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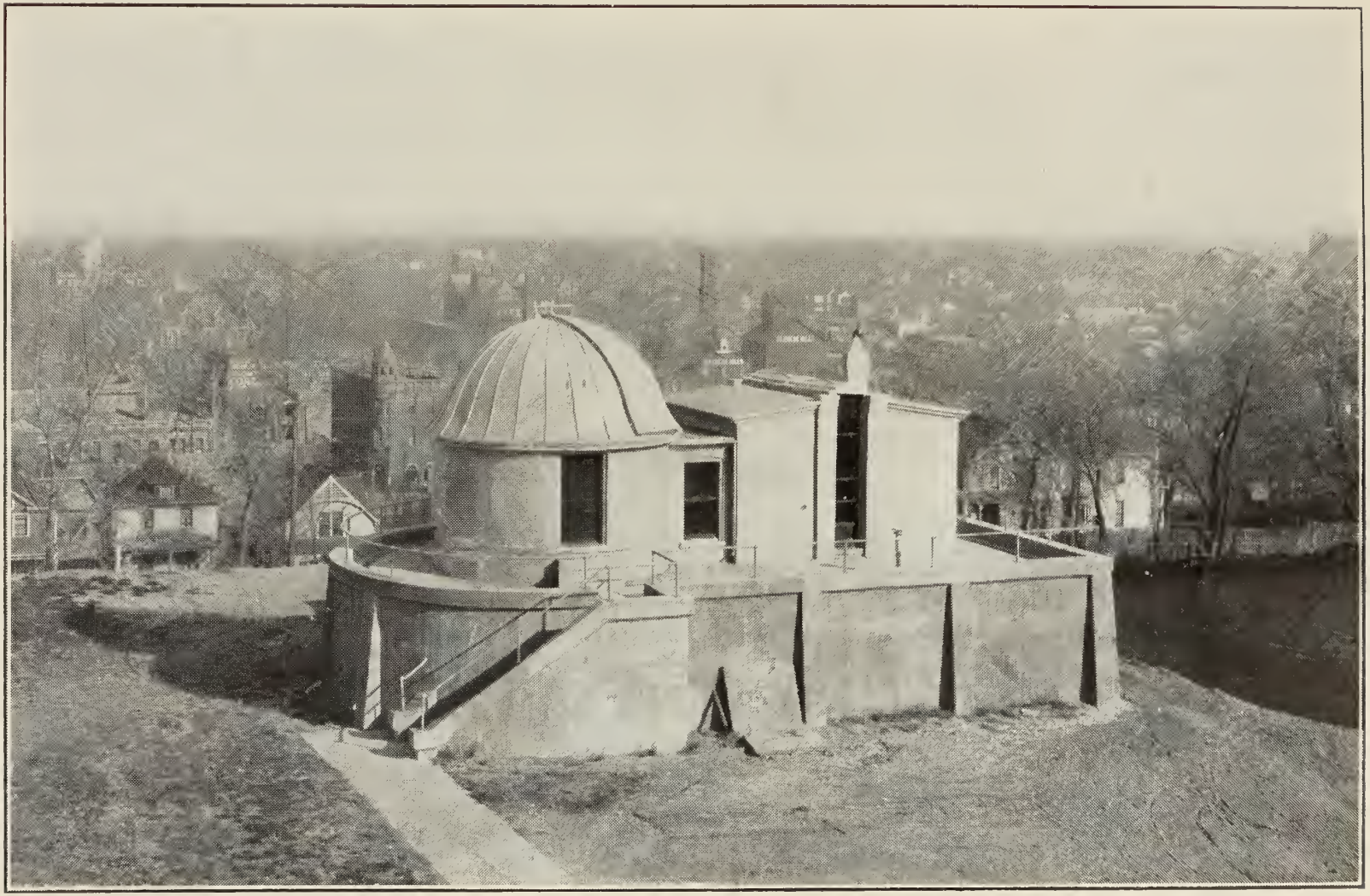

The Creighton University Observatory.

EDUCATION AND STUDENT LIFE IN GERMANY.

*ADOLPH SACHS, M. D.

Limitations of time and space preclude an extended discussion of this subject, but the following narrative may be of interest. Education in Germany is compulsory, just as in our own country. There are two types of schools—one for the very poor and the other for children whose parents can afford to pay a nominal sum. There are also many private schools. At the institutions maintained for the poor, their books, papers, pencils and other supplies are furnished, as well as coffee and bread or soup in the case of those children who have not been properly fed at home.

A child enters school at the age of six and remains until he is fourteen years old unless there be some special reason for exemption from this requirement. Children are taught those things which will be most useful for people of their position. In addition to the day schools, the government also provides instruction at night for those who desire to improve themselves, and particularly for boys who leave school at the age of fourteen and wish to secure additional education. A voluntary association plans free vacation outings for poor children and every year considerable numbers take advantage of this opportunity.

The other public schools require a payment of about ten dollars per year for tuition and the children must furnish all of thir own supplies. At the end of a three-year preparatory course, the pupil enters what is called a Gymnasium, an institution which though somewhat like our High School differs in this, that it gives instruction in elementary subjects, which with us are confined to the Grammar school.

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*M. D., Creighton 1907; Associate Professor of Medicine; at present on leave of absence in Germany.

The Gymnasium also offers the more advanced work ordinarily found in our High Schools. There is no co-education, the boys and girls being sent to separate schools.

School hours are from eight A. M. to one P. M. and twice a week from two until five P. M. However, the children are required to do a great deal more work than in our American schools, and often the younger pupils are assigned lessons which they must prepare at home in the evening.

Every healthy boy must serve in the German army, but if he attends the Gymnasium and passes the examination at the end of the fifth year, he is given the privilege of serving one year instead of three, and moreover enjoys a number of privileges not accorded to the regular recruits. For instance, he may live at home instead of at the barracks, but must furnish his uniform and other supplies. After graduating from the Gymnasium, a student who desires to continue his education may enter the University.

In the Medical course of the University there are ten semesters, two each year. The Winter semester commences October fifteenth and ends March fifteenth. The Summer semester continues from April fifteenth to August fifteenth. There are a great many vacations during the year, so in reality the time actually spent in school is about the same as in our American colleges. All medical schools are under governmental control and there are no private institutions.

A student chooses which university he wishes to attend, then shows his credentials and on paying a very small fee is allowed to matriculate. He attends as long as he desires and if he wishes to complete his course elsewhere he may do so and receive full credit for work previously done. Very frequently a student commences at one university and graduates at another; however, as all of the schools are controlled by the government and have the same requirements, this change from one university to another is much easier than in the United States. Men and women are accorded the same privileges in all universities.

During the first five semesters the preliminary branches studied are the same as in American colleges, but there is no set time within which a student must finish these branches. He may study them for several years if he desires, for no one controls him on this point, but the shortest period in which he can hope to finish his preliminary work is five semesters. Each student is left to his own judgment, and is not given any schedule requiring him to take particular studies at particular times. However, most students follow a regular routine, taking as a rule Anatomy, Physiology, Chemistry, Botany, Embryology, Zoology, Histology, Physics, etc.

At the conclusion of the preliminary work each student must take an examination which is for the most part oral; should a student fail, he is required to repeat the course. There are no yearly examinations as in American schools—each student carries a card which at the satisfactory completion of the course is signed by the professor.

During the last five semesters the student studies Practical Medicine as well as Theoretical Medicine, Surgery, Pathology, Pharmacology, Obstetrics, Hygiene, Otology, Neurology, Dermatology, Rhinology, Laryngology, Pediatrics and other branches usually required of medical men everywhere. Here again there is no fixed time for the study of each branch, but the students usually follow a regular routine just as during the first semesters. In these last semesters there is very little check on the students, and as there is no daily roll-call there is no way of telling how often a man is absent from his lectures. The only check on the student is that students who are called on to recite must go down into the pit of the lecture room, and should a man who is called not respond he is of course marked accordingly.

