THE AURORA.

IOWA STATE
Agricultural College

AUGUST, 1886.

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Ames, Iowa.
ON THE HEIGHT.

PROF. W. H. WYNNE.

O, Sabbath, when thy hallowed light
Is reddening o'er yon mountain peak,
My burden all in pilgrim plight
I carry to thy templed height,
And the high hour of sweet communion
Seek.

There all things catch the tranquil
tone
Of mellow tints upon the hills,
And from a far celestial zone,
The winds of Paradise are blown,
And Eden's spices mingle with the
rills.

And see! in yonder brooding blue,
The softest blazonry of peace,
The old is passing and the new
Breaks hither on our gladdened view,
And lo! it brings the fettered soul's re-
lease.

O, rest! sweet rest! from the long
strain
Of battle's brunt on land and sea,
These heights delectable to gain,
Far towering o'er the ensanguined
plain—
One tabernacle for my God and me.

Why might I not forever dwell
Aloof from din of yonder world,
Where wedding chimes and funeral
knell
Alike one tale of sorrow tell,
With sin's black banner everywhere un-
furled!

See! from the centre of the sun,
And circumbent glory there,
The figure of the Holy One
His march triumphal has begun,
And bids me follow Him, nor query
where.

Down through the nether gloom we
go,
Demoniac faces leering round,
And all the world's wild work of woe,
Hell's forces moving from below,
To His all-conquering chariot to be
bound.

So climb I on from height to height,
O, wondrous Word of God, with thee!
Thou waxing ever in thy might
I, in thy panoply of light,
Still thrusting through the darkness to
be free.

And soon the war will end, and soon
Earth's dreariest damp be rolled away,
From sack-cloth sun and bloody
moon,
My light shall mount to blazing
noon,
Beneath the splendors of eternal day.
SILENT FORCES.

F. E. STINSON.

All phenomena may be referred to force as their cause. We may then with deep interest inquire, "What are the most potent forces in the great plan of Creation?"

In determining them we will go first to the material world and ascertain its controlling forces. Chemical affinity, unnoticed, unperceived by us unites atoms with a force not to be calculated! The strange vital force we call life, though we cannot perceive its workings, causes the germination and development of the plants that are to sustain the teeming millions of Earth. An unseen force raises the waters of Old Ocean from their briny foam and causes abundance to smile on Earth with each returning harvest. As we gaze in nighttime on the starry vault of the Celestial Sphere; as our telescope penetrates yet deeper and deeper into the hazy depths of space, revealing world after world, constellation after constellation, system after system in endless progression; when we remember that the silent force—gravitation—guides and controls them in their revolutions through the mighty deep of space, does not that silent force seem to us the very embodiment of resistless power?

If we turn to society we shall find its most powerful controlling forces for good or for evil to be silent ones also—for whence comes the spur to upward progress? From the inner region of thought, whose central principle is conscience, that, surrounded by the imperfect and finite, ever aspire to attain the perfect and infinite. From these silent depths come the mighty forces of intellect and soul—the one by its searching power of analysis knowing, the other by its sense of Duty, molding the lives of men—originating all reform. Take for instance as an example of the power of this silent originating force of all reform—moral sentiment—the great contest between the English Puritans and Cavaliers in the seventeenth century. We see on one side, arrayed around their gay and flaunting flag, bedecked with the symbols of material power, the Cavaliers, descendants of that haughty line who never mortal feared, the acknowledged flower of Europe’s martial nobility—on the other the Puritans, battling, not to sustain ancient prerogative or martial fame, but for a principle—liberty to make their own laws—freedom to worship God as they chose. The cry of battle resounds along the two hosts and over the field comes the charging lines of England’s chivalry. Cromwell’s Ironsides advance to meet them, and before those earnest, soul-actuated men England’s proud nobility goes down. The inherited military genius of centuries, the fierce passion for martial fame, the splendid military training of years, have all proved unavailing when pitted against men lowly and obscure, but whose valor comes from the mightiest fountain of human energy—the moral sentiment.

Leonidas and his three hundred Spartan heroes died, sword in hand, stemming the tide of Eastern despotism, telling to after generations that the strength of an army is measured, not by its numbers and gleaming arms, the manifest and apparent, but on the silent soul-force by which it is animated. That heroic stand of Greek spirit for freedom saved the Occident from Oriental dominion and the history of the world from becoming one long narrative of the sufferings of enslaved millions, prostrated beneath the diadem and the sword.

Only two decades have elapsed since we saw American Union and Liberty menaced by the sword. Nobly did Columbia’s gallant sons rally round the
flag of freedom, and on many a Southern battlefield did they uphold with undaunted heroism the nation's starry emblem.

But as we to-day look on the character of the population of our cities, the light esteem in which commercial and political honor are too often held among us, have we not reason to believe that we are to-day encountering a far more subtle and powerful foe? Terrible indeed is the treason which lifts its steel-armed hand against the life and perpetuity of our glorious republic, but greater by far is the peril to which she is exposed from that silent force which has always in the past with the increase of wealth diffused itself throughout society, causing the decline of moral principle, the gravitation force of the Moral Universe. For treason strikes only at the superstructure of Freedom, and often by the hardy courage it engenders revivifies national life, but the other, silent and subtle, corrodes the very foundations on which all free government rests, precipitating the whole into inevitable ruin. Slowly, silently, like an ingrowing cancer, in bygone ages has loss of moral principle made itself apparent in the social structure of the strongest of Earth's nations. Let us beware that it does not reach the heart of our own mighty commonwealth. We have conquered alike the crimson-clad legions of the proudest empire of Earth and the fiercer battalions of our own rebellious sons in conflicts the most terrible that ever a republic engaged in. Can we conquer this more powerful foe? We can if only we will remain true to the voice of national conscience—true to our motto, "In God We Trust."

Would you know the effect of trusting material power, ignoring those silent moral forces which constitute the essential elements of national strength? Glance back upon the history of those nations who 'have trusted' material power, their glittering armies and formidable armadas, rather than the hearts and minds of their people. Where are they now? Look on the ivy climbing o'er the ruins of their proudest temples, listen at midnight to the dismal owl hooting in what was once their senate chamber, hear the mournful requiem of their bards and poets telling of departed glory, and you are answered.

As we to-day, in this mighty industrial age, look on the myriad fleets of commerce whitening every sea, the cattle on a thousand hills, the ponderous machinery whose iron industry makes the sum of physical comforts a maximum, we are inclined to say wealth, skill, industry, these are the forces which shape and mold the destiny of man. But look deeper. What is it this mighty industry rests on as a sure foundation? That still soul force, Right Conscience. Remove this and yonder stately fleets of ships, planned by faithless architects, built by conscienceless workmen, sink 'neath the engulfing waves of the ocean, bearing thousands to a watery grave. Remove this, and the herds on yonder hills are parceled 'mid a thousand robber bands. Remove this, and yonder factories, built regardless of its inviolate precepts, at some unexpected moment will fall to pieces, hurling thousands into eternity. Remove this, and self-interest, become selfishness, urges on the mad passions of men till they pass all bounds of restraint and government sets in a sea of blood.

