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Electricity as an Illuminant.

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THEORY AND PRACTICE.

When Thales of Miletus, twenty-five centuries ago, announced his observation of what we call electricity, probably the first question proposed to him was, "What is it?" Probably his answers were like those of another philosopher who, being asked what is matter, said, "never mind;" and when asked what is mind, answered, "no matter." If an explanation of the simplest application of electricity is offered to the youngest student to-day, his first question is, almost invariably: "What is electricity?" Whether old or young, a knowledge of its action and effects will not satisfy us; we seek its essence and cause. The trite and oft-quoted statement of Faraday that, the longer and more carefully he studied the subject, the more convinced he became of his total ignorance of the nature of electricity, has not deterred others from continuing his researches.

Like every other recognized manifestation of the mysterious actions and powers of nature, electricity has for centuries received the attention and study of the ablest philosophers. Although the prime object of their research has not been attained, their labor has not been without fruit. The great and undeniable progress in knowledge of the properties of electricity, as shown in its numerous, wonderful, and most important applications, is, principally, the direct result of their theories and observation. The rapid increase of these applications, enriching thousands and benefiting millions, is well exhibited by the patent records. Over 10,000 electrical patents have been granted in the United States since 1880; and the department of electricity, at one time a sub-class under the division of philosophical instruments, is now one of the principal divisions of the patent office.

Practical "electric light men" are not without absolute standards and infallible rules. Indeed, the statements of some of the most prominent, and the reports of their precise and emphatic discussions would imply a perfect knowledge and absolute certitude. In common with all engaged in the study and application of electricity, they have for guidance the numerous laws discovered and demonstrated by Coulomb, Volta, Ampère, Faraday, Ohm, Joule, and many others. Electrical testing instruments are the most sensitive and accurate known in natural philosophy. Of these, the principal one used in electric lighting is the galvanometer in its various modifications. Professor Pickering, of the Harvard Observatory, describing this instrument, says: "The resemblance of the galvanometer to the chemical balance is very marked; only it is a balance of prodigious range, and possesses many most important advantages. It can measure from 1,000,000 to 0.001, a range as great as from 14 tons to 1 grain. Either arm may be made 10 or 100 times as long as the other; and the index is without weight, and moves over a long scale. Moreover, a slight change enables us to diminish the delicacy to 1-10, 1-100, or 1-1000,—as if, by merely inserting a plug, we could convert a delicate chemical balance into a rough grocer's scale." There are laws and accurate standard meters for the measurement of current, of electro-motive force, of quantity, of power, and of energy. The original investigation and discoveries made by electricians in inventing and perfecting the electric light is enormous. A record of the experiments and observations made on one point—for instance, the action and constitution of the voltaic arc—would fill volumes. This is sufficient to show that they are not obliged to work entirely by "cut and try" empirical methods.

MEANS OF PRODUCTION AND SYSTEMS.

Shortly after Galvani's discovery that the muscles and nerves of a frog's thighs would contract when touched by pieces of two different metals, Volta discovered the true cause of the action, and constructed the first primary battery, or Voltaic pile. With 2000 cells of this primitive battery, slightly improved, Sir Humphrey Davy discovered

the Voltaic arc, and produced both the arc and the incandescent light in air and in the vacuum of an air pump. The expense and labor required in preparing this short-lived battery made the electric light for many years a brilliant, but costly and seldom performed experiment. The inventions and improvements of Grove, Bunsen and Foucault made it more common, and prepared the way for other improvements. We have now a countless variety of primary batteries: many of them greatly improved, and in many cases they still furnish the most successful and economical means for experimental and practical electric lighting.

The grand discovery of magneto-electric induction was made by Faraday as early as 1827-31, and this foundation principle was immediately recognized and used in small magneto-electric machines by several physicists. These machines contained the germs of the modern dynamo, but many important principles and improvements were required for its evolution. The most important of these were added by Werner Siemens, Wheatstone, Paccinotti and Gramme. The dynamos constructed by the latter had all the leading principles now employed, and caused a revolution in the production of the electric light, rendering it entirely feasible, economical, and commercially efficient. Gramme's machine was constructed in 1870, and since that time the structure and action of the dynamo has been subjected to minute and careful analysis by the ablest physicists and mathematicians of Europe and America. A host of inventors have been improving and developing its efficiency, form, and minor details. During the past ten years scarcely a month has passed without the appearance of a new dynamo, differing more or less from existing types. The degree of efficiency attained by several is represented by 96 per cent. of a possible 100, or equal to that credited to the very best steam engines. In reality, the dynamo is far more perfect than the best possible steam engine. With this small margin for improvement in the dynamo and engine, no progress is expected, and the next great step in advance is looked for in the production of electricity directly from coal. Much work, theoretical and practical, has and is being done toward its accomplishment.