Some of the classes are very large and it happens that students are not asked to recite more than twice in a semester. Classes are conducted as follows: Each day from

five to eight men are called, and they must go down in front where the case is being demonstrated. They listen to the lecture just as the rest of the class, but occasionally are asked a few question, or what they hear in a certain heart lesion or other case. One day each week in the medical clinic there is a general quiz, but anyone may answer and no one is given any credit. Students are not quizzed as in the United States and are not held responsible for their recitations. The classes are divided into smaller groups for work on Percussion, Oscultation and other important studies, but even here no close check is kept on the student, as is customary in the United States.

Upon finishing a semester, the student again has his card signed, and thus he continues until he has finished all the necessary branches in the five semesters.

After completing his college work a student does not take an examination for a degree, but must prepare for an examination called the "Staats Exam," which corresponds to our State examinations. It differs greatly, however, in the manner in which it is given and is much more difficult than with us. The student must choose at which university he wishes to take his examination, and when he is prepared he applies at the institution which he has chosen. The examination is oral for the most part, and consists of practical work at the bed-side. The examination, therefore, may last three or four months before the student has completed all of his branches. For example, in medicine, which is one of their most difficult subjects, the student is shown a case and he must get the history, make the examination and give a diagnosis. Then he is also asked various questions which may bear on physiology, for instance, though the examination is ostensibly in medicine. Each examination is held by the professor in charge of the particular branch.

After passing the state examination the student must serve in a hospital for at least one year before he is given the right to practice, and at the completion of this practical year he is given the title "Arzt" (Physician), but is not given the title of Doctor of Medicine until he has written a thesis which upon examination by the university authorities must be passed upon favorably and must then be circulated in pamphlet form at the applicant's expense—from one hundred to one hundred and fifty dollars. This, however, requires no great amount of work and is largely a matter of form. Many doctors do not desire this title and the only practical advantage of having it is that one may put M. D. on his sign. Otherwise he may only describe himself as "Arzt" (Physician).

This brief sketch of study in Berlin will give a fairly accurate idea of the system prevailing quite generally in Germany. Perhaps student life would prove more interesting to the readers of the Chronicle, for it is entirely different from that to which we are accustomed in the United States. In Germany the student is dependent almost entirely upon himself. He comes to his lectures each day, but has no assigned work which he must cover. He has no daily or weekly quiz and does not burn the midnight oil preparing for examinations at the end of each semester. If a man really wishes to work, however, he has untold opportunities, for the professors are always glad to give a diligent student all the help he needs. During vacations an industrious student may work in the various hospitals and private clinics and thus secure an abundance of practical work. On the other hand, if a person is lazy there is no one to keep after him and make him work, and no examination looms up as a nightmare impelling him to industry. On the whole, the American arrangement would seem better, for often the best men will need prodding, and, moreover, under the German system, where the student is left so completely to himself, he does not always choose what

would be best for the obvious reason that he is not in a position to choose as wisely as one could who had years of experience.

College spirit is unknown in German universities. The students do not know what it is to have a college yell or class yell. As for class spirit, there is absolutely none, for the students are not divided into separate classes. Just think of it! a Freshman and a Senior look alike and no one ever yells "too fresh!" They never have a class rush, and a Sophomore never tries to down a Freshman. They do not know what they are missing.

College athletics is also unknown. There is no foot-ball eleven and none of the delightful sensation aroused in America when there are two "downs" and only five yards to the goal. Baseball is also unknown, and here again the German student misses the exhilaration of "two men out and three men on bases." On the other hand, they have their fun as well as we, but in a different way, and they probably would not exchange with us even if they had the opportunity.

The students are divided pretty much into two classes, the fraternity and the non-fraternity men. The latter have an association which is called "Freie Studentenschaft." Any student may belong to this association. They have an office at the university, which is really an information bureau for the students. They arrange for quiz courses—an obvious necessity, for there are none in the university. They plan outings and have departments for fencing, riding, rowing and polo. They also have literary departments for dramatic work and other lines of study, but athletics like ours, with one school contesting against another, is unknown. There are private matches in rowing and the like, but no great interest in them is shown by outsiders. The fraternities are called "Burschenschaft." These of course are more exclusive and only certain men are admitted.

Various fraternities have various restrictions for membership, and all have their respective colors and uniforms which are duly registered at the university. These uniforms with their small caps at first strike the foreigner as very funny, but later one gets accustomed to the life here and commences to see the pretty side of it. Oftentimes a wrong impression is gained by people who remain only for a short while, but the longer one stays the more attractive some of the customs really are.

The men of these fraternities are divided into two classes. The new men are called "Fuchs" and the older men are known as "Alte Herren." The main sport of the fraternities is duelling. Each man at some time must have or have had a duel. So, very often men look for trivial causes in order that they may have their fight. These quarrels or petty differences only occur between the men in the fraternity or between two fraternities. Sometimes different fraternities have matches in duelling, just as our colleges have matches in football. Often one sees a number of fraternity men in full uniform, with banners and full regalia, riding through the streets in carriages. This usually means that a number of fencing matches will probably take place.

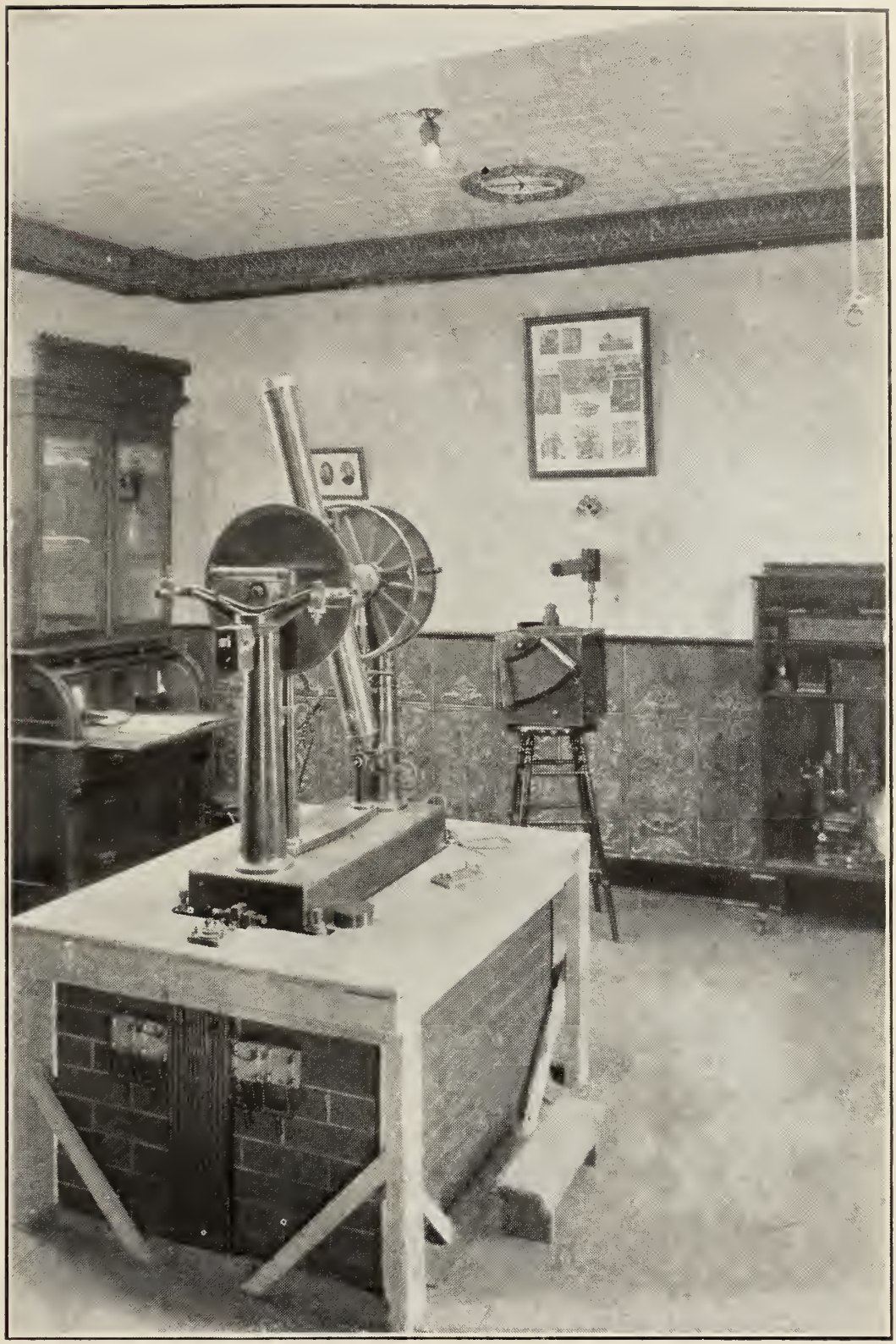
The duels are generally fought in some hidden restaurant or out-of-the-way place, for they are not allowed by law, though the law is not strictly enforced. There are different kinds of duelling. The most important are the menseur and saber duels. The menseur is the most frequent. In this form of duel the men's hands and arms are well protected and they only strike for the face—usually the left cheek. The one drawing first blood wins. A physician is always at hand to take care of the wounds of the injured person. In saber duels the men are not as well protected and the resulting injuries are therefore more serious.

