

Volume XX.

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Number 6.



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THE AURORA.

Volume XX.

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Literary Department.

TWILIGHT REFLECTIONS.

CONTRIBUTED.

The chapel thoughts, concerning friendship, recently presented by our esteemed president have set in motion many currents of thought.

How much does friendship mean! What will a real friend undergo for his friend, but he does not act like one impelled by an outside force, he does all as if from love of doing, actuated by an invisible yet effectual something.

The old adage, "A friend in need &c," is so cant that its full meaning is not always appreciated. He alone who has been in sore need, can really comprehend it, for man fully comprehends states of feeling only by experience.

That "true friendship gives new life and animation" is true both subjectively and objectively. To know that another enters into all our plans with interest, makes life worth the living; to know that our joys shed a soft cheerful light into another life, that our sorrows throw a shadow across another's path and causes a sigh, to know these, intensifies the joy and makes the sorrow lighter, lends "new life." On the other hand, the consciousness of having come into touch with a life that needed just that touch, is in its self a reward for living and an inspiration to "new life." A feeling of grateful

satisfaction pervades the whole being and every thing seems brighter.

In friendship as in all else. "True worth is in being not seeming." The seeming friends of prosperity are legion; the being friends of adversity are easily counted. The seeming friend neither gives or receives "new life." There is in his association that which indicates healthful life, but closer investigation reveals diseased organs whose action vitiates the social atmosphere, cosmetics whose deceptive attraction conceal that which is repulsive. It taxes all the powers of his better being to keep his own vitality, and that is but a semblance of life.

His conversation, brilliant thought it may be does not give one a feeling of ease and confidence; one unconsciously gives a sigh of relief on quitting him; his hand grasp is not a grasp, his fingers lie passive in the palm, or else if he be both strange and false, he may be so profuse with words and demonstrations as to cause one to shrink away. He may inspire action, may elicit confidence but there is a lack of conscientious heartiness in performing the action and an unnamable feeling of regret follows the confidence.

The true friend is unselfish, is broad-minded enough to see the various lines and bearings that effect other's lives as well as his own, to so direct his life that its bearings will not destroy the symmetry, strength and wholesome influence of others, even though his own may be somewhat restricted. What is so contemptible as a narrow minded sel-

fish person? There can be nothing good or great in his life. He sees very little outside his own narrow life and that is much hedged about with prejudices and jealousies.

Such a life does not engender friendship it may colleague with others of its kind for their common interest; but selfish scheming lacks the philanthropy, the open hearted, open handed God-bless-you that is inherent in friendship.

"He that would have friends must show himself friendly." "like begets like." He who is false will find false friends, not because all about him is false, but he lacks that quality which attracts to itself the true and sincere; while he that is true will feel and recognize those same elements in others, will perchance respond, "where hast thou been so long?"—will have true friends even though they are as wheat among chaff. The chaff may attract attention, but the individual discerns then and there the clean healthy grain and with a feeling of sincerity thanks his God and asks for protection from all else.

"A friend is gold; if true he'll never leave thee. Yet both, without a touch stone, may deceive thee."

* *

CONTEMPT OF SELF-ACQUAINTANCE.

Emerson, in his wonderful treatise on "Love" introduces incidental a profoundly philosophical and truthful view of a live man's intellectual birth and self-acquaintance. "Each man sees his own life defaced and disfigured, as the life of man is not to his imagination. Each man sees over his own experience a certain slime of error, whilst that of other men looks fair and ideal. Let any man go back to those delicious relations which make the beauty of his life, which have given him sincerest instruction and nourishment, he will shrink and shrink. Alas! I know not why, but infinite compensations embitter in mature life all the remembrances of budding sentiment, and cover every beloved name. Everything is beautiful seen from the point of the intellect or as truth. But all is sour if seen as experience. Details are always melancholy; the plan is seemly and noble. It is strange how painful is the actual world—the painful kingdom of time and place. There dwells care and canker and fear. With thought, with the ideal, is immortal hilarity, the rose of joy. Round it all the muses sing. But with names and persons and the partial in-

terests of to-day and yesterday is grief."

It is a painful experience in a man's life when everything is "defaced and disfigured," but often it is the time of his most rapid growth. The warm chase after his ideal puts him out with his real life and makes him loathe it. He is liable to count this as an experience peculiar to himself, and that other men are much purer and nobler than himself, forgetting that in more senses than one

"Weighed in the balance, hero dust
Is vile as vulgar clay."

A man must early learn in this healthful development of his life that if he is a fool the woods are full of them, and quit his self-flagellations. His judgment and reason must correct his realistic impressions. A man will probably have to live with himself a good many thousand years, and he had better early in the first century get well enough acquainted with himself to get beyond the chicken pox period of self contempt on the one hand and abominable conceit on the other.

Although the days of the present time for us as young people surpass those of any previous age, yet we often are overtaken in thoughtless complaints. "We begin life as our fathers ended it. We start our house-keeping with the luxuries that to them were the well worn reward of half a century's unambitious toil. We are uncontentable hang-angerels. We are uneasy dogs, forever on the wrong side of the door." Somebody else's lot is often more attractive than our own. Someone else's home would be, in imagination, much preferable to our own. The work of a neighbor would be much more desirable than that in which we are engaged. The advantages of another student if enjoyed by ourselves, would make study a pleasure. The friends of another are more thoughtful and helpful than our own. The old story of the privilege to exchange his crown for one he might pick out of a large pile is very significant and instructive. After the most attractive and costly crown has been worn a few days, it was found to possess a great many annoying thorns and was gladly exchanged for the one originally owned. No lot is so good as our own, if we will only make it what it can and should be to us and for the world. Let us keep on the right side of the door through a healthful personal content.

W. M. BEARDSHEAR.

* *

POPULAR TALKS ON LAW.

BY W. C. SPRAGUE, ESQ.

THE TEACHING OF LAW IN THE SCHOOLS.

A writer has said that we teach our children to run in debt in four languages, and that they are not taught to keep out of debt in one.

It would seem that as a great part of the misery and unhappiness of the world can be traced to the habit of running in debt, some sort of teaching or discipline of the young, with regard to this important subject, might be of as much advantage as the teaching of trigonometry or Greek roots.

When a boy has finished his education in the latter, and is turned out of the school as a finished scholar, he is the veriest babe in the matter of "the way up," financially, and in respect to the laws of his country which regulate the getting and the keeping of money. This subject he must learn in the tough school of experience, and by the time, in many cases, he has graduated in this school, he is a broken down man, with all the best years of his life behind him.

The Emperor of Germany has called a halt in the study of dead languages in the schools of his dominion, expressing the idea that too little of the practical is taught, and too much of the impractical.

We say nothing disparaging of the study of the dead languages and higher mathematics, than which there is no better discipline of the mind, when we say that no education should be considered complete until the young man or young woman has fairly learned the philosophy of money and the laws which govern the business relations of life.

By this we do not mean that the boy should have a thorough legal education, but we do mean that he should have an intelligent and well-defined knowledge of the principles and elements of the law, and the way of applying these to the every day affairs of life. For *once* that he is taught that the genitive of the noun *mensa* is *mensæ*, he should be taught *twice* that a dollar saved is a dollar earned; for *once* that he is taught that Gaul, as a whole, is divided into three parts, he should be *twice* taught that \$50 paid out, and \$30 received, is \$20 loss; for every *once* that he is taught that the square on the hypotenuse is equal to the sum of the squares on the other two sides, he should be taught *twice* that a promise to pay is not a payment of a debt.

Ignorance of the distance of the planet

Mars from the sun, or a distant acquaintance with the table of logarithms, can be excused, but the common sense of mankind in all ages has laid it down that ignorance of the law excuses no one; and yet, under our systems of education, we go upon the theory that ignorance of the law is perfectly excusable, and should be a valid excuse for a man's disobedience of it, while it is of the gravest importance that one should know how many parasangs Xenophon was accustomed to march in the course of a day in his great "going up" act, and that one should be able to draw a picture on the blackboard of a pterodactyl or plesiosaurus.

Many a full grown man has had to learn, after all his years of schooling, and after serious embarrassment and loss in business that the individual members of a partnership are each liable for the whole indebtedness of a concern—a simple and elementary principle in the law of partnership, which he may have heard several times in his business career, but which never dawned upon him in all its force, until called upon to suffer the results of the law.

A very short course, taking but a very small part of a year's study, with a text book comprising only the elements of business and domestic law, would be all that is required to allow the young man to begin his business career with some show of success, and some assurance that he will not make the fatal blunders, so often made by young business men, of over-reaching themselves in business.

May not this want of instruction in business law and sound business methods be the reason for the startling ratio of failures to successes in the business world. Over 90 per cent of business men fail, at least, once in their lives, and very frequently, if the reason be thoroughly examined, it will be found to be traceable to some infraction of the laws of business, unseen and unappreciated, until after a vain struggle, the catastrophe comes.

This is a truly practical age, and it is strange if the period shall pass, without this matter obtaining the attention of the educators of the day, and radical reforms instituted. If nothing more than periodical lectures by practical business men before the schools of this country, it would be a long step in the right direction.



LIBRARY COLUMN.

EDITED BY MISS THOMAS, LIBRARIAN.

The library is an essential part of our system of education; to the success of it various elements contribute; location, building with its furniture, fittings, conveniences and attractions for readers, regulations and the books themselves.