The storage, or secondary battery, was devised by Planté in 1859, and remained without change for twenty years, when Faure removed many of its imperfections. It was then introduced into England and the United States with an endorsement of no less authority than Sir William Thomson. The possibilities it contained were many and easily recognized, and much confidence and capital were placed in it. A short period of practical testing showed that the expectations were too high, and that it would have to undergo the same slow and gradual development as the primary battery and the dynamo. Improvements have been made by Sellon, Swan, Volckmar, Brush and others, but the high efficiency sometimes claimed for it is still regarded as doubtful. The advantages to be derived from it, when thoroughly perfected, are so numerous and important that its final success is assured.

An invention that is at present attracting much of the attention of electricians is styled a "converter" or "secondary generator." The principle of this apparatus is induction, or the property that an electrified wire has of causing induced secondary currents to flow in another wire placed close to it, but not in contact. Induction is often heard of in connection with the telephone, of which it is the basis, and, in some cases, the greatest enemy. Its action, more than any other, often inspires the chief electricians of the telephone company with a well-founded faith in an extremely energetic "personal devil." Several years ago, in the columns of the SCHOLASTIC, I mentioned this action as one of the principal difficulties in the way of long-distance telephoning. In the secondary generator it promises to solve the problem of high-tension and long-distance electric lighting. They have been introduced by two prominent companies, and form one of the principal features of the Westinghouse system.

Although Davy discovered both the arc and the incandescent methods of using electricity to produce light, the former seemed the most feasible, and until a few years back was the only one used. The production of suitable carbon, and means for automatic regulation of its consumption in the arc, received even more attention than the problem of generating electricity. In France this work was greatly encouraged, and to the French scientists, especially Archereau, Foucault, Jamin, and Lontin, much credit is due for the principles of the modern arc lamps. Their perfection is due to Brush, Weston and other Americans.

It may be said that the incandescent lamp is entirely the result of English, Russian, and American labor and ingenuity. The principal Americans connected with its practical development are Starr, Sawyer, and Edison. Immediately after its exhibition at the Paris Exposition, in 1881, it was acknowledged as a complete success. The eminent men who had pronounced it a failure a short time before, strongly indorsed it, furnished capital for its introduction, and pronounced it "the light of the future." Their prediction was true, and their confidence well-placed; for it is evident to all that it is very rapidly becoming the light of the present.

HEALTH.

The superiority of electric lighting in regard to health is well known, and has often been acknowledged by its opponents. In a popular treatment I may be allowed to give a few of the reasons. Among the defects of candle, oil and gas lighting is the heat produced, which is often undesirable and cannot be conveniently controlled. But the principal sanitary objection to these lights is the amount of oxygen and pure air consumed, and the offensive odors and poisonous gases given off by leakage and imperfect combustion. Many careful tests and comparisons have been made by interested and disinterested scientists, sanitarians, and physicians, with results largely in favor of the electric light. Although the heat of the "arc" itself is the greatest artificial heat we can produce, the heat

diffused is comparatively very small. From the many tables of comparison given, the following is a medium estimate. For equal brilliancy, or units of light, the heat produced by tallow candles, kerosene, and gas, compared with the arc light, is as 180, 130, and 85 is to 1. It is asserted that the production of carbonic acid gas by the ordinary flat gas burner is equal to that given off by the breath of five persons, and that of the Argand burner to eight. When taken on an equality, illuminating gas gives over 10 per cent. of all its combustion in carbonic acid gas, while the arc light does not give one-tenth of one per cent. From a thorough investigation by Dr. Breslaur, of Berlin, made in the Royal Theatre in Munich, the results were as follows (*Deutsch. Med. Zeit.*, Jan. 21, 1886): The increase of temperature noted from beginning to end of a play was, with electric light, in parquet gallery, and centre of gallery: 2.5, 8.1, 9.3, respectively; with gas: 25.1, 26.1, and 26.7. With gas the percentage of carbonic acid increased above the limits of safety from 1.81 to 3.35 per mille! As there is practically no combustion in the incandescent lamp,—a minute quantity of oxygen causing the immediate destruction of the filament,—it is unnecessary to state that no air is consumed, and no poisonous gas produced.