To us this seems to be a very dangerous amusement, but I am sure fewer men are seriously hurt in these duels than in our football games. Time and space make it impossible to go into the details of duelling. One often sees students with their faces bandaged, and to the newcomer the spectacle is apt to be misleading. A man once said to me, "My, but these students are subject to toothache, aren't they?" He has learned better since then. The students are very proud of their scars and the more one has the greater is the honor, for it shows that they have fought a great many times.

The fraternities gather about once a year and have a big entertainment which is known as a "Commerce," being much in the nature of what we would call a "stag" party.

The German student is very courteous to the foreign student—a great deal more so than we ourselves are to them. On first going abroad many things appear very funny, but when one learns to know the real German student he finds him an untiring worker, seeking to advance science without regard to compensation, his ideal urging him to seek riches in honor and knowledge even at the sacrifice of income. This is one of the reasons why the Germans have advanced so far in medical science and will doubtless continue to do so in the future.

Adolph Sachs, M. D.



The Creighton University Observatory—Transit Room facing east.

THE OBSERVATORY.

*WILLIAM F. RIGGE, S. J., F. R. A. S.

The many important improvements recently made in the Observatory are the cause of the present article. In mentioning these improvements, the opportunity is taken to speak of the nature of the Observatory, of its equipment and its purpose.

To an approaching visitor the Observatory appears to be a small but extremely massive structure placed in a commanding position on a hill. Its architecture is unique. While the eastern portion is square, with long central windows on the south and north, but with no opening whatever on the east, the western is cylindrical with a hemispherical dome. The wall below, ten feet in height and flanked with buttresses, conforms to the shape of the building above it, and is the chief factor to give the impression of massiveness and solidity, which is further enhanced by the partly natural and partly artificial stone color of the whole structure.

Upon entering the Observatory the view presented to the eye will strike all, and especially those who remember its former appearance, as a creation in architecture. Under a sky-blue dome supported by an ivory-tinted and sculptured cylindrical wall, which is pierced by two doors and a window with gothic borders, and surmounted by a cornice of pure classic style, there rises in the center of the room upon a solid stone base a sky-blue curtain, reaching almost to the ceiling and seemingly veiling a most precious statue. A mahogany-colored chair, running in guides almost as high as the curtain, stands behind it. When drawn aside and fastened to the chair, the curtain reveals the large telescope whose lacquering gives it a golden hue. One of our engrav-

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*Fellow of the Royal Astronomical Society of England; Member of the National Geographical Society of Washington, D. C., and of the American Association for the Advancement of Science; Director of The Creighton University Observatory.

ings presents this view of the telescope, of the observing chair and the curtain, and part of the cylindrical wall with its cornice, and part of the dome. The life-giving color, however, is wanting. The view, moreover, is taken from a point above the level of the eye, and fails altogether in impressiveness.

The telescope is seven feet in length with a five-inch glass. It is mounted equatorially, that is to say, it is turned about two axes, one of which points to the pole star. It is supported by four nickel-plated columns, which in turn rest upon an iron plate on the top of the large stone base, and enclose between them the clock which drives the telescope. The advantage of the equatorial mounting and the clock is that when directed to a star the telescope will follow it in its diurnal motion and keep it steadily and apparently immovably in the field of view.

The telescope was purchased in 1884 from Steward in London, at a cost of six hundred dollars. It was originally mounted on an oak tripod, and kept in a room of the chemical laboratory, from which it was wheeled out upon the grounds when it was to be used. This process was as injurious to the instrument as it was prohibitive to the observer. Accordingly Professor Joseph Rigge, S. J., who was at the head of the scientific department at that time, designed to give the telescope a permanent mounting. Mr. John A. Creighton came to his aid so generously and promptly that in six weeks after Professor Rigge's arrival in Omaha in 1885, the foundations of the present round house were begun, and in seven more the building was ready for use.

Mr. John A. McShane then donated about a thousand dollars for the Howard solar clock, the Fauth chronograph and the electrical outfit. It was in this way that the Observatory sprang into being.

As soon as all the instruments mentioned were properly set up, ideas expanded still more, and the College now proposed to furnish correct time to the city. Although this feature has never materialized, it was the cause of completing the instrumental outfit by the addition of the sixteen-hundred dollar transit and the five-hundred dollar sidereal clock, both the gift of our great benefactor, the late Count John A. Creighton.

The transit is presented in two of the engravings. It has a three-inch lens, and is provided with two circles. One of these serves as a finder in order to set the telescope upon a star. The other is read by microscopes to the tenth of a second. This is the usual limit of even much larger instruments of its class. It is such that inches might be measured at the distance of forty miles, and its own position on earth determined within ten feet.

The eye-piece is provided with seven vertical and two horizontal threads, each system being moved by screws with a hundred turns to the inch, the drum of the screw being divided into a hundred parts and read by estimation to tenths of these parts. This enables one to set the threads to the hundred-thousandth part of an inch.

The object of the instrument is twofold. First as a transit, it enables an astronomer to note the exact moment of a star's crossing the meridian. For this purpose he presses an electric key, whenever the star crosses one of the wires or threads in the field of view of the telescope, and thus records its transit on the chronograph.

The chronograph, unfortunately entirely concealed behind the transit in one of the views, consists of a cylinder wound with paper and rotated uniformly by clockwork, making one turn in a minute. A pen, pressing against it, is attached to the armature of an electromagnet, through which an electrical current is running in series with the clock and the observing key. At every even second the

clock breaks the circuit and draws the pen aside for a moment, thus impressing equidistant time marks upon the rotating paper. The distance of the observer's mark from a clock mark furnishes any desirable fraction of a second. In this way two clocks may be automatically compared. And as a fact the clock signals sent from the Observatory at Washington, D. C., were for many years daily recorded on our chronograph.

A marble switchboard with ten switches admits of all possible combinations, and places the chronograph at the service of an astronomer at the transit, at the equatorial, or at the piers placed outside of the building. Either or both of the Observatory clocks may be switched into the circuit, and signals may be sent to, as well as received from, any other observatory.

The two clocks, sidereal and solar as they are called, the first keeping time with the stars and the second with the sun, are housed in a vault built above ground with triple walls and a triple roof, the purpose being to insure a uniform temperature. This has been so well attained, that even without electrical control, the temperature has never been known to vary more than two degrees a day, no matter what the outside variation may have been. The vault is entered by the door seen to the left of the transit, through the glass part of which the sidereal clock may be seen, while the solar clock is visible through the round window.

The second purpose of the transit is to measure the height of stars in the sky. This is done by means of the circle mentioned before.

Another view of the transit shows two glass cases in the background. The left one is a computing desk, books, papers and the like, being kept on its shelves and in its drawers. The right case is shown open. It contains the eye-pieces of the equatorial, a sextant and a two-inch altazimuth. This last instrument was used for surveying, but

its great weight of forty-two pounds and two unlucky falls soon unfitted it for that purpose. By the addition of an idle micrometer and of two sensitive levels, as well as of a larger lens and of hardened steel pivots, an outlay of forty dollars changed a useless instrument into one worth nearly six hundred dollars.