On entering our college library we are at once impressed with its quiet yet cheerful location. Student, professor and stranger alike pronounce it a most delightful room. Certainly a feeling of pride immediately arises when we look around at the tastefully selected furniture with all the conveniences that the student requires to make his work light and pleasant. The reader can always find a comfortable chair and a table for writing if he desires such. While we feel the strong home-like attractions of the room, the books themselves make the library interesting. It has been the aim to make the library of the greatest use to all. After carefully considering the matter it was decided to have the books newly classified and the present valuable catalog has all been the work of Miss Crawford.

It is to be regretted that any one should fail to examine the catalog and be able to appreciate its worth. It has been prepared at the cost of many hours of thought and hard work.

It is not an uncommon experience to meet people, who never having used a saving method or machine declare it useless, because they know nothing beyond their own little sphere and as a consequence have never felt the need of anything further and yet the same individual after having a short experience with a really valuable new machine is very frequently the one to make the loudest cry that it would be impossible to get on without it. So in adopting our present new system of classification we have not found it wise to rely on the opinion of any one individual to the exclusion of all others. The librarian knows best what arrangement meets the demands of the library in which he is placed and if faithful to his trust will secure a comparative view of various plans and base his judgment on the consensus of the competent. However much good may be done, a library will never do its best work till its management recognizes the duty of studying carefully its special needs and working to meet the demands of each department. This is what

we are doing and we ask for the co-operation of student and professor.

Colleges are universally recognizing the fact that the work of every professor and every department is necessarily based on the library. The old method of following textbooks is forgotten and in its place is a broader and wiser plan for educating.

With some one to guide the student, the library work soon becomes fascinating, with some one to instruct him the student is prepared to search out hidden matter, the carefully and greatly improved indexes start him in his researches and by examining and following cross references he can put his hands on all the library contains.

We all notice the large number of readers that frequent our library and have great pleasure in noting the increasing interest here. Not less than an average of one hundred students per day are found examining the books on the shelves while during our most busy time, last year not more than forty per day were seen in our room.

Our library now numbers about 8000 carefully selected volumes and about four hundred pamphlets. Students are allowed unrestricted access to catalogue and shelves.

In many cases students are able to be their own guide in choosing books to read. So much care has been exercised in purchasing books for our library that it would be difficult to find in it a book written by an unreliable author but still we can quote from Carlyle; "Readers are not aware of the fact but a fact it is of daily increasing magnitude and already of terrible importance to readers that the first grand necessity in reading is to be vigilantly, conscientiously select; and to know everywhere that books like human souls are strictly divided into what we may call sheep and goats, the latter put inexorably on the left hand of the judge; and tending every goat of them, at all moments, whither we know, and much to be avoided, and if possible ignored by all sane creatures."

Alumni Department.**ACROSS THE SEA.**

(FROM SATURDAY REVIEW.)

BELFAST, IRELAND, March 7th, 1891.

Just now the eyes of the world are focused on the political situation in this unfortunate country. It is a situation that is not merely interesting—it is tragical. I shall endeavor to lay bare, to some extent its character.

The construction of the imperial parliament

and the general system of government that prevails in these islands are matters I think of common knowledge. It is also well known that in England, as in our own country, the affairs of state are conducted by one of two great political parties; that these parties are called liberals and conservatives; that the liberals, with Mr. Gladstone at the head, is democratic in its tendencies and in favor of extending the power of the people; that the conservatives, who are now in power, are led by Lord Salisbury, the present premier, and that their policy is to guard with jealousy the hereditary rights of the crown and to resist the advance of popular government.

It is further understood that Ireland has a voice in the parliament thus constituted; that she also has two parties politically antagonistic; that they are the conservatives, or unionists, and the nationalists, or home-rulers; that the sympathies and interests of the Irish conservatives are with the conservative or tory party of England, with which they are politically united; that the nationalists, who represent more than three-fourths of the people of Ireland, have for their main purpose the securing for their country the privilege of making its own local laws in a legislature of its own choosing.

All these fundamental elements of the situation are part of the stock knowledge of Christendom and are laid merely as a ground work on which to spread the details of the present warfare.

The Irish Nationalists are a party that was created by the political invention of Parnell. When he began political life he stood alone and with a single idea, he changed the policy of begging and demanded for Ireland, on the grounds of principle, certain measures of relief. It must be remembered that he was a born aristocrat with landed possessions and that his position was all the more unique because it was against both his pecuniary and social interests. Even in the matter of religion, which is not the least important element in the politics of this country, he differed from the great mass of the people whose cause he had espoused. And yet this madman stood up in the parliament of England and stoically pressed his demands. For a few years he received no attention except when an English tory would turn toward him with a pitiful sneer, or some Irish member would beg of him for God's sake not to imperil what few privileges Ireland had by making England mad. When items were scarce the newspapers would also refer to him, but during his early efforts no word of encouragement reached him from any source. Yet he always returned to the old charge, and kept up the old knocking, and repeated the old demands, until finally his loneliness, if not his logic, attracted to his side some of the aimless Irish members who were, at least not wanting in courage. Whenever he got a recruit he held him with the metallic grip of his personality until he got another. Time passed and the rack rents were growing burdensome, and evictions common, and distress seemed to be accumulating on every hand, and yet this cold calculating man remained unmoved in his position and unshaken in his ideas. He said, stand around behind me here as close up as you can get, and you fellows on the outside come in and I will weld the Irish representatives into a solid body that I will use as a sledge to

hammer relief out of parliament. And those that were already at his side stood up a little closer, and finally others began to crowd in, and then in their extremity, there was a general scramble until the whole country was at his back. And Parnell took that unorganized body and molded and solidified it, and infused into it the unyielding character of his own temperament, and then directing it at the English parliament, he drove it like a wedge in between the two great political parties in the house of commons until he blocked the wheels of the government. And when the machinery stopped and the administration turned around to see what was the matter, Parnell was recognized for the first time. Then the old demands were repeated in the same old tone, and one of the great political parties of England said, why, certainly, Mr. Parnell, why didn't you mention it sooner, and immediately the rest was reduced. Then this strange, resolute being was smiled on by both parties in the commons, but neither of them melted him into political union with themselves. He remained frosty and apart with his hand on his sledge. Other measures of relief were given to his countrymen at his request, but he never let his mind wander for a moment from the one, single idea of home rule for Ireland. He would take everything that was given, of course, but sledge in hand he always returned to that. Finally, Mr. Gladstone came up and tipping this iron-willed man a wink he drew him around into a quiet place and said Charlie, what is it you want? Home rule, said Parnell without changing his tone. Mr. Gladstone staggered for a moment, but he recovered himself and, seeing that Parnell still had a death grip on his sledge, he braced up and said, come with me, you shall have it. Then the world was astonished, and the friends of liberty rejoiced at seeing the rights for which the Irish people had contended for centuries, conceded to such a large extent by the home rule bill brought before the commons of England by the grand old man. This was not accomplished in a day. Fifteen of the best years of Parnell's life were devoted to it. And during that time in the face, both of discouragements and allurements, his rigid purpose never bent. He had forced the cause of Ireland on the attention of every country; he had created a public sentiment, both at home and abroad, that recognized the justice of his demands; he had strengthened the ranks of the liberal party by broadening the spirit of democracy in even England itself; he had organized and unified an Irish national party out of respect for which the greatest English statesmen of the age was induced to concede the justice of home rule and to stake his political destiny on the issue.

All these things are also tolerably well known and, I spread them out with the others because, in explaining the present strife, it is well to understand that they are freely admitted, at least in substance, by those of Mr. Parnell's old associates who are now fighting him.

On the first of last November this political Napoleon stood in parliament at the head of eighty-six out of the one hundred and three members from Ireland. All the nationalist. He held them aloof from any permanent alliance with either the liberals or the conservatives. He was pluming himself for a last final struggle,

in temporary conjunction with Gladstone to restore Ireland's lost parliament, and everything looked auspicious. He was feared by his enemies, idolized by his country and admired by the world. Grattan and O'Connell had each in turn drawn largely on Irish loyalty and devotion, but it is doubtful if any man ever sounded the depths of Irish allegiance and love as did Charles Stewart Parnell. The ides of November brought on the trial of the notorious O'Shea divorce case and, at its close, Ireland was silent for a time, as if groping around in search of her moorings. When the people had again found their voice the first public utterance was sent forth from Dublin, at a meeting of the Irish representatives held in Linster hall, on November 21. A resolution was put by Justin McCarthy and seconded by T. M. Healy, and unanimously adopted: "That this meeting, interpreting the sentiment of the Irish people, that no side issues be permitted to obstruct the progress of the great cause of home rule for Ireland, declare that in all political matters, Mr. Parnell possesses the confidences of the Irish nation, and rejoices at the determination of the Irish parliamentary party to stand by their leader." Still there was no sound within evidencing the approach of the domestic conflict fomenting against the continued leadership of Parnell on the grounds of morality. On the 25th of November, four days after the Linster hall meeting, the members of the national party met in a committee room in the house of commons and unanimously elected Parnell leader. Not a dissenting voice was heard. Not an oratorical flourish was made that wasn't eulogistic of the political wisdom and the matchless guidance of their old parliamentary pilot. Not a whisper was breathed against him on the grounds of morality. Nor was there yet any sound from the country indicating that the people were in agony over the retention as leader of the man whose character without any attempt at defense was blackened by the proceedings in the divorce court. But after awhile the grand old man awoke to the situation and indited a short though famous letter to John Morley. In this it appeared that he had heard of the divorce court revelations which had been made public two or three weeks before and that because of the new light in which they forced him to view Mr. Parnell he could hold no political conference with a party that retained such a man at its head. In short the Irish nationalists were given to understand that, unless they changed leaders, they could not rely on the support of the English liberals in their efforts to obtain home rule for Ireland. And that's the letter that upset the whole business.

