justified in drawing the following conclusion, viz: The introduction of the OH group decreases the toxicity of the compound of both the fatty and aromatic series when introduced by the alimentary canal. Whether this is due to change in chemical composition or molecular weight or solubility we cannot say. Similar results may be obtained by other series as the introduction of Cl or Br into the methane series. The introduction of these elements generally increases the narcotic power of the compound. Thus we have CH₃Cl, CH₂Cl₂, CHCl₃ in which the narcotic effect increases with the greater quantity of Cl, being the greatest in chloroform or CHCl₃.

The effects of many other groups might be spoken of with more or less interest, as for example NH₃, CO and CH₃, but we will not attempt it here lest we might weary you. How transition of the compounds Xanthin, Theobromine and Caffeine might be of interest:

\[
\begin{align*}
\text{H} & & \text{CH₃} & & \text{CH₃} \\
\text{N—C—H} & & \text{N—CH} & & \text{N—CH} \\
\text{C—OC—N—H} & & \text{C—O[C—N—CH₃]} & & \text{CO} \\
\text{HN—C—N} & & \text{HN—C—N} & & \text{CH₃—N—C—N} \\
&(\text{Xanthin.}) & & (\text{Theobromine.}) & & (\text{Caffeine.})
\end{align*}
\]

In Xanthin it will be observed we have no CH₃ groups, in Theobromine we have two CH₃ groups and in Caffeine we have three CH₃ groups. The toxic power of the compounds varies inversely as the number of CH₃ groups, Xanthin being most toxic and Caffeine the least.

Loew makes the following generalizations: (Ein natürliches system der Gift—wirkungen Munchen 1893.)

1. The entrance of CO or SO group weakens toxicity.
2. Entrance of a chlorine increases toxicity of catabolic poisons. (Loew’s catabolic poisons are alcohol, ether, chloroform...
chloral, carbon tetrachloride, \( \text{CCl}_4 \), volatile hydrocarbons and carbon disulphide.

3. Entrance of hydroxyl, \( \text{OH} \) group, weakens toxicity of catabolic fatty series.

4. A substance is increased in toxicity by every substance which increases its power of reaction with aldehyde or amido groups.

5. Entrance of a nitro group strengthens poisonous germs. Of these latter two propositions much has been said of late, but we can only give the bare proposition and at some future time work it out in detail. Thus we will say physiology and therapeutics must advance largely through physics and chemistry and over this land our universities are now expanding their physiological laboratories for this purpose. Such men as Chittenden of Yale, Vaughn Cushney and Novy of Michigan, Howell and Able of John Hopkins and Leob and Mathews of Chicago are men advancing along these lines.

A second general method of physiological investigation is that of comparative physiology, as yet only spoken of, and very little work has been done since the days of Du Bois Raymond, yet in the next fifty years it will be a magnificent system of investigation. We will, therefore, say that the new physiology is the reverse of the old—from the fact to the theory rather than from the theory to the fact, just as the new learning is the reverse of the old.

The edition of "The Purple and Gold of '98," the year book of the University of Omaha, was prepared early in the summer and some few copies are still on sale. The volume is handsomely bound in white morroco paper, with purple lettering, and is printed on heavy enameled paper, making a very attractive looking pamphlet of 115 pages. The main body of the book is entirely unlike the monthly "Purple and Gold," with which we are all more or less familiar. It is a complete history of all that has transpired from the creation of the college comprising the University of Omaha until the present time, including athletic sports, oratorical contests, literary societies, etc. It is beautifully illustrated with half-tone portraits of the different principals, instructors, classes and groups of other organizations, and also contains cuts of sketches of the many pretty spots around and about Bellevue. The feature of the volume is that it is arranged in such a way that it is invaluable as a means of reference.
Editorial.

The opening of another session finds many changes about the College. We have advanced in all directions, both internally and externally, and to everyone interested in the success of the College we point with pride to the evidence of increasing prosperity. The fact that the Senior class is the first of the four year series that will graduate under the new law requiring such a length of time is indicative of our advancement and position as compared to many colleges that will not reach this point until a year from now. The change in the schedule made possible by the extension of time is most satisfactory all along the line from Freshmen to Seniors, particularly the latter, who are now enabled to devote more time to clinical work and yet not in the least crowd the theoretical side. The addition to the corps of instructors, the prospects of a library, the phenomenal size of the Freshmen class, the new equipments in both chemical and pathological laboratories, the many additions to the museum, the general improvement within and about the College building, fill us all with great hopes for the future and the extended influence of the O. M. C.
OUR NEW LIBRARY.