This instrument is called an altazimuth or universal instrument. It is portable, and when in use is set up on one of the iron pipes or piers that are outside of the Observatory in the meridian of the large transit. The two circles on the instrument admit of its being used on stars in any position, while its micrometers and levels give it all the accuracy desirable. Its portable character makes it a capital instrument for a student, since it compels him to make his own adjustments, to find his meridian and the like.

To the extreme left on the same engraving a barometer may be discerned. Towards the middle is Bailey's Astral Lantern, illuminated by an interior electric lamp, and introducing the beginner into the study of the constellations. Above on the ceiling is a weather vane, while on the wall, just above the astral lantern, is a lamp for illuminating the wires of the transit at night. The switches seen below the transit in the foreground control electric light currents of four and of one hundred and ten volts at the outside piers. The table built about the transit pier does not touch it. There are also a Steinheil grating spectroscope and a Zoellner star spectroscope, which may be attached to the large telescope. The latter is the present of Mr. G. A. Peters of '08, and the former that of the Class of '04.

As remarked before, the life-giving color is wanting in the pictures. The interior of the Observatory is now a thing of beauty. In point of the money value of the instruments, of the artistic design and the tasty coloring, as well as the nobility of the science it is its purpose to foster, the Observatory is truly the gem of Creighton University.

The fate of the Observatory, which hung so long in the balance on account of the uncertain cutting-through of Twenty-fourth Street and the possible effect of the heavy car service upon the instruments, was definitively decided by the building of its retaining wall, which was necessitated by the grading of the college campus. This wall is of reinforced concrete, and is of such strength that its removal will be more expensive than its erection. The wall is ten feet in height above ground, and six feet below it. Its thickness at the top is one foot, but at its base is eight feet. Its length is one hundred and fifty feet. The reinforcing consists of two sets of steel rods, the vertical ones being twelve and the horizontal ones eight inches apart.

The remark has been made by some who saw the retaining wall in process of erection, that the whole Observatory might have been rebuilt at less expense. This may be true in a pecuniary sense, but it would have involved several important disadvantages. The instruments would have had to be taken apart, and afterwards remounted, a labor which only an expert can appreciate. Lowering the Observatory upon the same site was impracticable on account of the different foundations of the walls and the instruments. Rebuilding it on a lower level would have diminished the extent of the visible sky and brought it nearer to the cars on the street. A change of site was impossible on the college grounds: transferring it to the outskirts of the city would have been of questionable value, as the city's growth might renew the same difficulties. It would also have defeated the first purpose of its existence, which is the instruction of students. Its distance from the college would have been a serious damper upon the zeal of its directors, and would have rendered very difficult the care of the buildings and the instruments.

There was all along only one serious objection to the present site, the probable shaking of the instruments by

the cars on the street. This has fortunately turned out to be a negligible factor. Although only about seventy feet away, the cars cause no more tremors in the telescope than currents of air do, they are perceptible only to a close observer and last only for a few moments, although, strange to say, one's whole body quivers at the time.

As it is, the site is unsurpassed by any observatory in a city. The college cuts off about forty degrees from the south towards the west, the highest point being however only nineteen degrees high. Towards the southeast, in the direction of the High School hill and the business part of the city, about four or five degrees above the horizon are obscured, towards the west and northwest about one, while towards the north and the east the very horizon is visible.

Nor is there much likelihood of this extent of visible sky ever being considerably encroached upon. This would seem to be possible only towards the southwest in the direction of the college, to which an extension may be added in the future. Towards the south is the college front lawn fifteen feet and more below the telescope. Towards the east the nearest point of Twenty-fourth Street is fifty feet below it, and towards the north Burt Street is seventy-five feet below it.

The Observatory is thus upon a natural tower with a very broad base, immeasurably better supported than upon the roof of the college building, to which it once came near to being relegated. Stability is a far more desirable feature than extent of sky. It needs but a moment's reflection to convince oneself that, while terra firma may have some unavoidable tremors, those of a high building must be more numerous and much greater. And as a fact the Twenty-fourth Street cars shake the college building more than the Observatory, although it is twice as far from the tracks. When, therefore, a telescope is seen to be mounted upon the top of a high building, a closer acquaint-

ance with the circumstances will show that it either rests upon a pier entirely disconnected from the building, or else that absolutely no other place can be found for it. One ought to consult the user of such a telescope and hear his opinion on the mounting.

The loose texture of the soil, the frequent caving-in of which caused such anxiety during the building of the retaining wall, is now a very decided advantage to the Observatory, since it reduces the earth tremors to a minimum.

The Observatory was built for a double purpose. First, for the instruction of students. As a students' observatory we doubt whether there is any other in the country as well equipped as the Creighton Observatory.

Second, it is to subserve the zeal of its director in as far as his time and inclinations may admit. That this feature has not been neglected, the city of Omaha knows sufficiently well. The scientific world knows it also, since the name of the Creighton University Observatory has entered many popular no less than technical publications, so that it can now no longer be omitted from any official list of the world's observatories.

William F. Rigge, S. J., F. R. A. S.

ELEMENTARY LATIN COMPOSITION.

*ALOYSIUS C. KEMPER, S. J.

Under the term "Elementary Latin Composition" we may embrace all attempts at Latin writing made during the High School course. Of real composition, in the sense of putting together original ideas in Latin, there can be no question during these first four years. It might even be considered a sufficiently rare performance to find a member of Freshman or Sophomore class actually composing in Latin. On the other hand, the exacting preparatory drill of combining into sentences the elements of the language, since it is a necessary part of learning how to write Latin, is not inaptly styled elementary Latin composition.

Of the necessity and utility of writing Latin, even in the earliest stages of the work, there exists little theoretical doubt. If there is any practical remissness in this regard it can generally be laid to the blame of that precipitancy which aims only at the satisfaction of having covered ground. But where thoroughness is not a secondary consideration, the teacher will not be so carried away by his eagerness to advance as to leave no time for this necessary complement to Latin reading.

Two methods of Latin composition are in use, both, perhaps, equally well championed. Briefly they are these. The so-called traditional method takes the grammar as the basis of the study. Each principle, or set of principles, as it occurs in the grammar, is illustrated by a number of sentences in which this principle is involved. The student's attention is thus centered upon one point at a time, and by this concentration of attention a hold on the matter is secured. In this plan no particular connection exists between the text of the Latin author and the attempts at writing.

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The vocabularies aim, however, at familiarizing the learner in general with the vocabulary of Caesar, or some other standard classic.

The textual method bases its advances almost solely on the text of the Latin author. Even so small an assignment as five lines of Caesar is supposed to furnish the student, not only with a vocabulary, but with a series of grammatical units and idioms, with which some interesting and helpful work of a reverse kind may be undertaken. What has been worked over from Latin into English may be worked back from English into Latin upon lines which the text itself has opened out to the reader. This method has been universally applied in all Jesuit schools for over three centuries, and many other educators have declared for it. It has a tradition of its own and one which has produced results of no mean order. One might indeed question whether the "traditional" method has a good claim to this epithet.

Whatever system of teaching Latin composition is followed, two conditions must be secured before any successful work can be done—patience in the teacher, interest in the pupil. These two conditions are obvious requisites; but they are so fundamental, and so easily overlooked, that we may delay over them for a moment.

The patience of the teacher will find no more ordinary exercise than in the correction of the Latin theme. Here the seventy times seven times of the Gospel must be almost literally applied in condoning blunders. Even where attention has been massed on a single point, often for several consecutive hours, the point will again be missed when special attention to it has been withdrawn. It is helpful to remember that, to a certain extent, this must be so. The process of turning thought from the vernacular into Latin confronts the writer with the whole apparatus of the grammatical difficulties of a strange tongue. Every syllable requires special attention; there can be no guessing, no half

alertness, no lack of energy. As long as the ideal pupil, who brings to this difficult work all the required earnestness, is so rarely found, so long must the instructor expect to correct the most elementary errors. What teacher of Latin has not been nettled for the hundredth time by finding "we are" rendered by "sunt," "I said" by "dixit," "he forgets" by "obliviscit," and so on in numberless cases? When these difficulties have been overcome to a gratifying extent, there will be wrong tense sequence, faulty indirect discourse, obvious errors in mood to correct, and to correct again and again. This process is a severe test of patience for the teacher. But instead of trying indignation, open severity and harsh criticism, he will do better to approach the student from a more interesting quarter. Let praise be generously given where there is at all any justification for it. A perfect theme, or one more than ordinarily satisfactory, might be read or shown to the class; the writer might be excused from a subsequent exercise. The resulting hero-worship will inevitably do its work, at least amongst the better material of the class. Some individual attention is also necessary and very effective. A single word in praise of a good expression, a gentle question about a glaring mistake, will do more to effect its end than even a severe punishment. In these, and other ways the teacher will do well to confine his wrath and indignation chiefly to his own apartments. There is no way of dragooning a pupil into Latin writing.