These things, too, are known quite generally and it's only because they belong to the groundwork of the present local conflict here that I spread them out with the others.

At this point there was a sudden shifting of the scenes and ever since the controversy that has engaged the attention of the United Kingdom has not been the old one between England and Ireland, but the new one in the Irish ranks. The bishops of Ireland issued a pronouncement against Parnell on moral grounds; a delegation in America headed by Dillon and O'Brien, repudiated a cablegram of endorsement, which they had sent to the Linster hall meeting, by de-

claring against the old leader; disaffection broke out in the parliamentary party and a majority of the party under the leadership of Tim Healy called a meeting to reconsider their former action and depose Parnell. And after a fight of several days which has become historical not only on account of its character, but for the fiery splendor of its debates, Healy's majority withdrew from the meeting and, having voted to remove Parnell from the leadership, they elected Justin McCarthy in his stead. Then occurred something that might be regarded as very strange in the conduct of an individual toward an organized body. Parnell, who had done strange things before, refused to go. Over the heads of his parliamentary associates he appealed to the people of Ireland whose leader he claimed to be. And here it would be well to recall the fact that so great had been the confidence of the people in his political wisdom, and so absolute had been his influence over them that he even dictated the parliamentary members for the constituencies. He now made his appeal on the grounds that it was the Gladstonian party that desired his removal; that the measure of home rule which they were willing to grant was limited and barren of any real benefits to the Irish people; that it withheld from the proposed Irish legislature the settlement of the land question and the control of the police, both of which were at the very root of all their misery; that Gladstone knew that no such mock concessions would be accepted by him, as leader of the Irish party and that encouraged by this opportunity, he sought at this time to bring about his political extinction. This was putting it pretty strong to a people for whom he had done so much and against whom the charge of ingratitude is not often brought. And yet there was a momentary hesitation and not a little bewilderment on the part of the people. The clergy, whose flocks are attached to them by a love that is simply pathetic, and whose confidence in them is grounded in the affections of the heart, had arranged themselves almost unanimously on the moral side of the question. Even in their lenten pastorals, which were read in all the churches in the diocese, the matter was not only discussed, but Parnell was condemned by the Bishops of Armagh, Tuam, Down, Clogher, Kildare, Galway, and other places. And, at the same time, Healy who had seconded the McCarthy resolution in the Linster Hall, and who had on that occasion declared Mr. Parnell to be "more of an institution than a man," was discovering political treachery in the past conduct of his old leader and convulsing public audiences with witticisms on Kattie O'Shea.

Again let me say that all these things are generally well known and I spread them out simply as admitted facts leading up to the present struggle.

Let the full strength of the anti-Parnellites be understood. They have with them all the bishops and a vast majority of the priests; nearly all the smaller newspapers are with them; they are on the eve of starting, in fact have started a national daily to combat the tremendous influence of the Freeman's Journal; they have a majority of the parliamentary party. Justin McCarthy whom they have chosen as leader is not only famous for his learning, but

respected universally as a man; Sexton, who is conceded to be one of the ablest men in the house of commons, is with them; Tim Healy's merciless sarcasm is cutting in their lead, and even Dillon and O'Brien, who are whiling away the time in the Galway jail, have a silent influence which they claim. Nor are they wanting in resources. They have supplemented the O'Shea matter by charges of political treachery; they accuse Parnell of retaining political knowledge that should have been submitted to the party; they charge him with neglect of duty and they assert that for several years his parliamentary seat has been practically vacant and his whereabouts unknown; they say he is a despot whose tyranny is unrelieved even by brilliancy, and they point to the meeting at which he refused to be retired by a majority vote of the parliamentary body. Farther than that, they claim that his motives are purely selfish; that he would not allow his country's freedom to stand in the way of his own aggrandizement; that the extent to which his personal ambition will carry him is shown by the way in which, to retain his political power, he would alienate the English liberals, in whose friendly assistance lies the only hope of Ireland. They go farther: They say that the very safety of the country demands his defeat; that a man whose inordinate greed for power is not even limited by a conscience is a menace to the nation; that home rule with Parnell as dictator would simply make matters worse and that it would be far better to retain the burdens they now have than to exchange them for an absolute despotism under a man politically uncertain and morally unsound. In the meantime, Mr. Parnell is not idle. From the day he took the bits in his mouth and refused to be governed by the majority of his followers, his old iron purpose has never wavered. The opposition of the Irish hierarchy, against which no man could reasonably hope to lead the people of this country, was no discouragement to him. His movements were rapid and decisive, and his plans were as hastily executed as they were formed. He chose his position at a leap and defiantly flung into the face of the country his refusal to quit his place at the head of the Irish nation for any dictation coming from an English source. With one hand he seized the organization of the national league and with the other he spiked the guns of "United Ireland" and planted his own artillery behind the breastworks of the enemy. All eyes were turned toward the "Freeman's Journal"—it declared for Parnell. Into every county in Ireland he reached out his grappling hooks and laid hold on the local branches of the league, or wrung memorials from the members of the corporation. And, while the majority branch of the party were looking on in amazement and trying to accustom themselves to the new sensation of standing alone, Parnell had captured every available point of advantage, and placed a man on guard. Then he assumed the aggressive and branded the majority wing of the party as seceders from the national ranks. He hurled back at them the charge of personal ambition and said that their discontent was founded on envy and that the very men whom he had dragged up from obscurity were willing, because of some new born hope, to make Gladstone's letter a pretext for pulling him down. As to his moral character, he said that in respect to

political honor, or fidelity to the cause of Ireland, it has never been questioned, and that if his conduct aside from that, had any bearing on the honesty or strength of his public service, it was strange his countrymen shouldn't know it without having it pointed out to them by the leader of an English party. He said that so far as the evidence was concerned, that was furnished against him in the London divorce court, he neither admitted or denied anything, but that he didn't believe the Irish people, whose battles he had fought, would, on the very threshold of victory, throw him overboard because of a remote moral question that was three weeks old at its birth and of foreign extraction. The seceders, he said, to avoid friction, were willing to accept the shadow for the substance of home rule, and he charged them with having conspired with the liberal English to oust him from political life.

These are all circumstances that fit into the groundwork of the Irish crisis and while they are tolerably well known I spread them out with the others.

Along these two lines the opposing forces are arranging themselves. The cold, ubiquitous Parnell is in Dublin to-day, directing the efforts of his men, while a line of unexploded ovations is stretching away into the north along which he is to pass to the great mass meeting at Newry to-morrow. He has assumed the same old attitude and maintains the same inflexible personality. He says, get around behind me here and you fellows on the outside come in, and I will drive the seceders back into that obscurity from which they never should have emerged, and I will fill their places with new men whom I will weld into a solid mass and with which I will hammer a full measure of safe-guarded home rule for Ireland out of one or the other of the English parties, and I don't care which. And as there is something familiar in the tone of that voice, the people have pressed in around him until Dublin and Cork, and Waterford, and Tralee and Athlone, and Navan and fifty intermediate stations have been found standing at his back and cheering him on. So intense are his adherents that when adverse criticisms have been made in the churches, either on him or the Freeman's Journal, numbers have walked out of the churches. Wherever he goes applause attends him. His opponents haven't as yet been able to hold one successful meeting. The last one that Healy attempted was at Carrick-on-Shannon, where he was forced to seek shelter from a mob in the sacred precincts of a chapel. It has been said that Parnell's followers are of the noisy class and that his real strength is magnified by the tumult they raise around him; while on the other hand, the opposition strength is underestimated by the quiet, sober-minded character of the men who compose it. I have no means of testing this theory. It has also been stated that the wealth and the intelligence of the country is against Parnell. Perhaps. There is no intellectual fog, however, hanging over the articles that go thundering along through the Freeman's Journal, and a subscription list opened yesterday by that paper, for the purpose of carrying on the campaign; was swollen to fifteen hundred dollars during the first twelve hours. No evidence of compromise or retreat is manifest on the surface of either party. Both seem to be strengthening

their defenses. Delegations have been sent by the McCarthyites to foreign countries and a Parnell commission will sail for America on the ship that carries this letter.

Even in this you may discover things that are familiar, for they are known I am sure to a great many. And yet I spread them down in the path of the Irish controversy.

And now if you'll just pause and think for a moment, you will find that you are into it. That's about where it ends at present. There's going to be more of it—in fact, it is hard to tell where it will end; but in the way of a general outline, I would't dare tell any more without the gift of prophesy.

And yet I'm unable to restrain the prediction that if flesh and blood can survive the tremendous struggle he is now making, Parnell will win in the end.

* * * * *

But ah, the thoughts of the morning have too soon ripened into a reality of noon, and we, who but a few short months ago could survey or sympathize at the works of a great mind, and grasp at its results, can now but write its epitaph or pay a last tribute to its ashes.

Parnell is dead. Those piercing eyes that could transfix an audience, or penetrate political problems with unerring shafts, are closed forever; the hands that for the last decade gripped the helm of a nation and steered the cause of Ireland through storms of enmity, are cold and bloodless; that will of iron that no resistance could subdue is relaxed in death; the heart that swelled with courage and faltered not at discouragements under which weaker men would have sunk has ceased to throb, and that spirit has gone out which for the last ten years, sustained at the center of the world's attraction the burden of a people's wrongs. Parnell is dead. No man has risen in the political firmament of Europe with such strides since Napoleon grasped the scepter of France. And who is there that will stand at his open grave and say that his motives were not inspired by love of country? Surely not his enemies. If it were personal ambition that moved him, the imperial government of England offered laurels less doubtful; and with rank and wealth and the conquering strength of his personality, not even the premiership of Great Britain was beyond his reach. He died at the age of forty-five before he had arrived at the full measure of his powers. And yet he had lifted from a position of utter hopelessness and placed in the march of the nations the prostrate form of his country. The emperor of the French marshalled with invincible will and fiendish strategy the armed legions of war, but where Napoleon rode through blood, Parnell, with the same fixity of purpose and genius as unerring, carved his way through the intellectual barriers of England and was leading his countrymen in bloodless triumph to an honored place among the nations, when he fell exhausted and dying in the pass. But the pass is open and, as united Ireland marches into the realm of national freedom, let the emancipated hosts tread lightly over the dead body of our fallen chieftian.