The Pulse is pleased to announce that the college is to have a library. This is a move in the right direction and in line with the long list of improvements which have been made during the vacation just closed.

The room on the ground floor formerly used as a Faculty room will be fitted up with book cases, shelves and tables, for the reception of books, periodicals, etc., which collection has already begun.

The library room will serve admirably as a study and reference room. The lack of some place where the students can study while at the College when not engaged in recitation has always been a serious drawback to the College equipment. Consequently the library will be an advantage to all students, and the Trustees and Faculty are to be congratulated for making an effort to supply what has so long been needed.

It is hoped that Alumni members and friends having medical books and files of medical journals for which they have no special need, will remember the new library either by gift or loan.

* * *

Under the heading "Alumni Department" may be found a letter from Dr. A. Hakanson, '90, which we advise all graduates of the O. M. C. to notice. The Doctor expresses the sentiments of The Pulse to a "t" and has hit the nail squarely upon the head where he writes: "We have now a medium which will bring us into closer communication, etc." This is just for what The Pulse was established. It aims primarily to represent the interest of the College, past, present, and future. Any important communication from an alumnus, faculty member or student, any note of interest concerning an O. M. C. man, any contributions of a scientific nature that have to deal with the practice of medicine or surgery and any report of interesting cases or operations are especially solicited. The Alumni should dwell upon this invitation as their successes are appreciated by their Alma Mater, no matter where or what.

* * *

For a number of years the college has been without an athletic organization of any description. There has been a seeming interest from year to year among some of the students to organize
a football or baseball team, but never enough enthusiasm has been created to justly accomplish such an undertaking. Now that a new session is commencing and the football season among our neighboring colleges has but fairly started, The Pulse urges that a meeting be called immediately and all interested in football present themselves. This branch of athletics is one in which many of us are interested, and judging alone from the makeup of the Freshclass we believe a strong team could be turned out and many interesting games pushed off with our neighbors. Organize and start the ball rolling.

**

A good many physicians are so located that if they are in need of anything in the medical or surgical line they cannot conveniently get them without experiencing much delay and annoyance. Besides, there are others who will only purchase goods on inspecting them for themselves, not depending upon the ability of the merchant to select the best article for its use from a doctor's standpoint. In view of this fact we have made arrangements which will enable us to supply anything in the line of medical books, pharmaceutical or surgical instruments at the largest discounts, and as we give our personal attention to the matter we will guarantee that the goods are first-class before shipment. Remember we furnish “physician's supplies” on receipt of catalogue price less best discounts.

**

Prof. Donald Macrae, Jr., was the only member of the Faculty to take an active part in the late war with Spain. He is surgeon of the 51st Iowa Regiment, now enroute for Manila. As Professor of Anatomy, Dr. Macrae held the respect of the entire student body, and it is needless to say that he will be sorely missed this year. We are sure that we voice the sentiments of every student in wishing Dr. Macrae “good luck.” We hope in some subsequent issue to publish a letter from him.

**

Dr. H. M. McClanahan, our Professor of Children’s Diseases, has in this issue an excellent paper on Adenoids. This is an article written expressly for The Pulse; and as the Doctor has devoted much time to the study of this subject, what he has said has the weight of authority. We are pleased to present on our first page a portrait of Prof. McClanahan.
To the new students we wish to whisper that The Pulse is the foremost medical journal of the West. No medical student can afford to be without it. A paid up subscription to The Pulse is a pass-port to everything that is good in the College. Don't, whatever else you leave undone, forget to subscribe for The Pulse.

***

Owing to lack of space we are unable to publish two very interesting articles, on “Life at the County Hospital,” by Byron T. Pampel, M. D., and “The Emergency Hospital of the Trans-Mississippi Exposition,” by S. A. Campbell, M. D. They will appear in the next issue of The Pulse.

***

The first number of The Pulse coming out so soon after the opening date of the session we have been unable to make arrangements for class editors. Consequently “College Locals” are missing in this issue.

***

We note with pleasure that Twelfth street on the east side of the college has been graded, thereby making this corner more prominent and showing off the college building to a much better advantage.

***

Although there has been presented this summer abundant material in a clinical way, the clinical department has been omitted in this issue but will appear in the November number the same as usual.

***

We are pleased to publish on another page a letter from R. V. Witter, the only member of the Senior class who is with the army. We are indebted to E. J. Updegraaff for the letter.

***

Physicians and medical students visiting the Exposition should not fail to see the bacteriological exhibit in the southwest corner of the Government building.