The second condition mentioned above as a requisite to good work in Latin composition, is interest in the pupil. Interest is a valuable asset in all school work. It becomes more necessary as the work grows more difficult; and Latin composition is, possibly, the most exacting work the pupil is called upon to do. The system of encouragement and praise will do much to promote interest. But the chief factor of this interest seems to me to be a sense of power created in the learner, and a desire to display that power.

Let the pupil feel that the Latin text has furnished him material for expressing a great variety of thoughts such as he himself has every day. This will necessitate some daily oral work on the passage just read; and there is no more effective check to elementary errors in Latin writing than a frequent drill in elementary Latin conversation. If the eager faces of the entire class during the few minutes of Latin talk have any meaning, they undoubtedly point to a very easy means of arousing interest. It would indeed be an ideal condition to have Latin prevail as a means of communication throughout the hour. But where this is not practicable, it is extremely prejudicial to eliminate all Latin talk. The forces of noun and verb endings come to impress themselves in no other way so easily and so surely. In a class that speaks Latin there will be a few errors of the type, "dixit," "I said." Without some Latin conversation these errors will mar even Freshman work. The questions and answers need not confine themselves to the mere repetition of ideas presented in the author. The teacher should be ever ready to glide into the idiom of Caesar or Cicero to express the current class-room ideas. "Deponite libros vestros;" "oportet altius loquaris;" "quaero ubinam sint scripta vestra." In the lower classes the language must be even simpler and accommodated to the grade. Such snatches of sentences the pupil will hear and try to understand. It will at first strike him as a revelation that a current thought can at all be expressed in an ancient idiom. Probably he will try it himself. It will give him a sense of a power which he will be proud of. It is interesting e. g. to note how a Latin pupil will sometimes substitute for the abbreviated Q. E. D. at the end of a geometrical proposition the entire phrase "Quod erat demonstrandum." He is utilizing a power which he feels he has. The use of it, in the present instance, has been a very helpful lesson on the gerundive. If this tendency were more largely fostered we should have better results to show in Latin composition.

It need not here be objected that a power of using Latin as a medium of conversation is not an end of our study. The above suggestion does not intend to make an end, but only a very helpful auxiliary, out of Latin talk. Latin writing, Latin reading, Latin speaking form a trilogy that should never be separated. The triple point of attack will most nearly insure success.

In considering the necessity of patience in the teacher and interest in the pupil for successful work in Latin composition, we have already taken into account some means of conducting this work. One or two further points deserve emphasis. There should be a great deal of Latin composition. It should be considered an integral part of the course, and not a more or less troublesome appendage which can be disregarded with impunity. The ideal would be a daily theme on the passage translated into good English. Until this reverse process has been gone through the work is hardly more than half done. Probably more is gained from frequent short themes than from periodical long ones.

In all preliminary work, especially during the first and second years, attention to Latin word order had better not encroach much on correct grammar and idiom. Pupils may be early made to feel that the verb prefers the end of a sentence, that object frequently precedes its verb, and some such general principles. These they will get at first hand from their Caesar or Cicero. But nothing like originality can be aimed at in the beginning without prejudice to a genuine appreciation of Latin style. Any attempt at this oftentimes results in ludicrous violence done to the natural position of words.

Finally, it is important to remember that Latin composition cannot begin too early. There should be some of it the very first day the Latin course is taken up. With the verb "est" and a few nouns, with perhaps one adjective, some composition may be attempted. A few spoken

sentences will make the class immensely proud of their acquisitions of the first day, prouder, it may be, than they will ever be subsequently. As new elements are met, composition keeps pace with the advance, not consuming valuable time, but aiding, as nothing else will aid, to master these elements. When a Latin author comes to be used, the possibilities for composition widen and assume a new interest. And here we may state a preference for the textual method, which has already been hinted at before. The interest is best secured when the text itself furnishes the material that is to be worked over by the learner. He finds more zest in putting to use elements already laboriously gathered, than in beginning once more the labor of gathering fresh material from a strange vocabulary. In the higher classes of third and fourth years the isolated sentence may grow into a connected piece, and the principles of grammar involved may be multiplied. At this stage, too, especially in the fourth year, the pupil may for the first time be expected to appreciate some points of Latin style and thus utilize in his exercises not only vocabulary and idiom but also, in a sense, the logic of his model. But this attention to style should always be rigidly cautioned. Correctness, not elegance of language, should be the product of the High School.

The imitation of a model is at no time expected to introduce all the constructions and peculiarities of the original. This would prove fatal to solid acquisition of any kind. With a little ingenuity, however, a teacher can form, from any passage, sentences intended to illustrate principles of his own selection. In addition to these principles, a good idiomatic phrase from the author, or a choice word of his may be called for in the theme. Thus the advantages of both textual and traditional methods may be combined

at the cost of some extra labor on the part of the teacher. In this combination of the two methods lies probably the most effective preparation for the real Latin composition of the college classes.

ALOYSIUS C. KEMPER, S. J.

NEWS NOTES.

Department of Law

Professor Herbert S. Daniel has removed his law offices to suite 845 Omaha National Bank Building.

On January fifteenth, Professor John A. Bennewitz assisted in the installation of a charter class of Knights of Columbus at Fremont, Nebraska, and delivered an address at the banquet which followed the initiation.

At the banquet of the Omaha Bar Association, held January fourteenth, Professor Arthur C. Wakeley responded to the toast, "The Simple Life," and Professor Joseph W. Woodrough to the toast, "The Bar." Professor Frank Crawford discussed the differences between law as practiced in England and the United States. Associate Dean, C. J. Smith, was elected to the Executive Committee, of which Professor John A. Rine is also a member. Messrs. Eugene D. O'Sullivan and Ralph A. Van Orsdel, both of the class of '10, were elected to membership.

Mr. James H. Hanley, '10, has formed a partnership with Mr. Edward J. Waters, and they have opened offices at suite 638 Bee Building, Omaha.

Mr. John Kuhl, who was elected Speaker of the Nebraska House of Representatives, is a half-brother of Mr. Charles J. Thielen, '11.

Mr. Edward D. Hogan, '08, is now practicing law at Cascade, Iowa.

Mr. Ernest T. Grunden, '09, who is now practicing at Elwood, Nebraska, has been retained in four out of the sixteen cases docketed for trial in the District Court of Gosper County, Nebraska, during the January term which commenced January thirtieth.

Mr. Edward B. McDermott, '10, has recently been engaged in an important case which he prosecuted as County Attorney for Buffalo County, Nebraska, against the Omaha Elevator Com-

The Creighton University Observatory—Transit Room facing west.

pany on the charge of discrimination in the purchase of grain. A number of prominent attorneys appeared for the defendant company.

Prof. George E. Wells, secretary of St. John's Law School, Toledo, Ohio, visited the Department January twenty-fifth.

On the evening of January twenty-fourth the second Law School dance of the year was held at the Assembly Hall.

Preparations are going forward rapidly for the Inter-collegiate debates with the University of South Dakota and Loyola University of Chicago. On January ninth the first preliminary contest was held and the following eight men were chosen out of the thirteen who entered the try-out: W. C. Heelan, Charles Flanery, J. W. Delehant, F. P. Matthews, H. C. Robertson, W. J. Donahue, W. W. Hoye and P. H. McNally. The judges on this occasion were Professor Arthur C. Wakeley, Professor Joseph W. Woodrough and William C. Fraser, '08.