Nations are composed of individuals, the controlling forces in their lives, as in the lives of individuals, are silent ones. Our silent moments. Are they not always moments of the deepest thought, of keenest introspection, of grandest resolutions, of sublimest faith, when the soul mounts the highest heavenward in its approach to the unknown? Nearly a century has elapsed since the breaking out of the mightiest po-
political and social convulsion the world ever witnessed. France rose and by a single effort burst the shackles of centuries. But allied Europe in thunder tones commands France to take back her kings. She refuses, and heroically resists the legions of despotism, but at last she falls, sword in hand, completely exhausted. The revolution has apparently been a failure for France and a curse to humanity. It has left her a financial wreck, and has been the direct cause of the death of 3,000,000 of her bravest sons.

The revolution has been a failure; what of the idea of the revolution—individual liberty and equality—has that been a failure? Have the bayonets of Europe destroyed it also? No. Deep within the minds of the people, safe from iron-lipped cannon and the Cossack lance, it lives. We to-day recognize this mighty principle as one of the most potential underlying forces of society.

Strikes, labor combinations, Socialism, are to-day shaking the very foundations of government the world over. How to deal with them is the great problem of modern politics and social science.

But these are only the surface manifestations of that spirit which demands the liberty and equality of individuals—the spirit of our age.

The superficial observer, looking at these turbulent manifestations, says: "They are actuated by the desire for wealth." Are they? No. The mere desire for money never could give these movements the vitality, coherence and steadfastness which they possess. They come from within, are actuated by that mighty soul force common to humanity, which demands social and political liberty and equality. Hence, it is not from without, from external causes the manifest and apparent, that the tremendous political agitation of to-day ultimately comes, but from the silence of the within.

Who has not heard of "the land of fair women and brave men?" It is this of which I have been invited by the industrious editor of The Aurora to give a description "pro bono publico."

The general character of the formation of the state is rolling, hilly, sometimes broken and rugged. The landscape presents everywhere the agreeable curve, the rolling outline, and is a picture of beauty and serenity. Grass-covered knolls and elevations here intercept the sight, there leave vistas, allowing the view to sweep for miles, opening into fertile valleys with waving fields, meadows, pleasant farms, till on the horizon it ends in the dim hazy blue of forests. In soft undulations, the roads rise and fall, and the traveler's interest and observation is continually called on. As he leaves a beautiful sight on one hilltop, and descending, the horizon line falls with him and he studies this peculiar optical effect, he has already reached another hilltop, where new scenery opens itself to him, and so, on and on, the ever-changing landscape presents new points of interest. One effect follows the other, as if a landscape gardener had here concentrated on a large scale all his powers to produce the highest effects attainable.

All the geological formations, from the Lower Silurian to the Quaternary, are represented and fairly distributed over the state. But undoubtedly the most interesting portion of the state, at least from an agricultural point of view, is that part resting on the Lower Silurian limestone formation. It is here where, under favorable circumstances, the "blue grass" attains such "perfection," the "blue-grass region of Kentucky." This includes the north-
ern part of the state and contains the counties of Fayette, Scott, Woodford, Bourbon, Harrison, Jessamine, Shelby, and others.

Most all of the soil of Kentucky, except along rivers, is of the sedentary kind. That is, soil formed by the slow decomposition of rock in situ. The material from which this rock has been formed in past geological times must have been extremely fine, for the soil is of an extremely fine character, almost like flour, thus making it a valuable article for agricultural purposes. This soil is perhaps the first most peculiar and striking feature which the stranger notices on his entrance into this state. It is of a yellowish and reddish yellow color. To the eye used to the heavy, warm, black loam of Iowa's fertile lands, it presents at first a pitiable poor aspect. But the opinion of this soil is raised when one hears and sees more of its capabilities. The soil owes its red color mainly to the presence of oxide of iron. But this is one of the chief elements of its fertility; the power of the oxide of iron to condense and retain large quantities of atmospheric ammonia is well known, and the value of this compound, or plant food, cannot well be overestimated.

The peculiar formation of rock on which the whole state, nearly, rests affords a splendid natural drainage, and the land being hilly, it is at once apparent that the conditions of spring and pool formation are very favorable. And indeed, from every hillside bubble forth, from out of the layers of solid rock, the coldest springs, which wind their way like silvery threads through fields, meadows and pastures. In the steeper hillsides rocks crop out and leave quarries of fine limestone. A good share of this is valuable for building purposes, while another kind burns into a fine quality of lime. In the older settled portions of the state, whole farms are fenced by walls of limestone. Leaving the practicability of this out of the question, they make a strong old-country impression on the traveler, and in fact a kind of Old World odor seems to pervade the whole state. One may follow the stone fences for miles. I like to call them—roadside museums. Free of charge, placed conveniently, directly out of nature's own subterranean workshop The unknowing pass by those treasures, for them they do not exist. I stopped a good many times in my walks to here and there examine the stones; and I have in my possession a number of beautiful fossils which I have broken out as I passed. Pentumites of exquisite fineness and elegance of structure, specimens of Brachiopods, Bynchonella, Orthis, Craptoletes, Stiphonema, Columnaria, Fuvosites, Stromatopora, Atiza, etc., etc. It is the naturalist's delight. As would be expected, where there is such an abundance of rock, there are many caves and cavernous formations. The great Mammoth cave is known to everyone, by name at least. I was unable, on account of not being equipped, to visit it; had, however, the good fortune of visiting other smaller caves. They were splendid geological formations, and full of objects of interest and attraction for the student. That under these geological conditions the climate should be a peculiar one is evident, although the character of the climate is determined mainly by the geographical location. The summer seems to be, as far as I can at this date see, about the same in temperature as in Iowa, only one exception—cool, refreshing nights. The winter is not so severely cold, and short. Still, cold enough to find out the winter. The good people here know how to appreciate a sleighride, and there are but few farmers who have not ice houses of their own. On the whole, houses and heating devices testify to mild winters here. Fruits and fruit trees of all kinds are, therefore, in great abundance. And at present the trees in our orchard are
laden and bending down under the weight of the immense crop of apples, pears and peaches. We had cherries in great abundance, yes, enough to share with profit with the robin, sparrow, cat-bird and bluejay. The crops raised partake of no particular Northern or Southern character, the leading crops (except cotton) of both sections being raised successfully. Tobacco is undoubtedly the main crop; and as the Kentuckians can be anything but proud of raising such quantities of this "vile weed," I had better not expand on the subject. But still, the scale on which this is carried on is gigantic, and to the stranger imposing. It is almost beyond conception what amount of trading is hourly going on in Louisville (undoubtedly the largest tobacco market in the world.) Those immense tobacco warehouses, where endless rows and piles of hogsheads meet the eye, impress, after some observation, the stranger peculiarly, and this, as he breathes the mephitic odor of tobacco issuing out of the wide doors, turns into a disgust against the narcotic *tobacco* *nicotiana*. Hemp, corn, wheat and many other products of the North do well, to say nothing of the "blue-grass and Shorthorn cattle."

On the whole, the state seems to be an agricultural state, though of course all other industries and professions are fully represented.