***

Subscribe for The Pulse. Subscribe now.
Below will be found the present addresses and a brief resume of the darings of the last class graduated from the Omaha Medical College. One or two addresses we are not certain about and should be pleased to have corrections from any reliable source:

Dr. Frank is located at Monroe, Neb.
Dr. Nellie Clark is practicing in Omaha.
Dr. Gillespie is located at Mapleton, Ia.
Dr. Ross is located at Summerville, Kan.
Dr. Libbie L. Fitch is practicing in Omaha.
Dr. D. J. Smith is located at Rising City, Neb.
Dr. J. W. Pinkerton is located at North Platte, Neb.
Dr. Kraft, class of '97, is with Bryan's regiment at Jacksonville, Fla.
Dr. Van Camp assists in Dr. Gibbs' medical clinic three times each week.
Dr. R. E. Wright is associated in practice with his father at Berne, Kan.
Dr. S. H. Smith is practicing in Omaha and is located at 10th and Pacific streets.
Dr. R. C. Knodle is interne at the Presbyterian hospital, and is just recovering from an illness.

Dr. H. A. Fulton is in this city with City Physician Wiese, who is an Omaha Medical alumnus.
Dr. Yule, class of '97, is in the hospital corps of the 1st regiment, Nebraska volunteers, at Manila.
Dr. Jesse P. Truax, class of '97, is in the U. S. government service at Fort Robinson as contract surgeon.
Dr. John B. Joyce is located at Osmond, Ia. He is already one of the solid citizens and has been elected City Physician.
Dr. R. B. Mullins is practicing at Broken Bow, Neb., having succeeded his brother, C. L. Mullins, class of '91, who is a surgeon in one of the Nebraska volunteer regiments. Dr. Mullins recently paid us a visit while in the city visiting the Exposition.
Dr. E. A. Weymuller is interne at the Methodist hospital and assistant demonstrator of anatomy in the college for the coming term.

Dr. Geo. P. Clements, class of '96, was recently married to Miss Hoag of Wisconsin, who was at one time head nurse at the Clarkson hospital in this city.

Dr. Ernest J. C. Sward, class of '96, located at Oakland, Neb., now rejoices in the title of papa. It is a boy and the important event occurred August 1st.

Dr. E. L. Verley, class of '96, of Raymond, S. D., has been visiting the Exposition and while here entered his name on the subscription list of The Pulse.

Dr. George F. Pugh is located at Platte Center, Neb. He says he is doing much better than he had ever dared hope. It is refreshing to hear such news from our boys.

Dr. H. B. Lemere, who carried away class honors, is at present with Dr. Owen and is becoming acquainted with the mysteries of adenoids, turbinates and errors of refraction.

Dr. J. S. Livingston is associated in practice with his brother, T. P. Livingston, at Plattsmouth, Neb., who is also an Omaha Medical alumnus and Surgeon in Chief of the B. & M. railway.

Dr. R. J. Murdock is located at Petersburg, Neb., having bought the practice of Dr. Thompson. He has concluded that it is not good for man to be alone and has taken unto himself a wife.

Dr. S. Mogridge, '94, of Glenwood, Ia., recently read a paper on "Treatment of the Feeble-minded," before the Trans-Mississippi Conference of Charities and Corrections, held at Omaha, Sept. 15 to 20.

Dr. Porter is at present associated with Dr. Allison and is to be congratulated upon the advantages which he has of observing the best methods of doing a great many things in general medicine and surgery.

Dr. Byron L. Pampel is resident physician at Douglas County hospital. He will assist in Dr. Gifford's eye and ear clinic at the college during the coming term and will also do some quizzing in the dissecting rooms.

Dr. C. F. L. Swanson, class of '97, is in his second year as resident physician at the Immanuel hospital. The Doctor evidently
appreciates the great value of a good hospital training under good physicians and surgeons.

Lieutenant Albert P. Fitzsimmons, class of '95, who is a surgeon in the 3rd Regiment, Nebraska volunteers, has just returned from Camp Cuba Libre at Jacksonville, Fla., with a number of sick and convalescent soldiers.

Dr. Stewart A. Campbell is Chief of Staff at the Emergency hospital on the Exposition grounds, where he finds ample room for his energies, as the practice includes everything—from stomach ache in a Hottentot to neurasthenia in over-civilized Americans.

It has been reported to us that Dr. Florence Neal is engaged in the highly commendable task of fitting herself to be assistant to a certain young physician who graduated in the class of '98. This is not official, however, and we hope the Doctor may pardon us if it is not true.