Yours.

TOM BURKE.

ABOUT A BALE OF COTTON.

BY F. W. MALLY.

(Continued from September number.)

The seed cotton having been ginned and the lint baled the cotton is ready to be placed upon the market. Those engaged in buying and shipping cotton are called Cotton Factors. Each cotton factor owns or rents a large warehouse for the reception and storage of the bales bought. These warehouses are merely large plain fireproof sheds with no partitions and usually cover the space of a half block. They are stored with bales from the ground or floor up to the roof.

The first thing the Cotton Factor does is to sample and grade each individual bale. This requires the services of an expert, and each buyer employs one whose sole duty it is to attend to the grading. This process consists of ripping with a sharp knife the bagging between the two central ties, inserting a long pointed hook into the bale as far as possible and twisting out as much lint as will adhere, usually a pound or two. This is called the sample and is the basis from which the bale is graded or classified. The principal points taken into consideration in grading cotton are;

1—Color of the lint. This should be a pure, lively white, better understood when seen than from any possible description.

2—Length of the staple, that is of the fibres, conjointly called lint. This has more to do with the *price* than the *grading*.

3—Trash, such as leaves or pieces of bolls and other waste matter chopped up by the saws in the process of ginning. If proper care is exercised in picking, no trash will be found in the lint and hence does not enter the grading.

4—Sand or dirt. This is found when the seed cotton has been lying in the fields without cover and exposed to the dust, or when heavy rains splash the loose earth up into the tufts of those bolls near the surface. Classification, therefore, depends mostly upon the color and cleanliness of the lint and this together with length of staples determines the price.

The distinctions of the various grades are very slight throughout and the number of grades run quite high.

In the Shreveport market only some fifteen grades are distinguished while the New York and Liverpool markets recognize 25 or 30. Here at Shreveport the grades run about as follows: Low ordinary, ordinary, good ordinary, low middling, fair middling,

middling, good middling. More accurate grading would be about as follows: low middling, strickly good low middling. The same for fair, middling and good middling. This same elaboration applies to the ordinary and other cottons.

Each grade commands a distinct price in the market so that the value of a bale of cotton depends not so much upon the number of pounds as upon the quality determined by grading. At present writing middling and good middling cottons are worth 8 to 8½ cents per pound, while the poorer grades in the present over stocked market find practically no sale though under the usual conditions are worth 6 to 7 cents per pound.

At the same time the cotton bale is sampled it is named. This consists of a system of marking. Each cotton factor has a series of marks, whereby he can distinguish his bale from among all others in the market.

A series may consist of any number of bales. Each bale is marked with the series as also its number in that series. For example if the series be M. A. C. and the number of bales 50, each bale is marked M. A. C. 25, M. A. C. 37 and so on. The name of each bale is recorded and it is bought and sold by that name. If in shipping it becomes lost or injured it is traced or referred to, for example, as M. A. C. 23.

The two samples taken from each bale are labelled the same as their respective bales. One sample is retained by the cotton factor as a duplicate for reference in case of dispute or loss by accident. The other is sent away to some central market as New Orleans, New York or Liverpool to represent its respective bale. Here they are again tested and graded by the buyer, and the bale is bought and sold at specified prices upon the basis of those samples. Due to this fact most cotton bales reach New York or Liverpool without the buyers ever having previously seen them.

In order that cotton may be handled and shipped with the greatest expedition and convenience as well as at the lowest cost, the bales are "compressed." This consists of pressing a bale of cotton of 500 pounds, which is at first 2½ x 3½ x 5 feet into a space of 2½ x 1 or 1½ x 5 feet. That is instead of 3½ feet thick it is reduced to one foot or fifteen inches. To do this requires ponderous iron machinery, which in itself is enough to be wondered at.

There is much which enters in to influence and vary the determination of the quality of cotton when being graded. Among the more

important influences are:

1—Climatic phenomena. If at the season when the bolls are opening rapidly a season of rainy weather begins, the lint is bleached and does not retain a perfectly clear lively color. Again if at this same period excessive heat and drouth occur the bolls are brought to maturity prematurely and at an unnatural speed. This does not allow sufficient growth or time in which to attain a perfectly textile fibre, and lacks much in color and length of staple.

2—Insect ravages. Of these there are many and of various kinds. First may be mentioned the injury done by those insects which puncture vegetable structures from which to draw their food. Of these the principal insect is called the Cotton Stainer (*Dysdercus Suturellus*.) It punctures through the pericarp of the young boll into the tender seeds. These punctures form centers of decay which as such stain the lint of that boll. When the lint cotton of many such bolls enters into a bale it throws the grading quite low. Another insect does great harm in the larval stage, namely the cotton bell worm (*Heliothis Armigra*.) The moth lays the egg on the cotton plant. The worm hatching from this egg seeks out the small bolls and eats a hole into them in order that it may feed on the tender and juicy seeds inside. When this occurs to small bolls they usually fall off. Should it be nearly grown boll and only a portion of it eaten the rest will mature and open. The rot usually starting from the injured portion is sufficient to badly stain all that which reaches maturity. This stained lint of course has the same deleterious effect on the grading as does that of the Cotton Stainer.

I have thus briefly stated some of the more important facts concerning the gathering, ginning, grading and shipping of the cotton crop which is about the only crop raised in the south, excepting rice and sugar for some portions of the extreme southern districts.

I have farthermore attempted as an Alumnus to demonstrate the sincerity of the interest which I foster for my Alma Mater and its college paper. As Alumni who have battled individually and independently with the realities of life and, so to speak, know the way, we are in a peculiarly fit position to contribute information from nearly every walk of life not only to interest the readers, but also such as will be of positive practical value to them. Heretofore we have lacked, (or rather thought we did) the proper chan-

nel through which to communicate with each other and our Alma Mater. Now that THE AURORA has created for us a home in its columns, the last poor excuse left us has been met and we should now freely contribute our mite.

SHREVEPORT, LA., Oct. 12th.

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FROM IOWA TO CALIFORNIA.

On the evening of September 26th, '91 my uncle and aunt (Mr. and Mrs. Bellows) and I took leave of friends at Ames and started for the "far west," via Northwestern Railway to Des Moines, where we were delayed two hours. We then took the Diagonal to Kansas City where we met the excursion and came through without another change, on the Santa Fe route.

We crossed Missouri in darkness, the sun rising just before we reached "The Big Muddy." The river is broad and low, so that there are large islands which are all covered during high water. The wagon bridge near where we crossed is quite a novelty, being a combination of pontoon, hay and timbered stationary bridge. The water is a little darker than yellow clay. The banks are low where we crossed, and have very little timber close by the edge of the water.

Kansas City, Missouri has much to interest an inexperienced traveler. A part of the city is on a flat, and part on high bluffs. The cable cars run up an incline of perhaps 25 degrees. They go up and down at the same rate of speed, making the tourist hang to his hat. The streets are paved with stone and blocks of wood. Some of them are narrow, bordered with fine stone and brick buildings from five to eleven stories high. Some of the residences are elegant and the yards extremely neat and beautiful. Nearly half that we met were colored people and almost every male citizen that was able to walk alone puffed a vile cigar. We observed also that we had left the land of prohibition.

When we entered the tourists car at Kansas City, I was a little disappointed everything seemed so hard and "uninviting;" but the surroundings grew pleasanter as we became acquainted with our genial companions. Not the least of the pleasures derived from traveling, arise from the study of human nature, and from the close association with those who are congenial. Meeting people of genuine worth, inspires more unselfish chari-

ty and broader humanity.

As we started again we followed the Kansas river for miles, so closely that it is necessary to have piles of stones extending from the grade into the river to prevent the grade being washed away. A number of fields of corn were in sight of the road throughout Kansas. The stalks seemed small and the ears rather scarce. Quantities of fruit hung on the trees and vines. A few refreshing looking streams bordered with native trees relieved the monotony of unproductive soil.

The capitol at Topeka is "not so nice as ours" at Des Moines. The rest of the city was nearly hidden from our view. The depot is a fine large brick building.

When we entered Colorado we observed irrigating ditches, two or three rods apart. There are rocks on the summits of hills eroded into artistic shapes, like domes and castles. Whenever there is nothing of interest outside the windows, there is always something to attract the attention within the car. Two pair of parents started a game of cards, at the same time their three year old sons had a lively game of "cinch" on the floor.

The dwellings in this part of Colorado are inferior. The most of the vegetation consists of sage brush and a little tunch grass. There are large flocks of sheep that seem to be doing well on nothing(?) Prairie dogs held up their heads but didn't appear frightened at our appearance. There is a little winter wheat near Trinidad. The soil is light yellow and sandy.

A Mexican village came within our line of vision. The adobe houses look like box cars. At Raton, New Mexico the most conspicuous sign is "Denver Beer." In all of the western towns, saloons and hotels form a large proportion of the business blocks. In one there are seven saloons in a row. (Row has the long sound of o.)