The population is, to a large extent, made up of the descendants of the old Maryland and Virginia stock. A hospitable, generous, kind-hearted people so far as I experienced. Wherever I came in my zig-zag trip through Kentucky I felt at home. Truly, the Kentuckian only rivals with the Arabian in hospitality. The saying "home of fair women and brave men" is only partially true. The women are—fair; a good many of the men brave, and a good many seem to lack that desirable quality of a man. Some take life easier than would be in accordance with Northern ideas of progress and thrift. With others the tobacco habit, which here is generally excused with the phrase, "Comfort to youth and solace to old age," is carried to excess, and many young men seem actually to be trying to widen the gap between "fair men" and "brave men" by slowly volatilizing and sending up in flavored blue smoke their brains and nerves. This seems to be where the first advocate of the spiritualistic hypothesis got his starting pointer, where he saw a young man's nerves go up in blue smoke, twisting and curling and twirling, and then mysteriously disappearing in an "invisible, intangible something."

The people, on the whole, are cultured and orderly. The houses on the farm, as well as in the city, show refinement and cleanliness. Of course there are some few sad exceptions. Sometimes, in our excursions, we notice, located way back from the road, a remnant of old times, an old Kentucky home. Those peculiar, quaint, home-like looking houses, with immense porches, surrounded by parks and shady gardens, exert a charm on the stranger, and he feels himself set back in imagination into the ante helmin days. And this is strengthened as he sees "the little low log cabins" as their whitewashed walls peep out from behind the luxuriant green of vine trellis and lovely climbers. But they are mostly empty, and in reality everything is "falling in"—the home of the bat and lizard and owl.

The city population is not behind that of the country. The towns and cities are kept scrupulously clean and orderly.

Louisville, the metropolis of this state, may truly be said to be one of the finest and most beautiful of American cities. The houses and streets are models of cleanliness. There is hardly a home which does not front to a modest and well-kept garden. The build-
ings and parks show the liberality and generosity of the inhabitants and the immense amount of wealth amassed there.

But it is peculiar that under such extraordinary favorable circumstances only a mediocre school system should develop. But such is the case. And it is a serious matter for this state to ponder over. As my thoughts fly back to Iowa, I think with joy and pride of its system of schools, where little white school houses adorn every hilltop and for miles dot the prairies. The impressions which I carried away from my short stop at the Agricultural and Mechanical College were not the most favorable, the college being that just in name, not in character. That industrious industrial spirit, which is absolutely necessary to its success, does not pervade it.

PATHOGENIC BACTERIA.
WILL E. GAMBLE.

The pathologist or sanitarian has no more important problems for solution than those concerning bacteria. The compound microscope with immersion objective has revealed that they, of all beings, are the most widely diffused. We meet them everywhere, in the air, in water, upon surface of solid bodies and in the interior of animals and plants.

Their discovery dates soon after the invention of the microscope. In 1675 Leeunwenhoeck observed in a drop of putrid water "multitudes of little globules that moved with great agility." Until the present century but few skilled observers turned their attention to this field of research.

To modern botanists must be given the credit for the present accepted classification of bacteria, as well as the most thorough study of their structure and composition. Within the last three decades biologists and physicians have been studying these organisms from their respective views; the biologist from his standpoint has attempted to solve the problem of the origin of life—one result reached by this class of investigation has been the overthrow of the theory of spontaneous generation. The pathologist and physician have had for their objective point the relations of these micro-organisms to disease and the prevention of the spread of contagious disease. Koch, Pasteur, Devaine and Haller have demonstrated that some contagious diseases, viz.: anthrax tuberculosis and glanders "petrine" erysipelas are due to special kinds of bacteria.

In 1861 Pasteur discovered that fermentation was produced by microscopic organisms. He isolated the particular specie (m. codermi aceti) that produced acetic fermentation, also the specie that produced wine fermentation (m. coclermi vini). He next investigated the disease of the silk worm, at a time when the silk husbandry of France was in ruin; after a few months of study he discovered that the disease was the work of a definite organism in the body of the silk worm. Parallel with Pasteur’s investigation of "pebrine," Koch was studying Charbon. With skill and penetration Koch studied the life history of the bacteria (now known as bacillus anthracis) in all its stages, and after many generations, produced by cultivation, he fully demonstrated that these organisms were the cause of the disease; by inoculating healthy animals with his cultivated specimens the original disease was transmitted.

Previous to this time Pasteur had isolated the microbe of chicken cholera, and by oxydizing the organisms had so attenuated their virulence that fowls inoculated with this virus had but a mild
form of the original disease. Fired with the enthusiasm of success, he no sooner learned of Koch's discovery than he planned a series of experiments upon the bacillus anthracis. The object in view was to secure an "attenuated" virus. After months of experiment, he secured a method by which the virulence of these organisms was diminished. The result of the inoculation of his virus was all that he had hoped for; thus the dread disease, anthrax, was brought within the control of man.

Of all diseases that have affected the animal kingdom, none have been more destructive to life than tuberculosis. It seems to have originated in Europe centuries ago. From this center it has radiated to all parts of the world, following civilization into every land. For the last two thousand years it has been studied by eminent physicians. That there was a "special poison" seemed to be "held to" by most of the profession. The discovery of the "specific virus" is due to the eminent bacteriologist, Robert Koch, who four years ago announced to the profession that "tuberculosis is a specific infectious disease caused by specific micro-organisms—the bacilli tuberculosis which constitutes, in fact, true tubercular virus." Koch took pus from the lung of a patient, separated the bacilli; after the cultivation through thirty-four generations, outside of the animal organism, extending over a period of twenty-two months, he was able to produce the disease in guinea pigs by inoculation. This discovery has exploded the idea that we inherit tuberculosis. The tendency to tuberculosis may be inherited, but the disease is a contagious one.

The scientific world had scarcely relapsed from the shock produced by the announcement of bacilli tuberculosis, when Koch announced the discovery of the cause of cholera Asiatic, a comma-shaped bacillus. There is hesitancy on the part of the profession to accept this bacterium as being the cause of the disease, cholera being a disease strictly confined to man. It is impossible to make experimentation on the lower animals, but Koch's experiments have been so accurate and conclusions so logical that many eminent men of the scientific world have accepted his theory.

The fog of mystery and superstition that has obscured the cause of that dread disease, leprosy, has been dissipated by the truth revealed by the microscope. Hansen and Meisser have demonstrated that the cause of this disease is a bacillus, the bacillus leprae.

The cause of erysipelas, syphilis and diphtheria have been proven beyond much doubt to be bacteria, genus bacilli. Reasoning from analogy, it is believed by many of the foremost students of pathogenic forms of bacteria that all contagious diseases may be referred to bacteria of some form for their cause.