Dr. George N. Butchart, class of '95, of Hibbing, Minn., has just been visiting the Exposition. He reports the arrival in June of a son and heir at his house. The Doctor is associated with Dr. Rood in doing the medical work for a number of large iron mines and is doing well.

Dr. H. A. Abbott, class of '96, is now located at Ashland, Neb. The Doctor was obliged to leave a fine practice at Saratoga, Wyo., on account of the high atmosphere, but to compensate for his trouble he took with him one of the young ladies of the place and is now enjoying "the only system," married life.

Dr. Paul von Koerber, class of '96, has just returned from a two years' sojourn in Germany, where he has been doing post graduate work. He has located at Fremont, Nebraska. His brother, Adolph, class of '97, is at present pursuing some special studies in Munich and will remain there about two years longer.

Dr. Charles E. Stevenson, class of '95, was married June 1st, 1898, to Miss Ida Griffith of Emerson, Iowa. After an extensive tour through the west, during which time they attended the meet of the American Medical Association in Denver, they returned to Emerson in July, where the Doctor has a large practice.

Editor Alumni Department—Dear Doctor: I have the great pleasure to hereby acknowledge the receipt of No. 1 of THE O. M. C. PULSE. The editors are to be congratulated on the very credit-
able appearance of this first issue. We venture to predict that the near future will see The Pulse occupying a high place in the ranks of medical college journalism.

The birth of this new herald is certainly not premature, as the period of gestation has been somewhat prolonged. This fact, however, should not prove deleterious to its vitality, for have we not the assurance of one of the "accoucheurs" that it was born alive and kicking—foramen ovale closed and free from cyanosis? Brethren of the O. M. C. alumni, surely we have cause for rejoicing. We have now a medium which will bring us into closer communication, call up old memories—spirits of that eventful past, which comes but once in the life of an alumnus.

Many of us who left the fold of our dear old "Alma Mater" in her early days have drifted far apart. Since then she can undoubtedly point with pride to many others of her sons and daughters who now are doing valiant service in the noble ranks of the soldiers of Aesculapius. News of how well they are fighting the "common enemy" will surely prove of great interest, not only to herself, but to every one of her alumni.

Comrades of March 27th, 1890, to you I send special greetings. Together for three long (?) years we stood the drilling. We were a very small company, and the bombardment we had to stand was hot and heavy! But we have since learned that "the heavier the drilling the better the soldier." Comrades, report to headquarters, that we may all know of your whereabouts and the service you are doing. A. Hakanson, 153 92nd St., Chicago, Ill.

A LETTER FROM ONE OF OUR SOLDIER BOYS.

Camp Merriam, Presidio,
San Francisco, Cal., August 22, '98.

Dr. E. J. Upedegraff, Omaha, Neb.

Dear Friend and Classmate: I have waited so long for a letter from you that I now believe you must have forgotten me entirely. We came to San Francisco June 20th and were quartered in Camp Merritt, about two miles from the Pacific ocean. There we had to live on the sands with very unhealthy surroundings, viz: Daily fogs, city grave yards, filth, sand, fleas and hundreds of sick soldiers. Before we left this camp we had about
twenty-six hundred on our sick list. We were then sent to this
place, the Presidio, or U. S. barracks, situated on terra firma,
early the beautiful San Francisco Bay. It is much healthier here,
but these chilling fogs are always with us. The Kansas and
Tennessee regiments, battalions from New York and Utah and the
regulars are here. The regulars live in barracks, while we live in
tents on the hillside. I had been in camp only about two weeks
when I was transferred to the hospital corps. It consists of fifteen
privates, three stewards, a matron, three surgeons, one of which is
Dr. Macrae, Jr., and a dentist. Our Major Surgeon Matthews is
now chief of the entire forces at Presidio and is sanitary inspector.
About two weeks ago we all expected to go aboard the Arizona,
but were disappointed. It steamed out of the Bay yesterday with
regulars and supplies for Manilla. It is a fine transport, over
300 feet long and draws thirty feet of water. The Scandia leaves
this week with about one hundred and twenty-five of the division
hospital corps. The latest is that all the remaining troops go to
Honolulu and wait orders. The transports City of Peking,
Australia and Sydney have returned and may sail with the remain-
ing troops inside of two weeks. However, as peace is declared,
many of the troops are being mustered out, but as the Phillpine
question is still unsettled I may yet see some fighting. As some
of Iowa sick are in the division hospital a few of us may have to
stay and I am afraid I will be one of them.