SAFETY.

That electric lighting is or may be, in certain cases, accompanied by great danger to life and property, is not denied. So are all great forces. If a person accidentally, carelessly, or wilfully gets under the wheels of a moving locomotive, he will be seriously or fatally injured. If an engine of like power is exerting its full force driving the dynamo of a large arc light circuit, and a person accidentally or wilfully receives through his body a large portion of the energy that is being transmitted, he will also be injured. The dangers arising from the ignorant and careless use of oil and gas are so numerous that prominent newspapers keep "standing heads" for reporting the regular occurrence of accidents caused by such use. The principal dangers of electric lighting arise from the sharp competition of the numerous companies, causing the use of inferior material and improper construction, in their efforts to avoid infringement, to lower installation costs, and to effect sales. Crude apparatus, "half-invented" details, and the lack of experience and knowledge of principles have caused much damage. In September 1886 a committee of insurance men of one State estimated the losses in their territory caused by electric light fires at \$200,000 *per annum*, and that this amount was "on the increase." The underwriters and municipal authorities have done much to secure safety by issuing certain requirements, and by enforcing the observance of certain rules. Neither arc nor incandescent lighting is perfectly safe; but to assert that, when properly installed and regularly inspected, they are more dangerous than other lights, is entirely unwarranted. It has been shown that even the unfavorable record of the infancy of electric lighting proves the assertion

absurd. The many improvements which experience and study suggest are being so rapidly applied that it will soon become generally recognized that electric lighting is the safest as well as the healthiest of artificial lights.

ÆSTHETICS.

As a means of decoration, for public display, and for beautifying the household, the electric light adds greatly to our resources. When the incandescent light was introduced, the best features of the gas fixtures were made adaptable to it and utilized; but these were not sufficient. The dangers of fire, spilling, and explosion, the flaring and extinguishing caused by a draft, and the depositing of smoke and soot on walls and furniture, necessarily required for oil and gas rigid, upright fixtures, and great care in placing them. The incandescent light in its sealed globe, practically unlimited in size or shape; with pliable conductors, no smoke or soot, and little heat; glowing equally in any position and at any angle, offered many opportunities for skilful work and artistic fancy. The result is shown in the electroliers of to-day with splendid designs and innumerable specimens of the metal and glass-worker's highest art.

The destructiveness of gas in libraries and art rooms has long been known. Experience in large circulating libraries and private studies proved that the heat and vapors produced by lamp and gas lighting reduced the best bindings to a fine powder in five to eight years. Mr. Rush C. Hawkins, in an article on "The Destruction of Art in America" (*North American Review*, April, 1887), has given an earnest and emphatic warning of the effects of gas lighting on public and private art collections. Numerous examples of similar warnings, by city librarians and the experts of Paris and Munich, might be quoted. The electric light has been introduced into many of the principal galleries in the art centres of Europe, and its trial and adoption in the Cathedral of Milan and the Vatican is a reliable indorsement.

COMMERCIAL DEVELOPMENT.

The first electric light publicly exhibited as a commercial venture, in the *Place de la Concorde*, in Paris, was produced by 200 cells of two-fluid, zinc-carbon battery. This was in 1843, and it is worthy of note that since that time the periods of greatest activity in electric lighting originated or received their first impulse in Paris. Even at this early date an account of the exhibition was headed, "Gaslight Superseded by Electricity," and the correspondent of an English journal wrote: "Should the thing work as well in a general way as it did last night, and the cost be less than gas—which it must be—there will be a terrible revolution in gas works. I have heard it asserted by gentlemen acquainted with M. Archereau, who performed the experiment last night, that a company for the supply of the electric light would realize a handsome profit on charging *only a sixth* of what is now charged for gas." (It was only recently announced that the electric light develops all our in-born capacity for lying.) Very often during the

past fifty years have reports like the above disturbed the gas manufacturers, and induced many to invest in electric light stocks. It is very probable that the electric light will fulfil the most sanguine predictions of its early friends; but the time, labor, and cost of developing it, will be far above their computations. An indication of the cost of its present efficiency may be taken from a careful estimate by Mr. Edwin Goadby who, in an essay on commercial depression, placed the amount lost in electric light ventures at about \$35,000,000. Not like the telephone, electric lighting did not spring into perfect, practical existence to supply at once an urgent want. The inventors' contributions to its development were made by too many and at too long intervals to allow a monopoly of its leading principles at the outstart. The ownership of the incandescent lamp may be in doubt, but the dynamo and the arc lamp are practically free to all. Those who have acquired fortunes by electric lighting, so far, are few.