On January twenty-fifth the final preliminary contest was held, the eight men above mentioned being aligned four on each side as follows: Affirmative, William J. Donahue, Francis P. Matthews, John W. Delehant and Patrick H. McNally; negative, William C. Heelan, Hubert C. Robertson, Walter W. Hoye and Charles Flanery. The judges for the second try-out were Hon. Lee S. Estelle, Judge of the District Court and Lecturer on Practice; Professor John F. Stout, of the firm of Stout & Rose and Lecturer on Judgments and Liens, and Mr. Clinton Brome, '08, Second Assistant City Attorney of Omaha. The positions assigned the contestants by the judges are as follows: Francis P. Matthews and John W. Delehant, first; Charles Flanery, second; Walter W. Hoye, third; Patrick H. McNally and William J. Donahue, fourth. The cash prize of one hundred dollars offered to the winners of this try-out will be divided as follows in each team: First, twenty-five dollars each; second, fifteen dollars each; third, ten dollars each. Mr. F. W. Driscoll, recently elected President of the Law School Debating Club, presided and announced the decision of the judges.

The recently organized Saturday morning Practice Court has proven entirely satisfactory, and though involving a great

deal of extra work, it gives the Seniors experience along practical lines and furnishes training seldom offered in law schools.

The following comparative statement shows the result of the first semester examinations both this year and last as to class leaders:

FIRST SEMESTER 1909-10.

Seniors.

Student	Rank	General Average
E. D. O'Sullivan	1	91.13
A. W. Proctor	2	90.
J. N. Moonan	3	88.56
H. H. Harper	4	86.28
J. L. Greer	5	83.85

Juniors.

H. C. Robertson	1	85.59
P. H. McNally	2	85.57
D. P. Stough	3	83.90
N. H. Mapes	4	83.07
C. B. McCartan	5	81.85

Freshmen—Day.

G. A. Floresch	1	89.50
D. J. Burke	2	86.67
D. C. Geiselman	3	81.83
C. J. Aldrich	4	81.50
W. L. Griffith	5	79.33

Freshmen—Night.

J. T. McGuckin	1	87.
Henry Monsky	2	86.80
P. E. Horan	3	84.20
N. H. Mapes	4	78.80
C. J. Peacock	5	74.

FIRST SEMESTER 1910-11.

Seniors.

Student	Rank	General Average
H. C. Robertson	1	88.55
C. B. McCartan	2	85.99
D. P. Stough	3	85.55
J. J. Zitnik	4	84.11
P. H. McNally	5	83.32

Juniors.

D. J. Burke	1	87.50
Henry Monsky	2	84.14
A. Rosenblum	3	83.57
W. L. Griffith	4	80.14
D. C. Geiselman	5	79.36

Fresmen—Day.

Joseph O. Burger	1	93.21
Wm. Grodzinsky	2	91.71
L. A. Magney	3	91.43
W. R. Ross	4	90.71
G. V. Rademacher	5	88.36

Freshmen—Night.

J. W. Delehant	1	96.25
F. W. Matthews	2	95.33
Frank Johnson	3	93.67
C. R. Malm	4	89.
E. H. McCarthy	5	88.01

Sophomore—Night.

P. E. Horan	1	86.50
J. T. McGuckin	2	85.50
C. F. Schrempp	3	78.90
J. C. Barrett	4	76.08
F. J. Rossbach	5	72.91

RELATIVE GENERAL AVERAGES OF CLASSES, BASED ON GENERAL AVERAGES OF RESPECTIVE MEMBERS.

1909-10.

Seniors	1st	77.76
Juniors	2nd	72.03
Freshmen, Night	3rd	71.02
Freshmen, Day	4th	70.63

1910-11.

Freshmen, Night	1st	82.46
Sophomore, Night	2nd	76.48
Junior, Day	3rd	76.30
Freshmen, Day	4th	75.38
Seniors	5th	75.16

Professor John A. Rine, City Attorney of Omaha, has just submitted his report to the City Council showing the activities of his office during the year 1910. The following summary will give some idea of the work handled in his office:

	No. cases pending January 1, 1910.....	No. cases filed during year 1910.....	No. cases disposed of during year 1910.....	No. cases pending January 1, 1911.....
District Court.....	78	66	41	103
Supreme Court.....	11	6	6	11
U. S. Circuit Court.....	19	12	9	22
U. S. Circuit Court of Appeals	1	0	1	0
U. S. Supreme Court.....	1	1	1	1
County Court.....	2	0	0	2
Justice Courts.....	0	6	6	0
Total	112	91	64	139

On the evening of Tuesday, February twenty-first, the students of the Department will hold a Smoker in the Assembly Hall, at which a first-class program, which is in the hands of the Night Freshmen, will be rendered.

On Saturday, January twenty-eighth, the annual Stockholders' meeting of the Douglas County Law Library Association was held in the Association rooms and the following board of directors chosen: Mr. Howard B. Smith, Mr. William Giller, Mr. Paul L. Martin, Mr. Harley G. Moorhead and Mr. Charles Haffke, '08.

A son was born to Mr. and Mrs. Joseph R. Sullivan, January twenty-ninth. Mr. Sullivan, who graduated with the class of '08, is engaged in the successful practice of his profession at Laramie, Wyoming.

On January twenty-third a daughter was born to Mr. and Mrs. William C. Fraser. Mr. Fraser graduated with the class of '08 and is now associated with the firm of Brome, Ellick and Brome, Omaha.

Mr. William H. Shaw, '10, has opened an office at rooms 209-210 Willits Building, Klamath Falls, Oregon. The Klamath Chronicle for January twenty-second says of Mr. Shaw:

> "Mr. Shaw is originally from Omaha, where he was connected with the juvenile law practice, having been probation officer and having entire charge of work of the court in connection with the boys of that city for three years. He is highly recommended as a young lawyer of ability and will, no doubt, make good in his chosen profession here. He has been admitted to the Oregon bar."

Mr. Shaw has been retained as attorney for the Good Government League of Klamath Falls to fight the attempt of the local Electric Light and Water Company to obtain a fifty-year franchise.

The recently issued docket for the District Court of Sarpy County, Nebraska, bears the name of William N. Jamieson as County Attorney and shows that he has sixteen out of the sixty-eight cases on the docket. Mr. Jamieson graduated with the class of '10.

A statement recently published in the American Law School Review of St. Paul shows that Creighton is forty-fifth in point of enrollment out of the more than one hundred law schools in the United States.

A joint banquet of the Emmet Monument Association and the Irish Fellowship Club will be held at the Henshaw Hotel February twenty-eighth, at which Professor L. J. TePoel will deliver one of the principal addresses.

Mr. Peter F. Ward, '10, is at present located at Hot Springs, South Dakota.

Messrs. Hugh J. Boyle and Benjamin Cunningham, both of last year's class, visited the Department early in February. Mr. Boyle is associated with Hon. M. F. Harrington at O'Neill, Nebraska, and Mr. Cunningham is practicing at Wood River, Nebraska.

Department of Medicine.

The following extract from an editorial in the Omaha Daily News of January eighteenth will interest Creighton men: "Gas Commissioner Crowley is deserving of commendation from the taxpayers of Omaha for his successful exposure of the attempt of the Gas Company to collect a grossly padded claim from the city. He made it perfectly clear that the company charged up various articles at prices that ran from two to six times the amount for which they could be purchased in the open market.

Professor Hugo Wightman was elected president of the Nebraska Demonstrators' Association at its meeting held in Lincoln, January seventeenth. Following the business meeting a banquet was held at the Lindell Hotel.

The following extract from the Daily Nebraskan (published by the Nebraska State University) for January twenty-fourth will prove interesting to Creighton men:

"Culminating from the suggestion first made by university authorities that it would be advisable to unite the university medical departments operating at present in Lincoln and Omaha, action has been taken by the Lincoln medical profession with a view to the re-establishment of the Omaha branch of the college at Lincoln. Although no official action has been taken in this regard, it is apparent that the interest manifested by local physicians is creating sentiment favorable to the adoption of the plan.