The regimental hospital only contains those who are but
slightly affected with bowel and lung troubles and those convales-
cing, while all sick men go to the division hospital. Several
patients have died here from vaccinia, resulting from the vaccina-
tion. The patients are quarantined in tents back of the hospital
division together with the contagious cases. I was detailed some
time ago to take charge of a case of erysipelas and was in quaran-
tine ten days, and returned home (it was like home to me) last
Friday. There has been ten deaths so far in the Fifty-first Iowa,
one of which was Private Tucker, Company L, of Council Bluffs.
Tennessee has suffered the most with sickness and death, but they
are slowly getting acclimated to this disagreeable San Francisco
weather.

I have second cousins living across the bay at Sansalito, and I
have been over on a steamer to see them, but as we haven't been
paid since July 1st, I am "broke" and can't go any more. Over
there there are no fogs and no sand hills. The days are cool and sunny. It is actually like a different country. Oh, the scenery of the bay and city are so fine and grand that I only wish you were here to enjoy it with me. I have had ocean baths, visited the famous seas, rocks, cliff-houses, the fine gardens, gathered star-fish and shells and visited the United States mint and thousands of other interesting places.

What have you been doing this summer? I suppose you have been studying and attending the clinics, a thing which I now wish I could do. How many operations have you performed this summer, and have you seen any obstetric cases that you could have taken me with you? How is the old O. M. C., and what are all the boys doing and how many will return to the college? I would like to go back again this fall but I am afraid I cannot this year.

Write me soon, as I have been waiting so long to hear from you. I hope that your family is in good health and that you are getting along just O. K. I must close.

As ever, your classmate,

R. V. Witter.

MISCELLANEOUS NOTES AND PERSONALS.

Turnell of the Junior class goes to Cornell, Ia., for an extended course in the university of that place.

Dr. B. B. Davis recently read a paper on the management of hernia in children, before the meeting of the Southwestern Iowa Medical Association.

Dr. Harold Gifford has been elected to the chair of Ophthalmology and Otology at the Omaha Medical College, made vacant by Dr. J. C. Denise, emerited.

The Western Medical Review for September contains articles by Doctors H. M. McClanahan, H. Gifford, A. F. Jones, C. C. Allison, J. E. Summers and H. B. Lowery.

H. S. Finney, class of ’99, has just returned from Saratoga, Wyo., where he has been enjoying the advantages of an extensive practice. Mr. Finney says he intends to take the first train for Saratoga after he receives his sheep skin.
The Omaha Dental College will open this year with a larger attendance than ever before.

E. J. Updegraff will assist Drs. Campbell and Strader in the work at the Emergency hospital this month.

A. J. Ames, William J. Douglas and H. F. Thulin have been employed at the Exposition during the vacation.

J. R. Beatty, Harry Baugness and H. S. Preston have been in the employ of the Omaha Street Railway during the summer.

George L. Strader, '99, has been assisting Dr. Campbell at the Emergency Hospital of the Trans-Mississippi Exposition during the summer.

Dr. E. W. Powell, formerly of the Class of '98, has graduated from a St. Louis medical college and is now assisting in the office of Dr. E. W. Lee of this city.

The attorney general of Iowa has decided that itinerant doctors must pay the state tax of $250 per year, and that any city or town can assess them besides.

The Junior class loses one, C. T. Gritzka, hospital steward in the Third Nebraska. The Sophomore class one, A. A. Tinley, Second Lieutenant Fifty-first Iowa.

Dr. W. L. Curtiss, formerly demonstrator of anatomy, has been elected to the chair of General and Descriptive Anatomy to fill the place of Dr. Donald Macrae, Jr., who is surgeon in the Fifty-first Iowa Regiment, now enroute to Manila.

Dioviburnia has stood the critical test of the most exacting physicians for years and has been pronounced of the highest therapeutical value. Can always be relied upon in all functional disorders of the Uterus and Appendages, whether Acute, Sub-Acute or Chronic.

WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

The eighth annual meeting of the Western Surgical and Gynecological Association will be held at Omaha December 28 and 29, 1898. Titles of papers from some of the leading surgeons of the west are already in the hands of the secretary and the coming meeting promises to be the most interesting yet held. Titles of papers should be sent to the secretary as soon as possible, but not later than November 20, to ensure a place on the program.

GEORGE H. SIMMONS, Secretary,
D. S. FAIRCHILD, President,
Lincoln, Neb.
Clinton, Ia.
NEBRASKA BUILDING.