Future prospects are bright. The *Scientific American*, never enthusiastic on the subject of electric lighting, two years ago denounced the arc lighting business as a swindle and a fraud. Last year, after receiving answers to inquiries sent to the local companies using a prominent arc system, it changed its views and said: "We find these companies uniformly successful, so far as our inquiries have extended. There is room for great extensions of these local lighting companies in all parts of this and foreign countries." All of the leading companies competing for the incandescent business are taxed to their utmost to fulfil new contracts; and, when considered as new enterprises, their financial condition is acknowledged to be remarkably good. The men at their head are widely known as prosperous capitalists and inventors. They are using all their powers to make the light better and cheaper, and in both cases their success is evident. In a few years they have reduced its cost more than one-half, and important improvements appear weekly to warrant further reductions. Many subsidiary applications of electricity and of the light itself, which my limits forbid noticing, are being introduced with the electric light. The most important of these is the motor for supplying light and heavy power, for domestic and manufacturing purposes, conveniently and economically. The addition of motors to their present lighting plants, which is becoming general in the cities, almost doubles the capacity and revenue of the electric light companies.

The long and fierce contention between the electric and gas lighting companies, in which there was much light but an utter absence of sweetness, is coming to an end by the weakening of the latter, who are now increasing and transferring their capital, adding both the arc and incandescent light to their present interests. When considering the effect of the complete substitution of the electric light in place of its rival, it must be remembered that, with the possible exception of the railroads, gas lighting is now placed as the leading industry of the world. Estimates made at the beginning of the

present year show that there are now in daily use over 500,000 incandescent and 100,000 arc lamps.

The entire capital invested in the electric light with its dependent interests was about \$125,000,000. This represents the growth of *six years* in the United States.

The Fear in Death.

I hear the voices that I left on earth.

—*Dream of Gerontius.*

To fall from ridge to ridge, from peak to peak,
 To grasp, half-chilled, at every yielding bush,
 To have it swerve beneath the fatal push
 That downward forces; mute when one would speak;
 Friends' eyes, like clouding stars, in vain to seek;
 To find them irresponsive, which to gush
 In streams of love were wont: oh, this would crush
 Hope to despair, and make Faith low and weak!

But thou, Gerontius, in thy burning dream,
 Filled with the white heat of pure Love and Faith,
 Hast taught us that this Fall will bring us near
 That Fountain clear, where no things are that seem.
 "Prepared for weal or woe," thy true soul saith,
 "In His dear might," and conquered even by fear!

—MAURICE F. EGAN, *in the Ave Maria.*

Manual Training.

(CONCLUDED.)

The description of the various kinds of iron, brass, wood, fuel, and the methods of working and utilizing them most economically and efficiently; the properties of heat as applied to tempering, annealing, expanding, shrinking, drying, improving and working materials; the philosophy and construction of steam-engines, pumps, mechanical powers and water wheels of every variety; gauges, dynamometers, indicators of speed and pressure; distinct notions of force, energy, resistance and all the general properties of matter—which yet constitute a large and essential part of the natural sciences—are here mastered with ease and rapidity. Moreover, the workshop is one busy assemblage of moving geometrical figures, of cylinders, conical frustra, spirals, helices, trochoids, involutes and hyperboloids; some bounded within closer limits, others extending away before the mind to infinite distances; all rolling in a perpetual, never-tiring play.

To the experience of the drawing-room and workshop add that of the scientific laboratory—which, in reality, is only another form of manual training—and you have the most valuable preparation for the pursuit of literature. You have developed simultaneously an extensive and useful vocabulary, not merely of words, but of words associated with living pictures and always at command; an acquaintance with the most grand and beautiful phenomena of nature; a brilliant and fertile imagination, and a better appreciation of the conditions and worth of laboring men.