This year promises much of discovery in the prevention of rabies, under the leadership of Pasteur, and of yellow fever by Domingos Freires of Brazil. Both these investigators seem to have secured an attenuated virus that, when introduced into the system, is a prevention of the respective diseases. Many of the older scientists and physicians are loth to believe in "Koch's bugs" or in "microbes of any kind." Much of this conservatism is a result of age. Old men, as a rule, do not easily fall in with new ideas. The discoveries I have mentioned are sufficient to indicate that there is a vast region of pathological territory yet unexplored and discoveries to be made that will be of inestimable value to mankind. A great quantity of chaff must be gathered in order to garner the few kernals of wheat. The conservative skepticism in the belief that these organisms are pathogenic is valuable in separating the truth from the error.
It has been believed by eminent bacteriologists that some forms of septic microbes are changed by particular favorable environments into pathogenic forms; the question, "Are not all pathogenic forms but septic forms changed into pathogenic by conditions?" Buckner holds that the common bacillus of hay infusions can, when growing under certain extraordinary conditions, be transformed into bacillus anthracis. Sattler also believes that the harmless bacillus subtiles assumes pathogenic properties when growing in an infusion of seeds of *abrus precatorius*, becoming endowed with the property of causing ophthalmia. Grantz says the common mold *aspergillus* assumes poisonous properties. Koch and Klein are opposed to this theory. Klein, by a series of experiments, has shown conclusively that these conclusions are erroneous, and thus far all investigation points to the conclusion that pathogenic and septic forms are widely different.

The belief that certain pathogenic organisms are the cause of certain diseases rests upon three propositions: First, they must be found in body of individual having the disease; second, they must be purely cultivated and inoculated into body of healthy animal; third, the inoculated animal must receive the same disease and upon examination the same bacteria must be present in the inoculated animal. In anthrax, tuberculosis, glanders, chicken cholera, syphilis and some other infectious diseases the bacilli have by this test been proven to be the cause of the disease; just how they produce the pathogenic condition is unsolved. Two theories are formulated: First, that the pathogenic condition is produced by growth and presence of the organism similar to the alcoholic fermentation of sugar—the alcohol produced is the result of the presence of saccharomyces, the saccharomyces simply abstracting carbon and hydrogen from the sugar; second, that the organisms elaborates a special ferment, which after a certain amount is made sets up a special pathological change.

Either or both of these theories may be correct; the one fact remains that they are the cause of disease. Some writers have attempted to explain away the fact of bacteria being the cause of disease. They consider bacteria a product or harmless accompaniment of pathological condition. Such inferences fall to the ground when the great chemical changes that they produce in the system are considered.

"How can these organisms be destroyed, or their reproduction limited?" This is the central thought in the minds of the sanitarian physician. In "prevention" lies the only hope. When once microbes gain entrance into the body, they are out of reach of all medicinal means of destruction; the only weapons that promise success in the destruction or limiting the reproduction are vaccination and good sanitation, aided by use of anti-septics. Pasteur, by attenuating the virulence of micrococi in chicken cholera and anthrax and rabies (?), has proven that vaccination is a practical and successful method of prevention.

The method used in attenuating the virulence of each species varies. As new methods are applied to the different species, it can be confidently hoped that infectious diseases will come within the control of the physician. The second means of prevention—good sanitation—is a source from which much good will come. The discovery that micro-organisms are the source of infectious diseases has given birth to a strong public opinion in favor of good sanitation. The sanitary officer is the creature of the last decade. Boards of health are doing much in this direction. The absence of wholesale putrefaction, and good sewerage in our large cities and cleanliness in the home will lessen materially the outbreak of these diseases.
SCIENTIFIC NOTES.

The longest clock pendulum known is said to be one in Avignon, France, measuring sixty-seven feet, to which is attached a weight of 132 pounds. Its movement is slow, passing through an arc of between nine and ten feet in four seconds and a half.

The total amount subscribed to date to sustain the Pasteur institute in France is $113,719. The Sultan has presented Pasteur with the grand order of Medjidie and $2,000, and will send a commission to Paris to study his methods of rabies prevention.

The Royal Academy of Medicine of Belgium has recently offered its largest prize, $5,000, for the most meritorious work or paper on the treatment of diseases of the nervous centers, especially for a remedy for epilepsy. The great need of some better means of controlling this last disease induced the academy to offer an additional prize of $1,600 for the best paper on that subject. The prizes are international and will be awarded in December, 1888.

Werkhoyanck, in Siberia, latitude $67\frac{1}{2}^\circ$ north, still maintains its position as the coldest place on earth. A Russian government surveying expedition, reporting to the Academy of Science of St. Petersburg concerning its temperature observations there in 1885, gives the mean temperature of the year as $17^\circ$ C. or $1^\circ$ Fahr., the mean temperature of January of that year as $-49^\circ$ C. or $56^\circ$ Fahr., and the minimum as $-68^\circ$ C. or $90^\circ$ Fahr.

The Pasteur Institute in France is more successful in its appeals for financial aid than a similar institute organized for the same purpose in the city of New York. The French people have already contributed more than one million francs toward the perpetuation of the Paris institute, at which more than a thousand persons have been inoculated for the prevention of rabies, while we are informed that the support given to Dr. Mott for a similar purpose is so meagre that his work will probably be discontinued after a few weeks. The American people were willing to subscribe an unlimited amount to send a few children to Paris; but, now that an opportunity is given them to provide protection to the whole population of the United States, they fail to respond.

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TERMS.

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Ames, Iowa.
We regret that force of circumstances has made it necessary for our late editor-in-chief, Dr. Gamble, to resign. He expects to remain in college but a part of the term, but will return for graduation. We regret that he has tendered his resignation for two reasons: First, the success of The Aurora, with him at its head, has been very marked; second, our inexperience makes it doubly desirable that he should have remained. In taking upon ourselves the duties of this office, we would acknowledge the help we have received in the arrangement of this, the first issue.

Another summer vacation has passed. Again the halls resound with the cherry voices of returning students. A new term has commenced, bringing with it the usual amount of preparation—the necessary antecedent to regular study. The recreations of vacation have given renewed energy for the work of the term now before us. Each student, as he returns, casts aside his pleasure-seeking desires and renews those studious habits which are sure to bring him success as the result of the term's work. Several changes of interest greet our return. The greatest of these is the change in presidents. W. I. Chamberlain, LL. D., lately from Ohio, fills this position. There are no words but those of praise, no feelings but those of pleasure and satisfaction to express our appreciation of our new executive and his interest in our welfare. We sincerely believe that we have secured the right man for the right place. Already do we see the College, by the wisdom and prudence of the new administration, growing stronger and more complete. So it is with an equilibrated state of mind that we assume the duties of the present term of instruction.

Two more changes in our list of instructors greet us this fall. Miss Anna Gaff as instructor in music, and Miss Elizabeth W. Gowdy as instructor in drawing and painting.

Miss Gaff comes to us with the highest recommendations as a thorough musician. She is originally from Cincinnati, Ohio, where she secured a high reputation as teacher of music. She is just lately from Europe, where she has spent two years in the musical conservatories of Leipsic and Frankfort, in Germany. This is what the college needs—thorough teachers in every department. We have no fear for this department now. There is no doubt but that all who are "musically inclined" can make rapid progress under her proficient instruction.

Miss Gowdy is another valuable acquisition to the College. So well is she known in Iowa that little need be added. Her paintings are recognized as rare productions. The 150 souvenirs with which she greeted the participants of the banquet, or President's reception, at the College gives evidence of her genius. She has a studio in Des Moines, on Locust street. She is a graduate of the Cooper Institute, N. Y. Besides her class duties here, she will receive private students on Saturdays. She will have a large class, and we only regret that a severe accident kept her from starting, as intended, in May.