The Nebraska building possesses, architecturally, a distinctive character. It is classic in style, closely following the Ionic order, with unconventional detail. There are two grand entrances, emphasized by pedestals embellished with statuary and the grand seal of the state. The building is 90x145 feet. The principal feature is the central dome. This is sixty feet in diameter, octagonal in form and rises to a height of eighty-five feet. This dome indicates plainly the magnificent assembly room, which is open to the top of the dome. Off this assembly room, which is intended for general gatherings, are offices, reception rooms, parlors, baggage and toilet rooms. These are for the convenience of various state societies and also for the use of states having no building of their own on the ground. The four corners of the building are surmounted by small domes, which in form and ornamentation, harmonize beautifully with the central dome. Over each entrance and opening from the gallery is a large, airy balcony for the use of the public. The building typifies the wealth, prosperity and educational advance of the State of Nebraska.
Stephens & Smith, ARE DEALERS IN
MEN'S FURNISHINGS AND HATS.
SOLE AGENTS FOR THE $3.00 Hawes Hats.
Mail Orders Solicited. 109 N. 16TH ST.

DENTAL DEPARTMENT
UNIVERSITY OF OMAHA,
12TH AND PACIFIC STREETS, OMAHA, NEB.

Regular Session begins October 3d, 1898, and continues six full months, ending April 1st, 1899.
Examinations of applicants for admission will be held Friday, September 30th, 1898.

Matriculation Fee, - - $5.00
Lecture Ticket, - - 75.00
Graduation Fee, - - 20.00

Board can be obtained for from three to six dollars per week.
Instruments required can be procured for from $35.00 to $45.00.
This does not include dental engine.

SEND FOR CATALOGUE, OR ADDRESS
W. H. SHERRADEN, M.D., D.D.S., SECRETARY.
101 SOUTH FIFTEENTH STREET, OMAHA, NEB.

This College is governed by the requirements of the National Association of Dental Faculties with regard to admission and graduation of students.
AMMONOL is one of the products of Coal-Tar and differs from the numerous similar products in that it contains Ammonia in active form. As a result of this AMMONOL possesses marked stimulating and expectorant properties. The well-known cardiac depression induced by other Antipyretics has frequently prohibited their use in otherwise suitable cases. The introduction of a similar drug, possessed of stimulating properties, is an advent of much importance. AMMONOL possesses marked antineuralgic properties, and it is claimed to be especially useful in cases of dysmenorrhœa.—The Medical Magazine, London.

Ammonol may be obtained from all Leading Druggists. Send for "AMMONOL EXCERPTA," a 48-Page Pamphlet.

THE AMMONOL CHEMICAL CO., New York.
Douglas Printing
Company

1308-1310 Harney St.

Printers, Binders, Blank Book Makers.

Where with greatly enlarged facilities, we are prepared to do all kinds of Book and Job Printing. PHONE 644

A. C. STOKES, M. S.,
ANALYTICAL CHEMIST.
Prof. Chemistry & Toxicology, Omaha Medical College
1107a Pacific Street, OMAHA.

A. B. HUBERMAN,
Oldest Jewelry House in Omaha,
13th and Douglas Streets.
Lowest Prices and Best Goods Guaranteed.

LETTER Duplicating Co.
Typewriter Work Imitated Perfectly.
TELEPHONE 2247.

Office and Typewriter Supplies
Dealers in Second Hand Type-writers’ Students’ Note Books, Pencils, Etc., and Circular Letters.
Thomas Whitehead,
B. O. & T. Life Building.
Omaha, N. B. Neb.

Electric Lighted
Steam Heated
Solid Vestibuled
Train for Chicago and the East... leaves the Union Depot, daily at
5.45 p.m.
via the
Chicago, Milwaukee
& St. Paul Railway

Unsurpassed Service.
Meals Served “a la carte.”

City Ticket Office, 1504 Farnam Street,
F. A. NASH, Gen’l Western Agent.

Please mention this publication when writing to advertisers.
The **EMPIRE ELASTIC BANDAGE**

Specially adapted for **VARICOSE VEINS**

We invite the attention of the Medical and Surgical Profession to the various merits combined in our bandages.

1st. **Its Prolong**—The greatest in the "Empire." It never causes itching, rash or ulceration under the bandage.

2d. **Its Elasticity**, which will enable the surgeon or nurse to put it on at any required tension, and which will follow a swelling up or down, as the case may be, a feature unknown to any other bandage.