The number of words thus acquired is but a part, it is true, of the immense vocabulary of a man of letters—which, indeed, should embrace all the arts, trades and professions—but it contains some of the oldest, simplest and most beautiful words of the language which cannot be mastered in any other way. It is one thing to see a word in print and another to use it. You may see in writing the words skylark, cuckoo, nightingale, but will they produce a distinct image in the mind? Far from it! Unless you have seen them in their native form and surroundings, your conception will be as vague as that produced by a painting or the bare name "bird." And when you wish to employ the word, you must either copy closely from others, or run the risk of blundering like the author who described the sweet warbling of the woodchucks that flit among the trees. When your author speaks of the swallow, or bluejay, or turtledove, does he produce an indistinct paper impression in your mind, or rather a living, moving, glowing something that transports and fascinates like the reality?

There is no reason why the familiar terms of science and the industrial arts should be used more inaccurately than those of any other branch of human knowledge. What excuse can there be for a man of culture who employs ignorantly such words as vein, artery, muscle, nerve, tendon, force, power, inertia, momentum, magnetism, electricity, all of which are comparatively well defined, and are, therefore, susceptible of exact usage. Boys who examine or measure these things in the laboratories make no such mistakes. They seem to be as familiar with the blow-pipe, the microscope, the mortar, the crucible, the scale, balance, gauge, with gems, furs and skeletons, as they are with their daily food.

And they seem not to grow dry and calculating and insensible to the poetry of every-day life. On the contrary, they frequently address their instruments with much passion, call them by name, and moralize with them—in other words, personify them as poets do. I have seen a boy overwork the best-tempered tool he could find—compelling it to cut through more iron than it could bear—who, when the tool grew hot, and squeaked, and remonstrated with him, would laugh and mock at it as if it were an unruly brute. And others I have seen who would be kind to it, lessening its labors, ministering unto it oil and looks of sympathy, and consulting its welfare with their neighbors. And it has been known of men in charge of boilers, or locomotives, or vessels that they did entertain strong affection for them, and call them pet names, and weep over their injuries.

Why should it not be thus? Why should our poets sing the loud-ringing anvil and forget the drill—the musical, good-willing drill that is so earnest and devoted in the service of man? What superior educational advantages had the classical old poets over those of the present day? How is it that Homer, Dante, Milton, Goethe, and the great master genius spoke so familiarly of the material creation and the tools and processes of their

day? Were they reared and confined scrupulously within the walls of a library or class-room? The whole history of literature bears evidence of the importance of a careful observation of nature—the very thing most encouraged in the technological laboratories. The untutored young savage, or the simple shepherd boy, or the wild, ungoverned street urchin is, in many respects, a better candidate for the study of poetry than the lifelong book-worm, because he has finer sensibilities, a more excellent fancy, more animation and passion, more varied experience. Young literary aspirants should, therefore, roam in curvilinear paths through woods, and marshes, and valleys, and over the hills and along the river banks with all their senses full wide awake to Nature's wondrous form and color, melody and eternal motion.

Why should the peaceful student of letters be denied this inestimable privilege? Why should he worry his childhood years in search of Greek and Algebraic roots, while his brother plays with the microscope? Why forbid him a peep through this little shutter of the unseen universe, to witness there, as elsewhere, the same vast tragedies; the same endless story of life, death and decay; the same fearful catastrophes, and strange vicissitudes and far-reaching, inexorable laws? Why bid him admire splendid descriptions and guard his eyes against their objective reality?

It is recognized amongst artists and men of science that the powers of the imagination can best be developed by the employment of material objects. By means of such exercises the student is enabled to conceive easily the most difficult forms and movements which would otherwise be impossible. An engineer of some practice can hold in his mind all the details of a large steamer or follow the moving parts of a complicated piece of mechanism throughout a complete cycle. Such discipline, if it had no further object, should be hailed unceasingly, because to the man of fertile imagination "all avenues are open." It supplies the very form and splendor of poetry; it is the guiding light of art and invention,—the prime mover of all the wondrous creations of man. It is a light and airy spirit whose noiseless wings outspeed the lightning; whose sport it is to chase the flashing meteors in their wild, impetuous race round the universe or the subtle billows of the vast ethereal ocean till they break on the shores of creation; a spirit that ranges the heavens and the earth and the deep, dim shades of Tartarus.