We all rushed to the window to see a large herd of antelope. They were "playfully gamboling on the [not] green," without a trace of fear.

A point in Mexican "domestic economy" interested us. The bake ovens are out of doors and made of earth. A fire is built inside and remains till the walls are hot, then the fire is removed and the food to be baked is put in and cooked by the latent heat stored in the sides of the oven. The fresh meat is hung up to the eaves and left to get "higher itself."

The greatest elevation the road crosses in New Mexico is 7248 feet as shown by a sign close to the summit. "Navajo church" of

solid rock is on the top of a low mountain. It looks like pictures of ancient cathedrals. Rocks to the right of us, rocks to the left of us on high bluffs, yet the track runs along a level tract with no grades or cuts for miles. The pass seems designed for a railroad. The soil is dark, brownish red. Huge rocks up the mountain sides with trees growing between, relieved by solid rock with caves washed out next to the ground.

In Arizona real scenery begins—for us, since darkness covered the view in central New Mexico. The mountains rise higher and higher. They seem to fill the soul with emotions, rather than with thoughts that can be framed in language.

Goats and Indians run loose on the desert plains, and appear as contented as though there were nothing better in the wide world. The sandy soil reflects all the heat that the blazing sun pours down. Cacti flourish, some of the tree shaped ones are two and a half feet in diameter at the base. All the varieties that are carefully tended in the hot houses in Iowa, grow luxuriantly in the sandy soil of Arizona.

Canon Diablo—four hundred feet across and over two hundred feet deep is crossed by the road and we rushed to the doors and windows to see it as we passed. The sides are not very nearly vertical. The rocks remind one of "the moss covered bucket." There is no water in the bottom, but the greenness shows that there is moisture sometimes. After passing the canon the vegetation looks more thrifty. There are large pines and cedars so scattered and the ground beneath is so clean that we imagined that we were going through a park, with mountains all around it. The air is refreshing after the heat in the middle of the day. A large saw mill and lumber company seen at Flagstaff. The beauties surrounding us, make Byron's words re-echo, "I love not man the less but Nature more." A lake near by bordered with pines. After we go through a short tunnel we come to scenery "too grand to be described," so I'll describe it. Deep irregular gorges with rocky sides. One place looks like a pile of beehives. A natural well fifteen or twenty feet across, with stone walls, and an opening on one side wide enough for beasts to go in and drink. A deep oblong hole in the solid rock. Mountains close by dotted with pines. Darkness—"mean old thing"—again shuts out the view. A few of us congregate and sing regardless of the feelings of our fellow passengers.

On the morning of September 30th we 'woke in California, and looked out on a barren, sandy, desolate region of country. A ridge of black rock near by and mountains in the distance completed the scene. The sand is in waves like water driven by the wind. Alkali dry and white like snow is on the surface of the ground. Mountains that look as though I could go to them in ten minutes, are ten miles away. "Things are not what they seem."

At Daggett we thought we'd step out and get a little air; but as there seemed to be more sand than air afloat, and we had "more sense than sand;" we returned to the car. We crossed the Mojave Desert. It doesn't seem any more barren than some of the country that isn't named a desert. I secured some botanical specimens from the plains and mountain sides. We were delayed by sand getting in the boxes so that the wheels had to be taken off. Saw a wreck caused by a collision. Mountains among the clouds—going down grade very fast—deep cuts the sides of which are timbered to prevent their sliding onto the track. High grades over gorges. Cajon Pass. One peak towers above the rest. A rippling brook rushing along close to the track. We see in succession alfalfa, orange groves, cypress trees. Everything is flourishing as we enter San Bernardino, which is a thrifty fine town. Some of our friends left us here, causing a feeling of sadness to creep over us.

We soon reached Pomona where our friends met us and we drove away down beautiful streets bordered with graceful pepper trees, stately eucalyptus and tropical palms. We passed lovely homes where landscape gardening has reached the zenith. Nearly every house has some pretty vine twining over the veranda or windows. Cyprus hedges are trimmed artistically, leaving arches for gateways and pyramids or monuments at intervals. By irrigation large orange groves are rendered profitable. Figs, prunes, pears, apricots, grapes, nectarines, peaches and other fruits are produced in profusion in this little valley. Lemon culture is a growing industry, that promises great results in the future. Water that is placed in the open air at night in an olla is almost like ice water in the morning. This keeps comparatively cool all day. The evenings and mornings are very cool and in the middle of the day the mercury runs 75 degrees to 90 degrees in the shade.

The Iowa people that live in Pomona are very cordial, and we are enjoying life in the

"Golden State" surrounded by beauty and luxury.
BERTHA MANN.

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'84. Carrie L. C. Catt is again lecturing in this state.

'79. W. M. Scott has changed his address to Bismark, Dakota.

'87. E. J. Christie is candidate for County Sup't of Clinton county.

'90. Spencer Haven is teaching at Amherst, and Herbert Crosby at Almond, Wis.

'90. W. E. Bobles is taking a P. G. course at Vanderbilt University, Nashville, Tenn.

'90. J. M. Graham is at Bayard, Iowa. He visited his many friends at the college last week.

'89. Messrs. Burt Chamberlain and Chas. Lamborn, of Chicago, expect to visit the college soon.

'84. Miss Fannie Wilson is candidate on the Republican ticket for County Sup't of Keokuk county.

Mrs. Alice Freeman is teaching in the schools of Fairmont, Neb. Her home is in that place now, her father Mr. Dalby being proprietor of the Merchant's bank recently purchased.

In our last issue an error was made in the article "A Bale of Cotton." At the bottom of page 10 it should read four (4) to five (5) celled instead of two (2) to five (5) celled. We correct it because it is of scientific importance.

'87. Mr. G. W. Sturzt, an enterprising nurseryman of Plainview, Nebraska, has been profiting by the experience of older horticultural brothers in the state by laying in his supplies of stock. A favored Alumnus met him at Geneva, Nebraska, and he reported him as prosperous, hearty and healthy.

The friends of J. C. and Addie Hainer will be pleased to know that they are soon to go to housekeeping. Their home is pleasantly situated along the A. & C. motor line at the first station west of Ames. All Alumni who may be traveling along that line are invited to stop and take dinner with them.

Married—Tuesday, October 6, at 11 o'clock, at the home of the bride's mother in Crawford county, Ia., Mr. Bayard T. Hainer of Topeka, and Miss Florence E. Weatherby, Rev. Smith of Carroll, officiating.

The bride is well known throughout the state. She is a graduate of the Iowa Agricultural Col-

lege of the class of 1888. Since that time she has been principal of the high school at Sigourney, Ia., where she was eminently successful as an educator. Mr. Hainer is also a graduate of the Iowa Agricultural College of the class of 1884, and of the law department of the University of Michigan, of the class of 1887, and at present has a lucrative practice in Kansas and Oklahoma. The bride was lovely in white cloth dress trimmed with old brocade. The groom is to be congratulated, as he carries away one of Iowa's fairest daughters, and the REGISTER joins with hearty congratulations.—State Register.

Their friends at the I. A. C. join in congratulations and in wishing them a hearty God-speed.

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Scientific Department.

FIVE WEEKS IN NORTHERN ARKANSAS.

BY P. H. ROLFS.

The expedition was in charge of Dr. S. E. Meek, biologist at Coe College and Asst. U. S. Fish commissioner. He deserves much credit for its abundant success and the pleasure of the trip. I am much indebted to Professor Pammel for his kindly help and allowing me to be absent.

The first point was to make St. Louis. This was accomplished by going to Marshalltown and taking a morning train. St. Louis was reached too late to see much if one is not acquainted. While waiting for the porter on the M. & I. M. R. R. to prepare the sleeper for service my eyes were arrested by some one who looked rather Meek and on direct questioning it was found to be the Dr. S. E. This was no case of finding a "needle in a hay stack" for neither of us suspected that the other was on the train. We had engaged adjoining berths.

We arrived at Black Rock, Lawrence county, Ark. about 3:30, July 30th. There and then active campaign against the inhabitants of the water was commenced. Black Rock is a thriving village on the Black river. It is at the southern extremity of a vast mining country reaching as far northwest as Aurora, Mo. We were told by the editor of the Black Rock Representative that they had been booming the place but one would not suspect it from the cold indifference to strangers. There were more gentleman (?) of leisure both white and black in that town than could be found in an Iowa town four times as large. The main business of the people over sixteen years seemed to be to march to the depot and "see the train come in." On the day we closed our work there while waiting for the

train we counted over thirty-five idle able-bodied white men (?) simply doing nothing. Yet these same fellows complained as much of hard times as any could who were at work. The ladies I think thoroughly enjoyed themselves there. A young lady who had just returned from Montana was disgusted with the North. She didn't like it there because "they wouldn't chew gum nor read yellow backed novels, they wouldn't gossip, wouldn't go visiting, wouldn't fuss (quarrel), wouldn't do nothing but work, work, work for fact it was altogether monotonous."

The Black is a fine stream its deep and dark-green waters flow quietly over the sandy bed. Traffic by means of steamboats is carried on. Although it cuts through a sandstone formation the banks, as far as we saw, were not cliffy. The cool sweet water and strong current make it a desirable haunt for food fish. About thirty species were taken from this stream.

The leading industry is lumbering; there are seven mills at Black Rock. The best lumber is white oak but as these logs are too heavy to float the shrewd raft-man alternates these logs with cypress that grow in abundance in the low land. The cypress is not very good lumber but in the absence of pine makes a fair substitute for it for making shingles. A raft of half oak was advertised as being worth \$2.50 per M. counting cypress as entire waste and allowing \$2.50 per M. for sawing, brings the cost of white oak lumber to \$7.50 per M. In our markets it sells for from \$30 to \$40 per M. leaving a handsome margin for the railroad companies and lumber merchants to divide.