3d. **Its Absorbant Properties.**—Greatest in the "Empire." 4th. **Its easy application** to any part of the body, not being necessary to fold over, as it follows itself with equal uniformity around any part of the abdomen.

5th. **Its Self-Holding Qualities.**—No bother with pins, needles and thread, or string, so tiresome to surgeons, as simply tucking the end under the last fold insures its permanent stay, until its removal for purpose of cleanliness.

6th. The only bandage that is Superior to the Elastic Stocking for varicose veins.

Send $1.00 for 3-inches by 5-yard bandage on approval.

---

**THE EMPIRE ABDOMINAL SUPPORTER**

Is Superior to all others for the following reasons:

1st. It adapts itself to every movement of the body, giving strong and even support.

2d. It produces warmth without irritation or sweating, as it is perfectly ventilated.

3d. In pregnancy, corpulency, tumors, or other cases of enlargement of abdomen. It supports weight of body from the backbone, relieving the sinews of their overwork.

4th. Its easy appliance (lace and draw on over the head or feet.)

5th. It is cheap, durable. It can be washed when soiled, proper care being taken to cleanse it in lukewarm water and dry in shade.

In ordering give largest measure of the abdomen.

**Prices:**

- 8 inch wide, $2.50
- 11 " 3.00
- 12 " double rubber 4.00

Manufactured by **THE EMPIRE MANUFACTURING CO.**

No. 48 Spring Street, LOCKPORT, N. Y., U. S. A.

Please mention this publication when writing.
TRUAX, GREENE & CO.
Physicians' and Hospital Supplies
SURGICAL INSTRUMENTS
STRICTLY PURE DRUGS

Our COLLEGE AGENT, MR. GEO. L. STRADER, will gladly make
prices to graduating students.
75-77 Wabash Avenue, - - - CHICAGO.

No Typewriter is Best.

No typewriter is best for all purposes. There are but
a few makes of really high-grade typewriters. There is at
least one purpose for which each of these is best.

We are the only concern in America handling more
than one variety of high-grade typewriters. Therefore, we
are better equipped for meeting all requirements of the user.

We can honestly and consistently suggest to you the
particular typewriter best adapted to your particular wants.

The Typewriter now being used exclusively by the
Trans-Mississippi and International Exposition is one of
the makes we handle.

We are also handlers of the biggest line of Typewriter
Supplies—Papers, Ribbons, Oils, Carbon Papers, Mimeo-
graphs, and Supplies,—west of Chicago.

Write or call and see us for particulars at 1612, Farnam
Street, Omaha, Nebraska.

The United Typewriter
and Supplies Company.

Quality Rather Than Quantity.

The International is
Scientific and Practical.
Words are easily found. Pronunciation is easily ascertained.
Meanings are easily learned. The
growth of words is easily traced,
and excellence of quality rather than superfluity of quantity characterizes its every department.

WEBSTER'S
INTERNATIONAL
DICTIONARY

It is the School-Teacher
of the Republic.
The International and its abridg-
ments are in general use in the
colleges and public and private
schools. Should you not give the
students access to the same Dic-
tionary in the home that they use
in the schoolroom?

Specimen pages and testimonials from eminent persons and publications sent on application.

In writing to advertisers mention THE PULSAR.
The Allison Physician's Table

Modern and up to date. Most complete, convenient and practical Table ever invented for general practice. Adopted and recommended by the leading Medical Colleges and Post-Graduate Schools of this country. Heartily endorsed by thousands of eminent physicians in all parts of the world. Can be instantly adjusted to any desired position without inconvenience to operator or patient. Has all the chair positions; has revolving cabinets underneath, with glass shelves for instruments, and glass trays for antiseptic solutions; has drawers for bandages, adjustable stirrups and leg crutches for rectal and gynecological work. It will pay you to investigate.

The Allison Chair.

No Chair has ever been offered to the profession that has given more general satisfaction. Its stability and easy manipulation have made it a favorite.

W. D. ALLISON CO.,
133 and 135 East South Street, Indianapolis, Ind.
OMAHA MEDICAL COLLEGE.
MEDICAL DEPARTMENT
UNIVERSITY OF OMAHA.

Four years graded course comprising all branches of medicine and surgery. Credentials issued to students by other medical schools in good standing permit of admission to advanced work. Graduates of universities and other colleges of equal requirements are credited with one year's work.

Entrance Examination required of those not possessing literary credentials indicating a good English education.

Clinical Instruction in the Out-door Dispensary, the Douglas County, Omaha, Clarkson, Immanuel, and Presbyterian Hospitals.