Now I should offer an apology for this undignified levity in so serious a discussion; but the subject is trite and distasteful, and I have been loath to weary you unnecessarily. And but for your generous sentiments I should expect some one impatiently to ask himself: "What on earth do we want with this mince of knowledge?" But that is not for me to answer, gentlemen. The solemn fact is that for the last unnumbered ages collegiate students, all over the civilized world, have been obliged, by every moral and physical means, to cram this matter from text-books, and I only state a method of facilitating the work and making it more

substantial. It might be more easy and consistent, perhaps, to know but one book—the catechism, for instance,—but it is the fashion of the day to be learned in the arts and sciences as well.

As for my single self, I would as soon be combing wool in the tents of Abraham, or on the soft, green meadows of Canaan tending sheep for fourteen years and making love with Rebecca, as flying around the "Horse-Shoe Bend" in your modern palace car. But are we to stand facing antiquity in desperation, and, with doleful looks opposing the swift progressive tumult of the age, cry hold! Shall we act as brakes to the rapid advancing wheel of fortune, or in the little rut of our own conceit sit moaning till lashed along by the whips of rough compulsion? Oh, no! Let us rather, on the bold, unreigned steeds of science, leap to the front, and amid the foremost din and rush of the times, with a champion's voice, lead onward. Let us at least admire that noble band of artisans who with their great, strong arms raised us from the state of barbarism, broke the chains of slavery and the prison walls, and with patient, toiling skill made possible our cherished civilization. It is too late to oppose them if we would; they go on increasing in wealth and prosperity and honor.

There is, amongst the youth of our country, and of every country, an unworthy prejudice against manual labor which the new school is destined to remove. When they have tested the difficulties of the workshop they will be able to appreciate a workman's skill; and when they have heard and read of the great achievements of the mechanical geniuses of the world they may be fired with a zeal to apply in this direction talents that would otherwise be lost. Few can read of the labors of Watt, of Stephenson, Bessemer, Whitworth, Fulton and Ericson without a thrill of enthusiasm. It is estimated that the Bessemer process of making steel—which went into operation in 1860, in spite of its slow adoption—added to the wealth of the world in 21 years \$5,000,000,000, and continues to yield annually the enormous sum of \$800,000,000; and as to the inventions of the venerable old fathers of the steam engine, railway and steam navigation, they are simply inestimable, having completely altered the conditions of civilization.

Many of the ablest, wealthiest and most renowned men of this generation belong to the band of manual labor and the industrial arts. The tremendous power wielded by the mechanic of to-day may be realized from the following remarks of Prof. Thurston to the American Society of Mechanical Engineers in 1880:

"The class of men from whose ranks the membership of this society is principally drawn direct the labors of nearly three millions of prosperous people in three hundred thousand mills with \$2,500,000,000 of capital; they direct the payment of more than \$1,000,000,000 in annual wages; the consumption of \$3,000,000,000 worth of raw material, and the out-put of \$5,000,000,000 worth of manufactured products. Fifty thousand (50,000) steam engines, and more than as many water wheels at their command turn the machinery of these hundreds of thousands of workshops that everywhere dot our land, giving the strength of three million horses night or day."

At a recent meeting of this society, when the

subject of education for engineers was discussed, it caused so much excitement and intense interest that it had to be prolonged to the next sitting. Earnest speeches were made by old professional men, who had sons to educate and were perplexed to know what course to pursue. Some few—principally foreigners—advocated the old apprentice system of seven years; others, with great vehemence, the manual training school. Prof. Robinson, of the Ohio State University, said:

"I have come here from New York by rail; I might have come afoot and seen the country better. I have also tried the fast and slow methods of learning mechanics. I have served as an apprentice, been knocked down with a hammer for asking the blacksmith how to temper, and thus discovered that with a little chart of colors I could learn more in half an hour alone than with my boss in three weeks. I was once running a steamer at New York, when a number of students from Stevens' Institute came aboard to examine the engine, and I was put to blush to find that these boys knew more about the engine than I did. I had built the engine myself, and should, I thought, understand it better than these striplings of no experience; but they actually pointed out defects in it and suggested improvements."