There are few species of plants here. The large trees oak, sweet gum, pecan and hickory, claim the ground and wherever permitted the less sturdy ash comes forth. In the low land the cypress reigns supreme. Everywhere the grape-vine claims the right to be supported and from the size one would judge that some had been supported for at least half a century.

An interesting plant is the mistletoe growing from a few inches to two feet long. It is a parasite on the branches of oak, elm, honey locust and sycamore. The seeds are distributed by birds. The hostoria penetrates the bark of the host and soon the two are so closely interwoven that it seems like one branch. At the union the branch often swells to twice or three times the diameter just below. The upper portion of the limb is robbed of its nourishment and gradually dies. Its thick dark green foliage is in such contrast that the eye catches the bough at a long distance.

Lawrence county is quite rough. Much would be tillable after the heavy timber be removed.

The sandstone cliffs and ledges make fine places for ferns. We were warned everywhere to look out for rattle snakes; we did look out for them but all our search on the whole trip was not rewarded by a single specimen.

The way the land is cleared of timber is quite easy but it looks rather tough to a Hawkeye. The first year the farmer cuts all the underbrush and small trees that are eight inches or less in diameter. This is piled and when dry burned. The larger timber is then "ringed" (girdled to the depth of two or three inches and six or eight inches wide.) The farmer then plows, or roots, around among these stumps and standing dead trees that yearly reward the tiller with a shower of limbs to be in his way or pelt down the growing crop. After long years of warfare against falling limbs and trees, the farmer finally has cleared his farm and too often finds that he has at the same time nearly or quite exhausted the fertility of the soil. He now cheerfully lays seige to another piece of land and plants the old piece to an orchard, if he be thrifty or if not lets the weeds have it when finally it is claimed by grass it makes a pasture.

One accomplishment, "dipping snuff" I think, belongs exclusively to the women of Dixie. It is a process much easier performed than described. There are two essentials to this process, a "dipping" stick and the snuff; the former is usually of sweet-gum wood varying from four to six inches long and about the diameter of a lead pencil, one end of this is chewed until it becomes brush like then it is ready for service especially since it is well salivated. This "brush" is mopped through the snuff and then passed quickly to the mouth. It seems to be as essential to the Arkansas lady as the cigar to the northern gentleman. It seems to have replaced the tooth brush as the first rush after meals is for the dipping stick.

September 4th, we left the Black and tributaries for the White at Newport; here the land is low and level and people are much troubled with malaria and chills. Here in the White we saw the monstrous alligator gar, the largest fresh water fish. Specimens of these have been in the I. A. C. museum for some time, but the real live ones are much more interesting. They seem to be perfectly conscious of their strength and confident of their scaly armor as they lazily lord it along. One of these giants shot at that place was flayed and the skin is now being used as a sign board for a restaurant.

We tried to fish in the smaller streams but the cypress knees were so abundant that it made work fruitless.

We were delayed somewhat at Newport on account of a railroad wreck. We had just passed one, there was one farther down the road and one on the Batesville branch, so we were hemmed in by wreck. On inquiry to the cause of so many one of the employes, carelessly remarked, "too much bad whiskey."

The next morning we were glad to leave the low flat lands for the elevated and rough country about Batesville. It is spoken of as, "in the mountains." We are told by a person who ought to know that the scenery is not surpassed by that of the White Mountains though the highest elevation is less than 2500 feet.

Batesville is an old city of considerable activity and stir. While here the weather was very hot, I think the thermometer registered 98 degrees, the greater humidity of the atmosphere made it more oppressive than it is here when it registers 100 102 degrees. Batesville is nicely located, a fine farming country to the south and east and the noted manganese regions to the north and west. At Cushman, twelve miles north of Batesville, are the 'biggest manganese mines in the world.' The ore is very abundant and very rich but the country is so rough and rocky that railroading is difficult and even wagon road making slow. The formation of the state being low the river beds are not deep, leaving considerable level land on top of the 'mountains'; this makes fair farming land and the finest soil for fruit raising. The river bottoms with their alluvium raise remarkable crops. These have long been taken and put under cultivation leaving the less profitable upland for the poorer people.

We might say there are very few roads and these few are very tortuous. A road very frequently starts out in nearly the opposite direction of ones destination and the answer to questions of information is almost as indirect. Here is a typical answer. "'use' go out to the 'corners' and turn to the right and 'keep the plain straight-forward road' and cross the 'crick' at Collies house and then look out not take the stave road, then follow the 'holler' down to Brigg's ferry." We usually asked if there was any chance to get off the road, answer, "No keep the plain straight forward road. The corners might be just a few rods or a mile or two and then there might be from two to four corners." What would you do when driving along the "plain straight-forward road" and suddenly be surprised by finding that it divided like a Y or broke into a T? No guide board three or four miles from the last house and probably that far to the next and those people off visiting; the sun sinking toward the horizon;

the road rough with stones and beset with stumps from four to six inches high. We came to the conclusion that, "plain straight-forward" was not very definite, so we would not be caught that way again but would ask how far it was, two answers fitting this question exactly, "Oh not too far!" or "Well far enough."

The roads on the mountains follow the top as that is usually as it was deposited or only slightly disturbed and to cross from one spur to another is a hopeless undertaking. The valley roads follow creeks and to cross from one branch to another is also a foolish undertaking. We crossed from Prairie Creek to Lafferty Creek. We were told that we had "to go over a right smart mountain" but people crossed it. Arriving near the critical part of the road we fed the team that they might be better prepared for the climb. It was my turn to drive, soon it became painfully evident that some one would have to get out and walk. It was decided that Dr. Meek should walk he being the heaviest it lightened the load considerably but the grade was growing steeper and soon the lad we had for guide, but we had to guide, found it convenient to walk and to my consternation the end was not yet in sight when the horses were stalled drawing an empty buggy. Human and brute strength brought the vehicle to the top of a "right smart mountain."

A second excursion from Batesville was taken in a southwestern direction toward Heber to the headwaters of the Little Red. A day's drive took us to near the Devil's Fork.

It was a long tedious day driving over rough roads besprinkled with stumps sticking up six or eight inches high. It was difficult to find a lodging place; we commenced to inquire before sundown but it was nine o'clock when the horses were stabled. We had taken an early breakfast, a lunch brought from town for dinner, and no supper. After a fine night's sleep we were ready for breakfast.

Domestic economy has been reduced to a science. There is no lurching or "piecing" as it is sometimes called. The meal is prepared, partaken of and then all traces of it annihilated. When a new meal is wanted the good wife commences just as though it were the first meal. The bill of fare is simple and the variations in different families is not perceptible: breakfast: coffee, soda biscuits (high colored and great specific gravity.) fry (bacon) and fruit; dinner: coffee, potatoes, soda biscuits, fry and fruit; supper: tea, soda biscuits, fry and fruit. If you are late in asking for dinner your hostess replies, "If n'se kin wait (about an hour) till I git it." But ordinarily they are not extravagant in

charging. At Big Spring Mills we were promised dinner "if u'se kin put up with what we got; we haint stilish." The lady of the house was sick so the man assumed that division of the labor. The bill of fare was similar to the rest except that he had "roast" (bacon boiled in string beans) in place of "fry". After dinner we were invited to rest on his spacious porch. When dinner had fairly settled the host treated us to cider and treated us again to start to work on. He fed and watered the team. For all of this he charge dTEN cents.

The back-woods men are united on their ideals of a house. Two square rooms with an open hall way between them, a great stone chimney; (whether of any service or not) and as much out doors roofed in as the owner can cover for porch, constitutes a house. Each room has usually two doors, a back and a front, and frequently three, the third opening to the hall way between the rooms. This hall way, or open space, between the rooms takes the place of a dining hall in summer time. It is also a very convenient place for the watch dog to watch the saddle and other fancy harness. Their stables are put up much on the same plan as their houses.

One morning we learned of a beaver's dam on the Devil's Fork, getting the farmer to be our guide we drove with the buggy as far as we could and then made our way on foot through weeds, willows, briar vines, and lastly through cane brake over fallen trees and drift-wood to the shore of the beaver lake. It was with much interest and surprise that we surveyed the work. The lake was clear as a crystal with black bass sporting after food; the banks muddy. Where the trees failed to claim its shores cane had occupied it. The stems of young trees had been floated to the outlet and lodged across the stream. Instinct taught these architects that these would float away with a rise in the creek so the wood had been loaded with stones, and stones that one would not suspect their having put there. Fine specimens of their chopping were secured. Where they deemed it necessary finer material was used for finishing the dam. The depth of the water in the lake was regulated by their dam. Beavers are particularly fond of young corn, just "out of milk". They do not choose the stalks near the banks of the water but go back into the field thirty or more rows and here chop the stalk about a foot from the ground and then take it by a single path into the lake. The road to their lake is freed of all obstructions even to the mere hanging vine. It is a model of neatness and straightness. They were very secre-

tive as to the opening to their nest. Dilligent search by trappers had not revealed it. We had the good fortune however of seeing the entrance to a beaver's nest in the Cherokee Nation, Indian Territory.

On our way back to the buggy we took a fine specimen of water moccasin. The people are unwarrantedly cautious in regard to snakes, every one they see is "pison". The most exaggerated stories are told, of course we had to show an interest in each of them. However we never heard the "hoop-snake" story.

August 18th found us in the capital city, Little Rock. It is a fine city of considerable stir and energy. The insane asylum and the college for deaf mutes, just completed, are here. The Palaski county court house is also a fine structure.