"That such action was prompted by the desire of certain individuals to permit Creighton Medical College to enjoy undisputed monopoly, not only in the local Omaha field but also the entire state, is a misconception which advocates of the plan wish to clarify. At first it must be admitted that it would be an extreme difficulty for the university to install a medical department at Omaha sufficiently strong to openly compete with Creighton College. The latter has secured a firm foundation, has an excellent curriculum, and is guaranteed financial success at least."

The following statement, covering ten years of the Department's exstence, indicates the source from which the student body has been drawn:

	92-3	93-4	94-5	95-6	96-7	97-8	98-9	99-00	00-01	01-02
Nebraska ...	28	34	39	29	31	55	46	91	96	97
Iowa	1	1	3	14	18	27	25	32	33	25
Illinois	2	1	1	1	0	0	0	2	2	1
Idaho	1	0	0	0	0	0	0	0	0	0
Wisconsin ..	1	0	0	1	0	0	0	0	1	1
Utah	1	3	3	1	0	0	0	0	0	0
Oregon	0	1	0	0	0	0	0	0	0	0
Indiana	0	1	1	1	0	0	0	0	0	0
Missouri	0	0	1	0	0	0	1	2	2	0
Kansas	0	0	1	3	3	3	3	4	1	2
Michigan ...	0	0	1	2	0	0	0	0	0	0
S. Dakota...	0	0	0	1	0	1	1	2	3	8
N. Dakota..	0	0	0	0	0	1	1	0	0	0
Arizona	0	0	0	0	0	1	4	0	0	0
Montana ...	0	0	0	0	0	0	0	3	3	2
Minnesota ..	0	0	0	0	0	0	0	0	1	2
Oklahoma ..	0	0	0	0	0	0	0	0	0	1
Mass.	0	0	0	0	0	0	0	0	0	1
	34	41	50	53	52	88	81	136	142	142

The following letter to Professor Crowley from the secretary of the Eighth International Congress of Applied Chemistry, Washington, D. C., is self-explanatory and marks the conferring of a distinct honor upon Creighton's well-known Professor of Chemistry:

"I have the honor of informing you that you have been appointed a member of the Organizing Committee of the Eighth International Congress of Applied Chemistry.

In view of the fact that we are now almost ready to print certain important preliminary matter for distribution in all the countries of the world and it is our desire to put your name among those of the Organizing Committee, we will understand that you accept this appointment unless we hear from you to the contrary by the 28th of this month.

In order that your name may properly appear, will you kindly send to this office such titles and degrees and positions as you hold that you wish to have appear in connection with

your name, so that we can print the whole or such part of it as may be appropriate in the various printed matter.

Trusting soon to receive your decision in this matter, I am,

Very respectfully yours,

BERNHARD C. HESSE, Secretary."

Dr. Henry A. Johnson, '08, who is practicing at Tekamah, Nebraska, visited the new laboratory building during the latter part of January.

The Juniors finished their course in the Pharmacological laboratory and have taken up the study of regional anatomy and diseases of the stomach.

The Shophomores have completed the course in Bacteriology and during the Second Semester will spend two afternoons each week in the Physiological laboratory.

During the remainder of the school year the Freshmen will spend considerable time in the study of Embryology.

Dr. A. D. Dunn made a trip to Chicago late in January.

Owing to sickness in his family, Dr. Millard Langfeld was called to Baltimore during the latter part of January.

Dr. Bryan M. Riley was called to Lincoln early in February in consultation upon the case of Bishop Bonacum, lately deceased.

Since the resuming of classes for the second semester, seven Sophomores have enrolled from Drake Medical College, Des Moines, Iowa, and five from the Ensworth Medical College of St. Joseph, Missouri. This makes a total enrollment of one hundred and ninety-three, one hundred and ninety of whom are in actual attendance.

Department of Dentistry

The regular monthly meeting of the Senior Dental Society was held December sixteenth, with all the Seniors in attendance. Dr. A. Hugh Hipple, Dr. G. W. Hamilton and Dr. E. H. Bruening represented the faculty; Mr. Frank Riley acted as Chairman.

The following papers were read:

"Cavity Preparation in an Upper Incisor, Involving the Incisal Angle," by Mr. Mumma. The discussion on this subject was participated in by Messrs. Singleton, Vacek, Tobisca and Duffy, of the club, and the three members of the faculty.

"Antiseptics and Disinfectants," by Mr. Dienstbier. The discussion on this paper was participated in by Messrs. Gibbs and Davis of the club, as well as by the three faculty members.

At the conclusion of the program refreshments were served and the Society adjourned to meet in January.

Dr. A. Hugh Hipple presided at a meeting of the Tri-City Odontological Society, held at the Millard Hotel on Thursday evening, January nineteenth, for the purpose of discussing ways and means to provide a system of instruction pertaining to the care of the mouth and teeth through the public schools.

Dr. E. E. Gemmill, '09, formerly of Salina, Kansas, visited the Department recently and reported that he has sold his practice in that town and intends locating in Idaho soon.

Dr. Harry Mitchell, '10, who has been practicing with Dr. Allwine of this city, recently removed to Council Bluffs, Iowa, where he opened up an office.

Dr. Mitchell and Dr. E. J. Perley, '10, of Emerson, Iowa, both of whom took the Iowa State examination, were among the successful candidates for license to practice in Iowa.

The members of the Senior class recently presented Dr. G. W. Hamilton with an Elk ring as a token of their esteem.

During the Holidays the cabinets in the Infirmary were renovated and fitted with asbestos tops, and now present a very neat appearance.

The Clinical work under the supervision of Dr. Gail W. Hamilton has a unique record this year. No fillings have fallen out and no plate or bridge work has been returned for repairs since the Infirmary opened under Dr. Hamilton's supervision last September.

The January meeting of the Senior Dental Society was held on the evening of the fifteenth. The entire evening was taken up by stereopticon views. Dr. Connolly read a paper on "How to Set Up Artificial Dentures," in which he fully described the taking of impressions, making of models, taking the "bite," selection of teeth and the process of setting them up. His lecture was fully illustrated by stereopticon views.

Dr. L. G. Van Slyke, of South Omaha, finished the evening by showing views of his twenty-two months' stay in the mountains. Dr. Van Slyke's views covered the entire trip from start to finish, showing the different modes of living, the homes of the Westerners and the farming, as well as the fishing places.

The Doctor's talk, as well as being very entertaining, was also instructive, in that it proved that tuberculosis can be cured by out-door life.

The evening was thoroughly enjoyed by all present.

Dr. Carl West, '09, of Council Bluffs, was a recent visitor at the Department.

Department of Pharmacy

Mr. B. S. Potter, '09, of Gothenburg, Nebraska; Mr. Harry Copeland, '08, Arcadia, Nebraska; Mr. F. P. Miller, '08, of the Myers-Dillon Drug Company, Omaha, Nebraska, and Mr. J. C. Casey, '08, were among the recent visitors at the Department.

Mr. R. W. Elton, a member of the Freshman class who was held up a few days ago at his store, 3240 North 24th Street, has recovered sufficiently to resume his work at the Department.

The Faculty and student body of the Department extend to Mrs. J. H. Butler, a member of the Junior Class, their heartfelt sympathy in her hour of bereavement, occasioned by the death of her husband, Mr. J. H. Butler. Mr. Butler had been in ill health for some time, but his death was unlooked for.

The Nebraska State Pharmacy Board held its regular examination at the Department of Pharmacy on February eighth. Sixty-nine candidates presented themselves for the test — the largest number in the history of the State. The board of examiners was composed of the following: Mr. Frank Koff, Fremont; Mr. Burt Locke, Central City; Mr. Dan Killen, Beatrice; Mr. Earl Harper, Clearwater; Mr. A. U. Pease, Fairbury.

Department of Arts

The following is the program for the coming concert to be given by the University Glee Club at the Brandeis Theater on the evening of February sixteenth:

PART I.

Creighton Song—"The Club," Kreutzer.

"Honor and Arms" (Samson), Handel, baritone solo, Mr. Harry V. Burkley, '81.

Master Joseph Gill, Violin—Selections.

Songs—(a) "Ein Jungling liebt ein Madchen," Schumann; (b) "Ein Schwan," Greig; (c) "Faden," Erich J. Wolff—By Miss Elizabeth Hamling.