As our fall term advances, the need of a good lecture or two at the College will become more and more manifest. A number of opinions have been advanced as to what sort of lectures would best suit our needs and still come within the range of our financial ability. So, without the least reflection upon our present lecture committee, or of those in the past, we would present our ideas on this subject.

The question "Shall we have any lectures this fall?" is readily affirmed. But the question as to the number and their standards is appreciably
more difficult. We want, first, the best lecturers we are able to secure. It is far wiser to secure one good lecture than two of considerably less merit. In the first case we have a double advantage. First, we are sure of getting something interesting and instructive, and are compelled to lose but one night of society. Of these two points, the latter is the more forcible. Our societies are the sources of no small degree of good, and to lose even one session is to be regretted, unless for something more beneficial.

Again, our cheapest lectures but rarely attract a sufficient house to pay their expenses, while the deficiency must be met by the literary societies. We can all afford to attend at least one or two good lectures each term.

In the last few years we have had a varied experience in connection with our lectures, both in quality and number. In point of quality we have had some not the best; but, on the whole, we must say, although some were inferior productions, that we have had good lectures. But it is of such as "Swing's" and "Wendling's" that we would speak; it is these from which we are able to cull golden thoughts; it is from these that we are enabled to see life, duty and the right in their proper light; from such productions we become acquainted with refined thoughts, in short we can not afford to lose any chance to hear a lecture of this kind.

In point of number, we have oscillated from the single lecture per term to that of such a number as to completely stifle all society interest. From these varied experiences we are enabled to arrive at the facts deduced above. It is by a knowledge of our mistakes that we progress. The "series" of lectures presented a few years ago was a partial failure, because we got beyond our financial depth, and because we were compelled, on account of the great number, to secure inferior speakers. From these experiences, then, we can see that we want (1) able men, (2) a limited number, and (3) a good attendance. When we have the two former conditions, the latter is a natural consequence.

The reception given by the faculty in honor of President Chamberlain Friday evening, July 31st, was one of the most brilliant social events in the history of the College. A spirit of "good will to man" reigned supreme in the hearts of faculty, friends and students. Arrangements for the reception were made on a grand scale. The wants of the evening proved that the expectations of the committees were not too great. From all parts of the state came representative men of the various industries and professions. From the capital came the Attorney General, State Auditor, State Treasurer and Deputy. The senate was represented by Senator Poyner, University of Iowa by Dr. Andrews, Drake by President Carpenter. Callanan was also represented. But few Alumni were present: J. K. Macomber, 1872; J. B. Hungerford, '77; J. L. Stephens, '72, and wife; Della Neal, '82; C. H. Lee, '75; J. S. Lee, '73; A. S. Hitchcock, '84; W. H. Wier, '84; C. A. Cary, '85; W. M. Hays, '85; Miss Etta Budd, '82, and all the Alumni members of the faculty. The faculty "spared no pains" to make everything agreeable for the guests—elaborate decoration, the best music that could be secured in the state, a supper of the choicest fruits in the season, and delicacies of every variety. After supper the intellectual part of the program was opened by the address of welcome to President Chamberlain by Dr. Welch, which was as follows:

"Dr. Chamberlain—In behalf of the friends of this institution, especially of its board of trustees, its faculty and its students, I tender you a most cordial welcome to these halls fis its new President. I give voice to a very general
sentiment when I express our sincere pleasure in your presence here, and our hearty respect for the work you have done, in kindred lines, elsewhere. We desire to assure you that your personal history has inspired, throughout the state, a confidence in the lasting success of your work, as President of the Iowa College of Agriculture and Mechanic Arts. Indeed, I am glad to say that all parties are united in the belief that your coming is a good augury for industrial education in the states and that your acceptance of the post you hold, as head of this institution, is one of the happy events of its history. But while we congratulate ourselves that this great educational enterprise has been committed to your care, we are sure that it has many features on which we may properly congratulate you. Its benign object is in the language of the law that gave it birth, “to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.”

“Now, without undervaluing in the least other enterprises of like character, I believe that no grander purpose ever animated the law-makers of our country than that which led them to provide for the liberal and practical education of its future workers—the children of the producing millions whose hands supply the bread we eat and whose honest and intelligent franchise makes this free government possible. Such is the enterprise, Mr. President, over which you are called to preside, and we are glad to say that its policy and purpose are in full harmony with the institutions of learning in the state. For in Iowa and in the West generally the old Utopian university of the middle ages, whose course of study were remarkable only for their remoteness from all ordinary human interests, is wholly extinct. We educate men in this state not to realize an impossible imaginary perfection, but for their actual duties and the lives of effort they will follow thereafter; not to divorce them from all useful arts, but to make their lives fruitful of good to themselves, the state and the world! I thank heaven and the national congress that this College is not one of the ancient scholastic grist-mills, wherein the student went into the hopper, a simple farmer's lad, and came out at the spout a sort of lofty intellectual dude, whose gaze fixed perpetually on the stars above struck none of the attainable values that lay thick around him on the earth below.

“Give us rather the system and matter in study that enable the youth finally to take rank among the world's leading workers—that sends him forth glowing with enthusiasm for the triumphs of practical labor. That gives to the hand its highest skill—to the eye unerring accuracy—to the judgment an infallible discernment, so that he may direct all the appliances of science and art to the enterprises that supply the wants of the world and quicken its wonderful progress. The pressing demand is for industrial leaders, master workmen, master mechanics, engineers, veterinarians, farmers and stalwart men as well. And in striving to supply this demand we are pushing forward no insignificant purpose, but the loftiest and the noblest that science and learning can accomplish.

“Such is the enterprise, I repeat, Mr. President, of which you are now the chosen leader. And we are happy to assure you that abundant and fitting material for your work are at hand. The sons and daughters of the farmer and the mechanic—all the workers in whatever line and especially those whose means are limited, are looking to this industrial school for that sort of practical, intellectual drill which will serve as an armor in the struggle of after life. All over this broad state, and especially on the farms, are hundreds, even thousands, who are now saving the means, dollar by dollar, to meet the moderate expenses which a
course of study here involves. As samples of their spirit, their earnestness, I point with pride to the young men and women you have already met. In fact, this is a hive of workers, Mr. President, in which you will find that the drones are conspicuous by their absence. The lawless boy who, sent hither at rare intervals by a despairing father, comes to dawdle and to drone, encounters an atmosphere that changes his dawdling into earnest work or brings it to an early end.

"In all respects this school of the industries comes into your hands in a prosperous condition. Its endowment is adequate, its funds well managed. Its equipments for instruction are ample. The departments are organized and carefully balanced, and the courses of study arranged to secure the most genuine and practical scholarship.

"With students that are earnest and eager for improvement; with Alumni that cherish a strong affection for their alma mater; with a faculty who are enthusiastic in their work, and who will give to you, without stint, their sympathy and support, and with a board of trustees who are striving wisely to bring this industrial school to its highest development, we joyfully predict for you a long and distinguished career as the honored President of the Iowa Agricultural College."