Here the Arkansas river is large enough to float medium sized boats, the water turbulent and muddy, but for the high banks one might mistake it for the Missouri. The name Red would be more applicable to it than to the Red.

The Arkansas is a hard stream to seine. The fine slimey, red mud choked up the meshes of our seine. In the swift water the quicksand would start out from under ones foot at every step letting one down about ankle deep while taking a step. Standing still for a short time we found ourselves in the sand half way to our knees. In slow or standing water this red mud slime would be from six to eighteen inches deep. Such a stream would not be expected to contain many fine fish; the catfish, gar and buffalo are the more common large ones.

The waterworks are fine and after this dirty water has gone through a filtering process it looks fine, clear and is tasteless.

Dr. Brackett and Messrs Siebentah and Williams of the Arkansas Geological survey made it very pleasant for us during our stay here.

August 27th found us on our way to Fayetteville. The train seems to be constantly going up hill from Fort Smith to Fayetteville. For a short distance the grade is so steep that two engines are required to draw the passenger train. Near Mountainburgh there is a tunnel about a half mile long. Many were anxiously looking for it. It being a hot day all windows and doors were open. Without warning the train dashed into the tunnel, all was darkness and sulphurous smoke! The anxiety now was to see daylight again. It seemed an age before it came and such billows of smoke as two engines can pour out had never been seen before or rather inhaled before. It was too dark to see anything.

It will be remembered that at Fayetteville is located the Arkansas Industrial University for

the whites. The main building reminds one somewhat of our main building but it is not used for dormitories at all. All the lecture rooms and laboratories are in this building. The machine shop is in a building near at hand. A dormitory has been newly built and the old college building is used for kitchen and dining hall.

The Experiment Station is also located near by but is not a department of the college.

From the tower one has a magnificent view. To the southeast one may follow the valley until his sight is lost in the distance. To the south, west and north the distant Weddington rise to meet the horizon. East of Fayetteville is East Mountain rising seventy-five feet higher than the college. From its top the town and college lay before one like a picture. With one glance to the southeast one may see the Confederate and National cemeteries.

The National Cemetery is on the summit of a beautiful round-topped hill about a half mile southwest of town. The flag that they upheld marks their "eternal camping ground." The square is enclosed by a brick wall about five feet high. The heavy metal gate noiselessly swings on its hinges. The magnolias and maples stand apart to let the morning sun look upon the peaceful camping ground. To sit near the grand old flag in the centre of four circles of graves, dotted here and therewith the more distinguished leaders makes one realize that

"The drum's last roll has beat the soldier's
last tattoo:
No more on earth shall meet the brave and
fallen few."

* * *

FORCE, MASS, WEIGHT.

J. C. HAINER.

To the student of physics a sound knowledge of mechanics and its fundamental laws is essential. It is the purpose of this article to state, and to illustrate briefly, a few of the fundamental relations regarded from a scientific stand point, associated with the words at the head of this article.

It may be stated as a fundamental principle of scientific procedure, that no scientific knowledge of the material universe can be obtained except by observation and experiment and mathematical (rational) deduction from the same. It seems hard to believe that it required the human mind 4000 years to learn this simple truth, and many who have learned it do not care to act on that truth.

The basis of modern physics was laid by Sir Isaac Newton. He understood the above axiom in its entirety. He believed in it and acted on his belief. He saw that all physical phenomena are due to motion or are the results of motion, and hence the first problem was to formulate the laws of motion. He succeeded in reducing these laws to three, and to honor the genius who discovered them they are known as "Newton's three laws of motion." They are as follows: (1) A body at rest remains at rest; or if in motion moves uniformly in a straight line forever. (2) Change of motion (momentum) takes place in the direction of the acting force and is proportional to the force. (3) To every action there is opposed an equal contrary and simultaneous reaction.

In these laws force and action are equivalents, and if used in the Newtonian sense, force is any cause that produces or tends to produce any change in a body.

The first clause of the first law seems to most minds, axiomatic, the second clause, however seems to be a contradiction of the daily experience of each of us. In fact, its realization forms no part of individual experience in any physical phenomenon about us open to observation. But experiment comes to our aid and teaches that as the resistances to motion are removed, the more closely does the resultant motion approximate to the statement of the law. We may say, the law is the expression of the limit to which all bodies tend, and in this expression of the tendency lies the chief significance and remarkable utility of the law.

This law may be tersely stated, matter has inertia (matter being defined as anything possessing weight.) Inertia in physics does not mean laziness. It does mean the perseverance, the persistence of matter in its present state, be that state one of motion or one of rest. Inertia expresses the indifference of matter.

This law also gives a correct description of a body when under the action of balanced forces, which means that the external forces acting on the body are equal in amount and opposite in direction, or where the body is acted upon by *no* force. An obvious deduction is that simply because a body is in motion, provided it moves with a uniform velocity in a straight line, this motion demands no explanation, any more than that a body is at rest demands one. One state is just as "natural" as the other.

The second law informs us when we can affirm that a force acts on a body and al-

so furnishes us a correct measure of force or of mass, since both are invalued in the law. If we define acceleration as the rate of change of velocity, whether this change takes place in the direction of motion or not, then evidently, the law affirms that the measure of force is the product of mass by acceleration. And right here comes in a difficulty, what is actually meant by "mass?" The old monkish definition that mass denotes the quantity of matter in a body turns out to be a meaningless phrase, or a mere truism. Ten pounds of lead has ten times as much lead (matter) as one pound of lead has. But he is a very bold man or else a very wise one who maintains that one pound of lead has the same amount of matter in it as has a pound of gold. Since these two substances cannot be reduced to the same terms, the statement is impossible of verification, and therefore is as likely to be false as true. Science is not organized on such foundations.

Now it is found by experiment, that the same or equivalent force applied to the same body always produces the same acceleration. It hence follows that the ratio of force to the acceleration produced by that force is constant for the same body. The value of this ratio is a definite numerical magnitude, and being invariable may be regarded as a property of the body. This is taken as the measure of the mass of a body. Mass, then, is that property of a body by virtue of which it resists acceleration. "In a rude age, before the invention of means for overcoming friction, the weight of bodies formed the chief obstacle to setting them in motion. It was only after some progress had been made in the art of throwing missiles, and in the use of wheel carriages and floating vessels, that men's minds became practically impressed with the idea of mass as distinguished from weight. Accordingly, while almost all metaphysicians who discussed the qualities of matter assigned a prominent place to weight among the primary qualities, few or none of them perceived that the sole unalterable property of matter is its *mass*, mass is, therefore, a dynamic phenomenon; and finds no place in statics. Weight is force. The weight of any body is the measure of the pull of the earth on that body. The weight of a body is variable depending on its position with reference to the centre of the earth. What on earth passes for one pound, to solar inhabitants would be a 28 pound weight, and to lunar inhabitants would be but a 7 ounce weight. Yet the resistance

to acceleration of that body would be precisely the same at sun, or at moon as on the earth,—its mass is invariable.

The third law states that forces always occur in pairs, equal, simultaneous and oppositely directed. This is obvious for bodies at rest; and an illustration will make clear the sense of the law for bodies in motion. When a force acts on a body otherwise free, the motion is an accelerated one, and the resistance to this acceleration is in virtue of the mass of the body. It is this resistance, which the body offers to acceleration, which constitutes the reaction specified in the third law. It follows that forces are always in equilibrium; and hence it is that all dynamics is but statics by virtue of Newton's third law of motion.

LaGrange, the great French geometer, who divided honors with LaPlace made the analytical expression of this law the fundamental equation of his mechanics. All actions of matter on matter are included under this law, the broadest and the deepest of the three. This law LaGrange put in the form: The work done by the power is equal to the work done against the resistances whether these arise from friction, cohesion, weight, or acceleration. In modern physics, this same law has the dignified title conservation of energy. All physical science may be justly regarded as a commentary on this all-embracing law.

There is no such thing as conservation of force. This is easily demonstrated by any of the mechanical powers. But there is such a thing as conservation of work or energy. Objectively, force always presents itself to us under one of these two equivalent forms: The time rate of the change of momentum, or the space rate of the transformation of energy subjectively, each individual interprets the nature of force according to his "muscular sense."

The student who has a clear notion of Newton's three laws of motion, and can apply them intelligently has conquered the first and greatest difficulty he will encounter in the study of the physical sciences. But let him be warned against the fatal blunder of being satisfied with a mere *verbal* of these laws.

* * *

The ball game played on Saturday October 17th between our boys and the Webster City nine was a partial failure on the part of our boys. They could not find the Webster City curves and so they struck out.

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OUR NATIONAL HYMN.

If asked "What is the National Hymn of the United States?" few Americans would be able to answer the question correctly.

If you visit France the "Marsallaise" will greet you at every fete and ceremony. If in England "God save the Queen" will call forth the hearty cheers of the Englishman, who is ever loyal to the Queen. In Germany "Die Wacht an Rhein" swells out in rich harmony and calls forth a patriotic response as does also "Gotte irhatte den Kaiser" in Austria. Our own beautiful "Hail Columbia" always fills the ear with harmony and the heart with pathetic emotion, as well it may, for it is our own National Hymn.

"Yankee Doodle," "Star Spangled Banner," "Columbia the Gem of the Ocean," "My Country 'tis of Thee" and other well known tunes are national airs, but "Hail Columbia" in sentiment, harmony and patriotic influence is pre-eminently our national hymn.