DEPARTMENT OF INTERNAL MEDICINE: Wellington S. Gibbs, M. D., Wilson O. Bridges, M. D., H. M. McClaran, M. D., William F. Miltroy, M. D.
DEPARTMENT OF SURGERY: John E. Summers, Jr., M. D., August F. Jonas, M. D., Chas. C. Allison, M. D., B. B. Davis, M. D., Donald Macrae, M. D.
DEPARTMENT OF MATERNAL MEDICINE AND THERAPEUTICS: William H. Christie, M. D., Henry B. Wilson, M. D.
DEPARTMENT OF OBSTETRICS: Edward W. Chase, M. D.
DEPARTMENT OF ANATOMY: Donald Macrae, Jr., M. D., A. W. Edmiston, M. D., W. L. Curtiss, M. D.
DEPARTMENT OF PHYSIOLOGY: Vernon L. Trenor, M. D.
DEPARTMENT OF CHEMISTRY: A. C. Stokes, M. S.
DEPARTMENT OF MEDICAL JURISPRUDENCE: Judge Wm. W. Keayor.
DEPARTMENT OF GYNECOLOGY: Ewing Brown, M. D.
DEPARTMENT OF DISEASES OF THE EYE AND EAR: Harold Gifford, M. D.
DEPARTMENT OF LARYNGOLOGY AND RHINOLOGY: F. S. Owen, M. D.
DEPARTMENT OF DERMATOLOGY: G. S. Hoffman, M. D.
DEPARTMENT OF NERVOUS AND MENTAL DISEASES: Hamilton B. Lowry, M. D., Richard C. Moore, M. D.
DEPARTMENT OF PATHOLOGY, HISTOLOGY AND BACTERIOLOGY: Wm. R. Lavender, M. D.

For particulars and further information apply to
EDWARD W. CHASE, Secretary,
Continental Building, Omaha, Neb.

---

Prescriptions filled day or night.

B. ROBINSON,
PHARMACIST.

1102 South Thirteenth Street, OMAHA.
TELEPHONE 1780.

Perfumes, Toilet Articles, Paints, Oils, Glass,
Varnishes, Brushes, Etc.
Liberal Discount to Students.

Presbyterian Hospital

Located at 26th and Marcy Sts., OMAHA.

This Hospital is equipped with all modern improvements for
ASEPTIC SURGICAL WORK
and the care of Medical Cases. The Resident Physician and Trained Nurses are constantly on duty, and the medical and surgical staff are in daily attendance.

For Particulars write care of THE PRESIDENT of its Hospital Staff.
In writing to advertisers mention THE PULSE.
Hundreds of Dispensing Doctors

Have taken advantage of our discounts and now buy their pharmaceuticals from us.

Try us once Yourself. We receive orders daily from all parts of the United States. Distance does not increase the cost to purchaser as we allow freight charges on shipments consisting of pharmaceuticals. Our catalogue prices are practically the same as those of leading makers, but we do not discriminate against the doctor, we give him inside manufacturers' prices.

Our discount is 40 per cent, while other makers give you only 25 per cent off list.

LAbORATORY AND OFFICE, 1112 HOWARD ST.
MERCER BUILDING.

AN EXAMPLE:
Fluid Extract Coca Leaves is listed by all leading manufacturers at $2.50 per pint.
You now get a discount of 25%, making net cost $1.50.

Our discount is 40%, making net cost $1.20.

The same proportion of saving will be found in all Fluid Extracts, Elixirs, Syrups, Wines, Pills, and other regular goods.

Those low prices do not indicate an inferior quality of goods.

Favored Buyers Get This Discount, Why Should Not You?

You do From Us as We Favor the Doctor.

We guarantee our goods to be equal in quality to any in the market, and as we are responsible, you need not hesitate to

Mail Us a Trial Order.

THE MERCER CHEMICAL CO.,
PHARMACEUTICAL CHEMISTS,
OMAHA, NEB.

Complete Catalogue sent to Dispensing Physicians on request.

Please mention this Publication when writing.
The season approaches for Throat and Lung troubles. Are you prepared to treat them successfully? Can’t we sell you a Multi-Nebular Vaporizer?

No. 1—Having 6 Nebulizing Chambers E (three attached and three extra, with nickel plated screw covers.) Price $25.00 net.

No. 2—Having 10 Nebulizing Chambers E (five attached and five extra, with nickel-plated screw covers.) Price $35.00 net.

The Aloe & Penfold Co.

Surgical Instruments
and Physicians’ Supplies

1408 Farnam Street. OMAHA, NEB.