Dr. Chamberlain responded in earnest and eloquent words, which were apparently impromptu, and from the heart as well as head. They were in substance as follows:

"Dr. Welch, my venerable and distinguished friend, and all of you, my stranger friends and newer acquaintances, the kindness of whose hearts he has just expressed, I would be guilty of insufferable vanity did I for a moment regard this most cordial reception and this elegant banquet as a merely personal tribute. As showing the kindness of all your hearts toward me personally, indeed, I accept it with feelings of profound pleasure and thankfulness. But it all has a larger and a wider significance. It shows your love to the College and to the work it is trying to do. That is what has decorated these walls and spread these tables with all that can delight the sense of beauty through the eye, and the lower sense of taste through the tongue and palate, and made the orchestra and the band, the great organ, the grand piano and the human voice delight the aesthetic sense through the ear. This it is that has made these ladies of the faculty do this artistic and this culinary work, and the gentlemen of the faculty furnish the sinews of war. This it is that has brought here trustees and ex-trustees, alumni and alumnae, former professors, state senators, officers of state and distinguished citizens and representatives of the agricultural, horticultural and industrial interests of the state, and a goodly number of professors in other colleges and of the citizens of Ames. What then is the work of this College that has made you love it, and come to-night to testify that love? Somewhat different from that of our old-time colleges. The wise men who first formed the plan in congress of the magnificent land grant that endowed this College and similar ones in other states evidently aimed at supplying a lack in the field of education. They declared that "the leading idea" of these colleges should be, "without excluding other scientific and classical studies, and including military tactics," to teach those branches of learning that relate to agriculture and the industrial acts" in such manner as to fit the industrial classes for the various callings and professions of life. I may say that I am in full sympathy with the spirit of the law that created our endowments. I could never believe in educating one class to be the exclusive thinkers and leaving the other, and far larger class, in ignorance, to be exclusively the physical workers. That is the old
monarchial idea. He that made man at the first joined the body to the mind. Reverently, therefore, would I say, "what therefore God hath joined together let not man dare to put asunder." It is undemocratic and unchristian wholly to sever the physical from the mortal in labor; and I may now add it is unphilosophic and unscientific. It is bad political economy. Our republic cannot stand unless our physical workers are trained to be thinkers; to think clearly through language, to think rightly and soundly on political, social and moral questions. It is the work of this College to train a large body of young men and young women year by year to be just such thinking workers.

"Pardon a personal reference, as it hints at one of the needs of the College. So far as Iowa is concerned you see me here to-night a widower and childless. Why? There will be no vacant house for my family until spring, and so they must remain in Ohio. Not only that, the wives of two of our professors who board and room at this great building from necessity, have confided to me that the longing of their hearts and of their husbands' hearts is for the time when houses may be ready for them. Still more heartrending, two of our most brilliant professors, our old bachelor and our young bachelor friend, may often be seen wistfully examining buildings, building sites on our immense campus of 120 acres, and longing for the time when—(the rest of the sentence was lost in the laughter and applause.)

"Seriously, we are so far from arms that the lack of houses is a serious one. A Ladies' Hall is another pressing want. With it the ladies will soon be as merry here as the gentlemen, for they are as numerous in the state, and as bright and anxious for knowledge, truth and discipline of mind. These wants will be clearly laid before what will, I hope, be a friendly legislature, at its next biennial session. Pardon one more personal reference. I cannot fully share in the abounding confidence you all seem to feel to-night in regard to the success of the College under the new administration. My friends have ever placed too high an estimate on my abilities, though not, I hope, on my willingness. God knows I never sought this place. God knows I always shrank from it with a feeling that it was too great. Yielding at last only to what seemed the clearest call of duty did I accept. To decline would have seemed cowardly. And now these expressions of firm confidence on your part awaken feelings exactly the reverse of vanity, pride or exultation, feelings rather of solemnity, deep responsibility, dread of failure. For if amid these strong and kind surrounding and supporting influences, manifest here to-night in eye and smile and voice and hearty shake of hand, and brief and hearty words of friendship and encouragement, if with trustees and faculty united and earnest and competent there should be failure, the fault would be my own. Nay, rather the fault shall not be mine, for neither God nor men will blame him who does "the best he knows how or can learn how to do." This, with your help and God's, I here to-night promise that I will do."

Responses to toasts were made by Dr. Yeoman, a member of the board of trustees, ex-Trustee Rigby, J. K. Macomber, Attorney General Baker and Mr. Farwell of the Senior class. At a late hour the company dispersed, carrying with them the realization of having enlarged their circle of friends, and the memory of an evening happily spent at the Agricultural College.

W. E. G.

EXCHANGE NOTES.

On account of the existence of vacation in nearly all colleges at this time, the exchange list is very small this
month. The June numbers of those we have are all full of "Commencement" orations and last farewells.

Our sister state, Kansas, sends her representative in the form of the Ottawa Campus. This is a quarterly paper. The matter is quite condensed, enclosing its entire matter in a neat little space.

We have before us, on exchange, The University Register. Its matter is all neatly and thoughtfully arranged. It has about six columns devoted to an account of "Commencement exercises." It contains some good editorials also.

The College Speculum, June number, is, as usual, full of interesting articles on spicy subjects. It grapples with those subjects which are of interest to the real student. It is a good home paper, containing a great amount of home-college news.

We have lately received an interesting address, in pamphlet form, from our old fellow student, C. Vincent. This address was given before the assembly at Council Bluffs July 3d. The exercises were conducted under the auspices of "The Knights of Labor." The subject of his oration is "Dangers Ahead." He divides it up into three divisions, all of which are closely discussed; but more especially the third division, "Monopoly." In this he attacks railroad monopolies, money monopolies, land monopolies, etc., and in short makes a good strong stand for the working class. This is the way we like to see our graduates doing. Success to you, Prof.

NEWS FROM OTHER COLLEGES.

Students at Harvard have now a choice among 189 courses.

Of the eight principal colleges in the United States, the only one advocating a protective tariff is the University of Pennsylvania.

The Northwestern University has received $40,000 for the erection of a Science Hall. The donor, a New York gentleman, wishes to remain unknown for the present.

Student: "Rex fugit—the king flees." Professor: "In what other tense can that form be made?" "Perfect." "Yes, and how would you then translate?" Painful silence; Professor suggests "has." Student: "The king has fleas."

The schools of Austria have been forbidden to use paper ruled in square or diagonal lines, as such paper has been found to injure the eyesight of pupils. In future only paper plain or ruled straight across is to be employed.

For the past five years the average annual appropriations made by legislatures of several states for the benefit of State Universities has been as follows: Michigan, $94,000; Wisconsin, $99,000; Iowa, $43,000; Minnesota, $59,000; Ohio, $13,000; Nebraska, $82,000.

Miss Kiss Kits, a graduate of the Normal school, at Fokio, has been chosen by the Japanese government to receive three years' training at the government's expense at the Salem, Mass., Normal school for the purpose of taking supervision of the Normal schools of Japan. She will be the first Japanese to be educated at the government's expense in America.

LOCAL.

Hot!
Hotter!!
Hottest!!!
Dust in proportion.
Rain in an inverse ratio.

The Freshmen are quieter than usual. Probably caused by geometry.

The Sophomore girls are taking analytics. It doesn't scare them in the least.