Persian Serenade — Quartette, Taylor-Jones, Messrs. Wall, Hoffman, Loomis and Kersey.

Intermission.

PART II.

"The Charge"—G. B. Nevin-Wellings, Mr. Harry Burkley and the Club.

Song of Thanksgiving—Tenor Solo, Allitsen, Mr. Frederic C. Freemantel.

Master Joseph Gill—Selections.

Songs—(a) "Come to the Garden, Love," Mary Turner Salter; (b) "The Lamb," John H. Densmore; (c) "Songs My Mother Taught Me," Anton Dvorak—By Miss Elizabeth Hamling.

"The Image of the Rose" (Arion), Reichardt, Mr. Wall and the Club.

Prospects for a good season on the baseball diamond are very favorable. Owing to the unsettled condition of the campus last spring, no university team was organized. In its place, however, students living in St. John's Hall formed a nine which would have done credit to any university. But they limited their games almost exclusively to local teams. This year a more pretentious schedule is being arranged. It includes games with Nebraska,

Morningside, Bellevue, Amity and other colleges. With two games each with Fort Crook and Fort Omaha, about twelve games are already on the schedule.

There is an abundance of material from which to choose a winning team. Hronek, Philbin, Riley, Harrington and Polski, stars of last year, are back in the game, while with Paul and John Kelley, Russum, Miller, Coady and so many others who have won a reputation in this line, the difficulty will be not so much to choose a good team as to choose those who will play the game and those who will watch from the bench.

On Thursday, March second, Professor George W. Ritchey of the Mount Wilson Solar Observatory near Pasadena, Cal., will lecture in the Creighton University Auditorium on the construction of his giant 60-inch reflecting telescope, and on the work it has done in photographing the wonders of the heavens. This telescope is the largest in the world, and as such has presented many new engineering difficulties. The mirror was ground by Professor Ritchey himself and the entire instrument is his own design. The photographs which it has already taken under his management are actually revelations even to professional astronomers, since they disclose so much of the delicate structure of the heavenly bodies that has never been seen in other telescopes. While the pictures of the instrument and of its work are of themselves of the highest interest, their value is more than doubled by having the mechanician and the astronomer himself personally explain them. Professor Ritchey is one of the world's greatest opticians. Although only forty-six years of age, he has distinguished himself by nine years of excellent service at the Yerkes Observatory, where amongst other things he constructed a 24-inch reflecting telescope and ground the mirror of the 60-inch. He is at present preparing to build a 100-inch reflecting telescope for Mount Wilson. It was at Mount Wilson that the recent great meeting of astronomers took place. They came to it from all parts of the world, not only to attend what was officially called the Fourth Conference of the International Union of Co-operation in Solar Research, but also to see the superb instrumental outfit of the greatest solar observatory in the world. Besides the 60-inch reflecting telescope constructed and used by Professor Ritchey, there are two 24-inch mirrors with focal lengths of 60

and 143 feet, a tower telescope with a 12-inch lens having a focus of 60 feet, a second tower telescope under construction with a focus of 150 feet, not to mention the 30-foot and 75-foot spectro-heliographs and other comparatively minor apparatus, together with the complete scientific laboratory on the mountain and the instrument shop in Pasadena. Professor Ritchey will show photographs of all these instruments and explain them as far as this is possible within the limits of a lecture. This lecture in the Creighton Auditorium, on March second, will therefore present an opportunity that has never occurred before in Omaha and may not occur again for many years. It will be the first in a popular complimentary series to be given under the auspices of the University. Professor Ritchey will be followed in the course by Professor Crowley, who will lecture on the Yellowstone Park, its natural beauties and scientific wonders.

Department of Science

On December twenty-seventh, last, Professor Rigge became a member of the American Association for the Advancement of Science. This organization has the largest membership of any scientific society in the country. It holds its meetings once a year in different cities. This time it was in Minneapolis, and the next will be in Washington, D. C. The association is sub-divided into many sections, each of which has its own officers. The meetings generally last three days and are always well attended.

A very useful minor instrument was recently acquired by the Physics Department. It is an air pump plate. As its diameter is twelve inches, it will hold the largest receiver. Its height of less than two inches makes it a very convenient instrument to set upon the lecture table and to carry about. It has, of course, a stop-cock of its own, and may be attached by means of rubber tubing to the Gaede high-vacuum pump mentioned some months ago.

The break in the cases of the Physics Department in the southwest and northwest corners of the cabinet has lately been bridged over with glass cases of the same pattern as the existing ones. This makes the whole room look complete and finished, as all the wall space on the north, west and south is now filled up.

The empty space beneath the three museum cases has also been turned into use and covered in with glass. This will make it possible to dispose of the minerals to better advantage and to display many others that could not be exhibited before on account of the want of space. The arrangement of the minerals is not yet completed, but we can say in advance that one case will be devoted exclusively to the many specimens that former students have donated.

The Scientific American of February fourth published a very interesting article by Professor Rigge on "A Shadow in Court." Professor Rigge had been the "star witness" in the Erdman trial last December. He had found the time that a certain photograph had been taken by means of the position of a shadow in it, and thus invalidated the testimony of the only eye-witness. In the article referred to the Professor explains his method of solving

the problem, and shows that there were four ways of arriving at the results. The four answers he obtained differed so little from one another that the range between the extremes was only twenty-one seconds. This was a most remarkable performance, the more so as the original photograph was very small and had been taken by an amateur, who, together with the parties figuring in it, did not have the remotest suspicion that the time of the picture had been so precisely stamped upon it by a shadow.

The Creighton University Observatory—Equatorial Room.

Mr. John Moriarty has been made House Chairman of the Committee on Municipalities of the Nebraska Legislature.

Alumni

Mr. James M. Fitzgerald, '03, who was recently appointed District Deputy of the Knights of Columbus for the Omaha District, had charge of the initiation exercises at Fremont, Nebraska, January fifteenth, when a large charter class was received.

Mr. Francis Colfer, '05, out-going oil inspector for Nebraska, has filed his report showing that his department has earned forty-two thousand dollars in surplus fees during the past biennium. The total number of barrels of oil inspected in 1910 was four hundred twelve thousand seven hundred and fifty-three. Of this number seven hundred and sixty-two were rejected. Mr. Colfer recommends that the oil and food inspection departments be combined and placed in charge of an official to be known as "Commissioner of Foods, Drugs, Dairy Products and Oils."

Mr. Charles D. Beaton has gone to Europe for a three months' sojourn.

The many friends of Rev. Daniel J. Hurley, '04, will be glad to know that he has so nearly recovered his health that he expects, in the near future, to resume his duties in the Archdiocese of St. Louis.

James H. Furay, Junior, the fourteen-months old son of Mr. and Mrs. J. Henry Furay of Denver, died February third. The body was brought from Denver to Omaha Saturday afternoon and was buried Sunday afternoon, February fifth, from the home of Mr. Furay's mother, Mrs. Catherine M. Furay, 522 North 26th St., Omaha. The ceremony was private, only a few friends and relatives attending. Rev. Albert R. Wise, S. J., of the University, officiated and interment was at Holy Sepulchre cemetery.

The body was accompanied from Denver by the parents and Mr. Charles and Guy V. Furay.

Mr. Thomas J. McShane and his sister Margaret have given up the family home at North Twenty-third street and have taken apartments at the Normandy.

Mr. and Mrs. William J. Coad are contemplating a trip to Cuba during the current month.

The February number of Current Literature contains an article by Mr. Edward J. McVann.

City Clerk Butler has completed his annual report for 1910, which shows a gradual increase in city business over 1909. This is a recapitulation of the work of the office:

Expenditures of City Clerk	$10,963.84
Expenditures for election purposes	5,237.00
License and other fees paid into city treasury	19,830.08
Number of licenses issued	4,721
Number of council meetings held	75
Number of documents and motions presented	6,379
Pages written in journal	3,080
Notices published	688

Mr. William J. Young, S. J., received minor orders at the college church of the St. Louis University during the latter part of the last week of January.

Mr. T. J. Leary, '97, has been elected president of the Rosalba Club.