In response to an inquiry of Gen. Boulanger when Minister of War for France, the leader of the United States Marine Band replied that "Hail Columbia" was properly the American National Hymn. The Government having referred this question of the French War Minister to the leader of the Marine Band for his decision, it necessarily makes his answer final and official. This point then being settled, this beautiful hymn should be recognized throughout our whole land and its strains should stir the patriotic impulses of every assemblage of American freemen, whether they meet in the camps of the soldier or the gathering of the civilian.

Yes let "Hail Columbia" on every public day tell the visitor to our shores that Americans have a National Hymn and know how and when to use it.

* * *

Kennan's lecture demonstrates that lectures at the I. A. C. will pay provided men of reputation, national reputation, are secured, the very best and no others. For the first time in our lecture course the chapel was crowded, and simply because we had secured a lecturer whom everybody was anxious to hear and see. Now the Lecture Association should engage five or six of the best lecturers that can possibly be obtained for next year and publish dates of lectures in our college catalogue. If this is done, Boone, Nevada and Ames will help to swell the multitude of listeners. Let the I. A. C. advance in these matters as it certainly has in others. Let it forsake the old rut in which 20 years have found it and keep abreast of the times. Why not act in this matter at once?

The past college year has been one of progress. Rapidly the days have passed by and commencement is near at hand. The seniors have finished their theses and feel that for them college life is almost o'er.

Probably 'tis true that "one never appreciates advantages until they are past." Truly as we stand "upon the threshold of the world" we give a longing glance, a tender thought to our college days.

The class of '91 has been a practical one thus far and we have reason to believe that each and every one will take up the active duties of business life and with true purpose, courageous heart, endeavor to improve the years as they come and go. And when the day's work is done, o'er them in the twilight musing, steal tenderest memories of their Alma Mater.

"How soon they're gone,
Those college days,
Those "happy golden hours."

* *

Exchange.

We are informed by an edition of the Epworth Exponent: "A Theory Analytically Stated," was the title of an article written by a Jones county youth, and that the Exponent's "edition of Webster was too ancient to solve the mysteries."

It seems our brother editor was a little careless, not only in looking up Webster, but in reading the title of the article in question; for there is a decided difference between the adverbs, "Analytically" and "Analogically," even in Webster. However youthful the writer may be, suffice it to say, he is a graduate of two summers that delves in such "mysteries." We are surprised that students in this scientific age should attempt to solve so simple a "mystery," as mathematics, physics and chemistry combined in a theory of life, by the original definition of Webster. Webster and the Bible are nowadays but the indicating hand, or the N. B., that points to the wayside directions of life, God and Heaven. The Law of Moses and the prophets is grand; the old book is the guide of nations, but in its very heart it carries the statement, "Seek and ye shall find." We have "searched the Scriptures," but Genesis is as poor as Webster—either ancient or modern—to enlighten us upon geology.

* *

Thesis week came and went and the Seniors' vacant look will soon surprise the thesis committee of the trustees.

Local Items.

"Got any lead in your den?"

Mr. Cammack is on the sick list.

"What are you going to do next winter?"

Mr. Malley entertained his cousin Oct. 14.

Lloyd Emerson went home during thesis week.

Mr. Shaum went up to Boone Monday Oct. 26th.

Mr. Spaan went up to Boone on Tuesday October 20th.

Mr. Norton was on the sick list on Oct. 17th and 18th.

Miss Rogers entertained her father on Oct. 24th and 25th.

Mr. Jackson went to Marshalltown on Saturday Oct. 24th.

Miss Alice Mann was at the college on Saturday Oct. 17th.

Clyde Jones is improving rapidly and we expect to see him out soon.

Mr. Guernsey was visited by his sister the latter part of last week.

Mr. James Graham was shaking hands his friends on Saturday and Sunday, Oct. 10 and 11.

Mr. Backus of Cedar Rapids was here last week tuning the various pianos of the college.

Dr. Graves made a short visit with his many friends at the College on Saturday Oct. 24th.

Miss Williams was visited by her mother and sister during the last half of week before last.

Mr. Hudson made a short visit at his home in Hampton during the first part of thesis week.

Messrs Austin and Heck went up to Boone Monday October 19th to have their picture taken.

The following are the commencement speakers: Miss Barrows from the Ladies' course; Messrs. Christy, Bowne and Moss from the Civil course; Messrs. Jones, Dyer and Steele from the Mechanical course; Mr. Shepherd from the Agricultural course; Mr. Schulte from the General course and Mr. Sorrenson from the Veterinary course.

Mr. Carl Brown left for his home week before last on account of sickness.

Mr. Moore a member of the Sophomore class has left his room at the Cottage and now boards down town.

Messrs McCord and McCall went to Nevada on Tuesday evening Oct. 20th to attend the Republican rally there.

Prof. Wilson gave a reception to the Agricultural students on Friday evening Oct. 23rd. All report a splendid time.

The members of the Faculty took tea with Pres. Beardshear's on Wednesday Oct. 14th. All report an excellent time.

The pleasant smile on the Senior face last week told us that Wallace the photographer from Marshalltown was at the College.

Quite a number of students are on the sick list and the sanitary is about crowded. We are glad to hear that they are all doing well.

Mr. Dean who spent most of September at the college doing photographic work has again gone home. He left on Saturday October 10th.

The prizes for target practice, room inspection and excellency in Military drill are on exhibition in Colonel Lincoln's office. They are dandies.

Miss Ford once a member of the class of '92 was at the college shaking hands with her classmates and friends Saturday and Sunday Oct. 24th and 25th.

Mr. John Moore Sr. expects to spend his winter in Ottumwa having accepted a position in the Bridge Company of that place as book-keeper and draughtman.

Mr. Dewell who has been on the sick list for the greater part of this term sufficiently recovered to endure the journey home which he undertook on Thursday Oct. 22nd.

It is not uncommon now to see the noble senior stand before the Secretary's office after 7 o'clock at night with a palpitating heart preparing to bombard the fort within.

The complimentary recital given by the music and elocution teachers on Friday evening Oct. 23d was largely attended and well received by the audience. We only regret that this was the last students recital of this term.

Miss Saylor was visited by her friends Mr. and Mrs. Cook on Oct. 7th.

The new creamery is going up rapidly and will soon be ready for dairy use.

Ed and Nell King spent Oct. 8th, 9th and 10th at their home in Grundy county attending the wedding of their brother Ray.

George Ashford entertained his father on Wednesday Oct. 21. Mr. Ashford is candidate for Sheriff of Story county and judging from his appearance will be elected.

Messrs Angnus and Moss, Misses Nichols and King made a short visit at the home of Miss Nichols on Saturday and Sunday Oct. 17th and 18th. They report a pleasant time.

Miss McCarthy tendered tea to several of her student friends at her home in Nevada on Friday evening Oct. 16th. Some of the guests remained until the next Monday.

The new elevator has arrived at the College. We hope it will be put up before the term closes in order to relieve the students from the burden of carrying their trunks down the stairs.

Prof. and Mrs. Bennett tendered a reception to the Senior and Junior chemists and ladies on Friday evening Oct. 16th. All enjoyed the evening very much. The Prof. and Mrs. Bennett know how to entertain.

The Cliolian and Phileleutheroi Literary Societies had a special session on Saturday evening Oct 17th. The Phileleutheroi's program was on Shakespeare and his works while the Clios held their session in south hall. The Bachelors, Welch and Crescents adjourned that night and went to visit them. The Philomatheans also cut their session short.

Mr. Weihe went to Greenfield, Adair county a week before last. He went with the intention of securing a house for next winter. He expects to spend his winter there with a view to practice his profession. We wish him success.

The members of the class of '92 are lamenting the loss of one of their best members. Winzent Zmunt expects to shake the dust of the I. A. C. campus from his feet at the end of this term. He has engaged the Professorship of Penmanship in a school in Mitchell county which he will probably hold for a year at least.

The lecture given by George Kennan on Saturday evening Oct. 24th was well attended and all speak very highly of it. Mr. Kennan has a very fine voice and appearance. He talked for about two hours on his travels in Siberia and gave a vivid description of the convict prison. We think the lecture association did some excellent work this term in procuring such lecturers as Mr. Kennan and Miss Chapman.

The Science Club had a very interesting session on Friday evening October 23rd. Prof. Osborn gave a very instructive talk on the National Museum and Smithsonian Institute about which institution comparatively little is known among students. Mr. Eaton also read a very elaborate paper on a mineralogical subject and presented a very fine collection of minerals.

* *

COMMENCEMENT PROGRAM.

Commencement program to be rendered at I. A. C., between the dates of Nov. 8 and Nov. 11, 1891:

Baccalaureate sermon by President W. M. Beardshear. Sunday, Nov. 8, 2:30 p. m.

Farewell meeting of the Christian Association, Nov. 8, 7 p. m.

Review and parade tendered the Governor, the Adjutant General and State officers, Monday, Nov. 9, 2 p. m.

Commencement concert by departments of music and elocution. Monday, Nov. 9, 8 p. m.

Address before the college and trustees by Hon. L. G. Kinne, LL.D., Tuesday, Nov. 10, 8 p. m.

Commencement Exercises, Wednesday, Nov. 11, 9:30 a. m.

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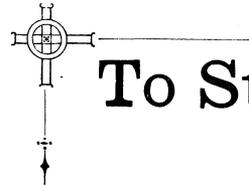
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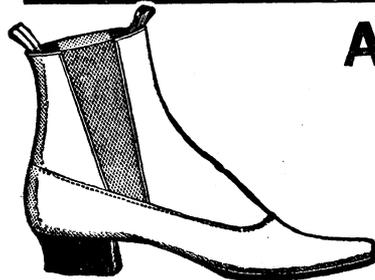
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