The rules remain as numerous as usual, but will be enforced with some degree of judgment.

The hydra, a low form of animal life, has been discovered here for the first time. It is found in the pond under the first railroad bridge between here and Ames.

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The Senior recitation room has been very nicely carpeted and papered, but we would like to know who is responsible for matching the colors.

We notice fewer of the girls this fall wear bangs. We suppose it is because pompadore is cooler, takes less work, and looks a great deal nicer.

The piece of ivory about the size of a half dollar which was picked up in the President's office has been pronounced to be a poker chip. We always wondered why the faculty met there every Monday afternoon and kept the door locked.

Chapel last spring was reduced to a minimum, lasting from four to six minutes. It has already this term assumed rather more than normal proportions. It is the most noticeable, perhaps, on Wednesday afternoon, when we have dress parade. It might easily be dispensed with on that day and give that much extra time to dress parade.

It has been unusually dry here this summer. The pastures have been burned by passing trains, the creeks have gone dry, and the ground is badly cracked in the paths, but not so bad as is reported in some of the different parts of the state. One young lady, whose veracity is not to be questioned, tells us that it is actually dangerous to drive outside of the beaten track in the western part of the state; while a young man from Newton, whose truthfulness is even greater, says the farmers in Jasper county go over their pastures every morning and cut the cattle loose that have got fast in the enormous fissures.

The college buildings underwent during vacation quite extensive improvements, under the supervision of Capt. Lincoln. The recitation rooms in the main building were painted, windows were put in some of the darker rooms, the library and chapel were painted, hard wood has replaced the worn-out floor in the third story, various portions of the building have been calcimmed, the walk extended to the cottages, porches are now being added to them and the grounds around them are being graded, the library steps have been replaced by new ones, and—well, enough has been done to fill a whole page if it were told in the shortest possible way.

That lonesome individual spoken of in the *Intelligencer* was perhaps a little lonesome during vacation, but his spirits returned as south section filled up. One cheering factor was the amount of edibles which returned with the occupants of the aforesaid section for the above-mentioned person. These ranged all the way down from a whole cake made by a certain little Sophomore I. C., who takes analytics to keep her busy. (If we had the giving of marks in domestic economy she should have a "4".)

The man who ought to die and leave this college $5,000 to build a gymnasium with, we are afraid will never be born.

The M. & S. S. Air Line has been strengthened to permit the carrying of heavy fruit trains. Stockholders may rest assured that it will pay ample dividends.
The Irish League here is composed mostly of Swedes and Norwegians.

One table of Sophomores challenged the Junior class to a game of base ball. The Juniors accepted and came off victorious.

We have the purest and best water here that can be found anywhere. At least Charley Bart says it is the best he found in a botanizing tour of thirty miles.

"Is —— going to preach this afternoon?" "Well, if he is, I am sick." "I wish I could be."

If 290 shows what a person knows about domestic economy, then, judging from samples of cake, that mark must be the standard of excellence.

The Aurora would like to know why—

The Clio Hall was not painted?
The old cottage has no walk?
Billy Myers was the only one who had his shoes polished one morning in ethics?
Bake and Pat can't raise moustaches?
McCarthy lables himself with some one else's name?
So many sleep on the floor?
We can't have a gymnasium?
Scott Bradford eats at a boys' table?
Chapel isn't optional?
The lively tunes are always played Sunday morning.

A certain Senior should stand at the entrance of a society hall and converse in tones loud enough to disturb the members?

Deck Sheldon and Bert Felt should go to Nebraska to work in the hay harvest?

The Shangodahnees do not challenge some higher class to play them a game of base ball?

June Rose goes around two or three extra tables to get to her own?

There are about two hundred and twenty-five in attendance this term, only twenty-seven being new students.

The Seniors intend to have good pictures this fall if possible, and have appointed the necessary committee to secure a good artist to do the class work. Any photographer who patronizes the college paper should be very favorably considered.

The societies held the customary joint session the second Saturday evening of the term. Below is the program and the officers:

**President—Jno. James.**
**Secretary—Miss Sallee.**
**Chaplain—Miss Lucas.**
**Music.**

**Declamation.** Miss Lulu Wright
**Essay.** Miss Cristie
**Poem.** Mr. Wright
**Debate—Resolved, That no man should own more than 200 acres of land in the United States.**
**Aff.** Mr. Greene. **Neg.** Mr. Farwell. **Mr. Gamble.** Miss Wilson. **Music.**

**Voluntary.** Miss Dell Neal
**Recitation.** Miss McClure
**Essay.** Miss Moulton
**Oration.** Mr. Curtiss

The students who remained here during vacation had a much more enjoyable time than was at first anticipated. Being bound down by no rules save the innate rule of right, they made the most of the moonlight evenings, the opportunities to go buggy riding and other harmless amusements in which young people take pleasure. The Saturday afternoon picnics were probably the most enjoyed. They were especially entertaining when trying to come out ahead by taking the short (?) way across the timber. Why the short way should always lead over ditches, thro' thickets, into ravines, and finally land up against a barb-wire fence, must ever
The following article referring to the reception given President Chamberlain is taken from the *Leader*:

"The reception given last evening by the officers, faculty and friends of the Iowa Agricultural College to the new President of that institution, W. I. Chamberlain, was of a most pleasing and satisfactory character. Many people were there from different parts of the state, among the most distinguished being auditor of state, Hon. J. L. Brown, Attorney General Baker and Dr. Carpenter, the President of Drake University. From 8 o'clock to 10 the throng received introduction and paid their respects to President Chamberlain, who received all courteously, and impressed everyone by his dignified but unostentious demeanor with his entire fitness for the important position to which he is called. He is a tall, well-formed gentleman, with gray eyes, dark hair, and is probably about fifty years of age, though he looks much younger. About 10 o'clock music by the band announced that the elegant collation spread for the future entertainment of the guests was ready, and all repaired to the chapel, where, seated at tables, they were waited upon to all the delicacies that would tickle the palate of an epicure. We have not the space to enumerate them, but will say that the supper was both elegant and sumptuous. During the repast the band discoursed a variety of music. When the appetite had been gratified, Dr. Welch arose and delivered the address of welcome. President Chamberlain responded in a very happy manner, expressing his thorough sympathy with the aims of the College and thanking the officers and faculty for their assurance of co-operation and assistance in his work. The guests departed well satisfied, and great confidence is expressed as to the future prosperity and usefulness of the College under the management of President Chamberlain.

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**PERSONAL.**

Miss Blood spent Saturday and Sunday in Des Moines with Mrs. Leigh Hunt.

A. W. Sherman visited his friends here. He looks as hearty as of old.

C. H. Potter, who spent a year here with ’88, is now in LaMotte, Iowa.

G. W. Greene spent vacation canvassing and collecting for a Harrison county newspaper. Lightning rods and chain pumps were also furnished on application.

Jno. James has returned and will graduate this fall with his class.

S. H. Hedges spent part of his vacation at Colfax.

Myron Reynolds celebrated the glorious Fourth with H. R. Jones at Scranton.

Herbert Preston took a flying trip to Chicago.

Miss Gertie Wynn visited Miss Stella Wagner during vacation.

Mr. Govier, who was here during ’82, has returned and entered with the present Junior class. He attended part of the intervening time at the I. W. U. in Mt. Pleasant.

Prof. Tripp, from the college located at Pella, spent several days here, visiting the different departments.

Jim Bradford’s face looks like it had been vaccinated on one side by a healthy bumble bee.
Walter McHenry has lately been admitted to the bar. In a recent case, in which his father was judge, he took one side and his brother the other.

U. S. G. Flora, not being satisfied with the college at Grinnell, has returned to the Iowa Agricultural College to finish a course here.

G. W. Greene is the new editor-in-chief of the Farm Journal. We predict that under his management it will double in circulation and be a success as an agricultural periodical.

W. E. Gamble, on account of leaving school, has resigned the position of editor-in-chief of The Aurora. A. P. Johnson takes his place.

Nat Stark is located in Des Moines, on Locust street. He is doing a general hardware business.

H. L. Chatterton's brother paid him a short visit.

Lon Rawson Sundays with his friends here.

Frank Jackson, secretary of state, who was once a student here, came up to the reception:

Mrs. Halstead's mother, sister and niece are visiting her.

Carance Baker and ye local visited at the home of the former in Des Moines. While there we met several old students. Among them were Talbot, Baldwin, Alex, Wilber Moore, Jack Clarkson, Schiller Kurtz and Dr. and Mrs. Shearer. They all looked happy, and most of them intend visiting the college this fall.

“Mike” Flannigan, who spent '82 here, is back at the old I. A. C. this fall.

Mrs. Budd has been quite unwell this summer, but we understand is improving now.

Miss Lulu Wright visited with relatives in Chicago a couple of weeks.

Gen. Geddes delivered the oration on July 4th at Vinton.

Prof. Hainer's father spent a couple of days here.

MILITARY NOTES.

We have the best drill master in the state and are ready to prove it by meeting any other College battalion in Iowa.

Our highest officer, Maj. Hunter, has been appointed on Gen. Beason's staff, with the rank of lieutenant.

Adjt. Corbett will not be back this fall. Lieut. Felt of Company A takes his place.

The companies will not be as large as they were last spring term, with the exception, perhaps, of "Company G," which has as many if not more than it had in the spring.

Company B looked rather slim the first night on dress parade. Nearly as much so as the Monday morning breakfasts.

The picture of the battalion is fairly good, but of the band is miserable.

Fred Dobbin is sergeant major.

We miss Phil and the snare drum.

Tom Wormley is leader in the band.

The officers are forbidden by Capt. Lincoln to chew gum while drilling. We believe it was done only to make the commands a little more indistinct.

The best part of Capt. Rich's company, the sergeants, will not be back this fall.

The commissioned officers will attend the encampment of the Second brigade at Marshall.
The chapel was decorated in true military style for the reception.

No one pays closer attention to business than the markers, Charley Lincoln and Harry Graves. They expect to act as such at Marshalltown for the Second brigade.

ALUMNI.

'85. "Dennis" Hill spent several days here the first of the term. He is working in the C., B. & Q. machine shops at Galesburg.

'84. Joe Porter is acting superintendent of the Electric Light Co. in Des Moines.

'81. W. O. McElroy is practicing law in Newton, Ia.

'82. Chas. Saylor has just finished the most successful Normal ever held in Polk county. Frank Saylor, one of the instructors, is county superintendent of Montgomery county.

'82-84-1906. Born, to Mr. and Mrs. Marsh, on June 15, a son. The young hopeful is known by the name of Frank Eugene.

'83. June Colclo will teach the coming year in the public schools at Carroll.

'85. Oak Norton sent a short business letter to the treasurer, but it is right to the point.

'84. E. J. Nichols is assistant engineer on construction work. He is now located at Charion.

'85. Dave Hutchison writes from Alpine, Neb. He is still at the railroad business. Dave inquires very particularly about Kelly. All the information we can give is that there are mighty few ponds there now, but just as many school houses as ever.

'85. Lou Brown is at present situated at Broken Bow, Neb. He is assistant engineer now, but we could not learn on what road.

'84. Fannie Wilson is spending her vacation at home in Harper. She will continue in her position as assistant principal of the Onawa schools.

'85. I. B. Schreckenghast is trying to keep cool in a brick factory. He will attend school in Mt. Pleasant this fall.

'85. John Pope is in the machine shops at Springfield.

'85. L. D. Jackson paid his alma mater a short visit.

'84. Bert Hitchcock spent several days during vacation at Cairo lake collecting botanical specimens.

'85. George Goodno visited a week in July with Oak Norton. About half a dozen members of '85 were there at the same time.

'82. Miss Della Neal is spending part of her vacation with her friend and classmate, Miss Etta Budd. Miss Neal is in her uncle's land office at Lawrence, Kas.

M. J. Riggs, A. M. Allen, A. G. Andrews, of '83, and J. D. Shearer of '79, with others of Minneapolis, have rented a cottage on Gideon's bay, Lake Minnetonka, and are spending the season there.

The Alumni were not well represented in numbers at the reception. Those present from a distance were J. K. Macomber, '72; J. S. Lee, '73; C. H. Lee, '75; J. B. Hungerford, '77, and W. H. Wier, '84.

'84. The following occurs in the Newton Journal:

Hazel Dell Academy—The fall term of ten weeks will begin Monday, Aug. 23. G. W. Wormley, Principal.
### General Directory

**Christian Association.**

Meetings.

Sunday School every Sunday at 1 p.m.
Prayer Meetings: Sunday evenings at 7 p.m., in the Chapel; Thursday evenings at 7 p.m., in Freshman Recitation Room.
A cordial invitation is extended to all.

N. Spencer, President.
Grace Frater, Secretary.

**Alumni Association.**

R. F. Jordan, Pres.
E. W. Stanton, Secretary.

**Science Club.**

W. M. Hays, Pres.
V. C. Gambell, Secretary.

**College Band.**

F. A. Bardwell, Pres.
B. J. Shelden, Sec'y.

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### Society Directory

The four literary societies meet in their respective halls every Saturday evening at 7:30 p.m. All are invited to attend.

**Cliolian Literary Society.**

Lizzie Langfitt, President.
Nannie Waugh, Cor. Sec'y.

**Bachelor Debating Society.**

E. S. Richman, President.
F. E. Stinson, Cor. Sec'y.

**Crescent Society.**

J. James, President.
W. H. Wright, Cor. Sec'y.

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**Philomathean Literary Society.**

G. W. Greene, President.
Maggie Cameron, Rec. Sec'y.

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**Society of Engineers.**

This society meets in Engineering Hall at 7 p.m. every second and fourth Fridays of each month. Those interested in engineering cordially invited.

James W. Bradford, President.
H. D. Graves, Sec'y.

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**Agricultural and Horticultural Association.**

Meets in North Hall at 7 p.m. every alternate Friday.
G. W. Greene, President.
J. Craig, Sec'y.

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**Veterinary Medical Society.**

Has its regular meetings in Sanitary Hall at 7 p.m. every second and fourth Fridays of each month. All interested in this line invited.

M. Stalker, President.
J. Tillie, Sec'y.

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