Mr. Babcock then arose—a venerable, polished old gentleman, the inventor of our tubular boiler here, and an able, well-known engineer. He spoke something as follows:

"I suppose it is natural for old men to wish to see boys brought up in the same manner as they themselves were; but I can assure you it was a hard road we had to travel, and I believe the younger generation have decidedly the advantage of us. There never was a time when mechanical engineers were in such demand as at present, and there is no question that this profession holds out to our youth the brightest prospects of success, and wealth and social distinction; but how to educate them, I do not know, as I am not posted in these matters. But of this I am convinced, from long experience, that you cannot make a whistle out of a pig's tail. I presume some of the younger members of this society have never heard this saying; but what I mean to imply is, that if your boy has not the bumps, you cannot make a mechanic of him and the fact will be discovered just as quickly at school as at the factory, and possibly with less expense."

At the close of the meeting, the members were all invited to attend the meeting of the American Scientific Society, where the subject should receive further discussion.

But this is a digression. Unless you wish to become mechanical engineers, you are not much interested in their education; manual training, however, as a part of the public education, more nearly concerns you, as it is absorbing the attention and receiving the hearty commendation of educators all over the land. Mr. James McAlister, superintendent of the public schools of Philadelphia, says:

"The conviction is gradually obtaining among the members of the Board of Education, and in the public mind, that every child should receive manual training; that a complete education implies the training of the hand in connection with the training of the mind, and that this feature must ultimately be incorporated into the public education."

Mr. C. H. Ham, an able thinker, who for many years has studied and discussed this subject, writes:

"The *Kindergarten* and manual training are one in principle, and should be one in practice. All educators will soon see this, and the National Educational Association will, no doubt, soon place

itself as heartily on record in support of manual training as it has already done in support of the *Kindergarten*.

"On the occasion of the annual meeting of 1884 of this association at Madison, Wis., manual training received a very large share of the attention of educators. Very creditable exhibits of various manipulations in wood and iron and steel were made by the following institutions: namely, the Massachusetts Institute of Technology, Purdue University, Ind., the St. Louis Manual Training School, the Illinois Industrial University, the University of Wisconsin, and the Spring Garden Institute of Philadelphia. There were also a large number of *Kindergarten* exhibits, and a large number of exhibits of specimens of drawing from public schools in various parts of the country.

"At its last meeting, at Saratoga Springs, N. Y., it took a great step forward in actually adopting a resolution indorsing the *Kindergarten*, and seriously discussing the adoption of a resolution recommending the introduction of manual training into the public schools.

"Massachusetts, the cradle of the American common school system, is the first State to legalize, by statute, the new education, placing manual training on an equal footing with mental training, by the following act: 'Section I of Chapter XLIV of the Public Statutes relating to the branches of instruction to be taught in public schools is amended by striking out in the eighth line the words 'and hygiene,' and inserting instead the words 'hygiene and the elementary use of hand tools'; and in any city or town where such tools shall be introduced, they shall be purchased by the school committee at the expense of such city or town, and loaned to such pupils as may be allowed to use them, free of charge; subject to such rules and regulations, as to care and custody, as the school committee may prescribe.' The Legislature of Connecticut adopted a similar statute last year."

But enough of this. You have probably seen sufficient data of the present status of the question in the daily papers. I have only wished to speak to you of the philosophy of the system; and as I have finished this, all that remains is to draw the moral. This I dislike, above all things, as moralizing is neither my profession nor my gift, having as yet not one gray hair of experience; but as it is a part of the subject, and the wish of another, I shall proceed undauntedly.

Be not, then, as little, one-eyed men who see with narrow indistinctness, and who, with their short girdle, would belt the big round world; but rather with large, comprehensive minds, cherish a regard and love for all humanity and the great material universe. Open with candor all the ports of your souls to the vast waters of the ocean of knowledge that you may be filled to perfection. Let us, gentlemen, learn with diligence to search the secret workings of Nature's myriad laboratories; to hail the rich variety of the recurring seasons, and with awful reverence to gaze upon the silent drill of those dread, starry legions, marshalled by the hand of the Almighty. Then, as members of one great, peace-

ful brotherhood, let us, with simple earnestness, tune our voices to the calm, sweet music of creation, and, in concord with that higher order of beings, unite in one eternal symphony of praise to the supreme, most perfect, all omnipotent Designer.

A. F. ZAHM.

Poe's "Raven" in Spanish.

[A recent number of the *Home Journal* contained a notice of an excellent Spanish version of "The Raven," which admirably preserves all the rhythmic beauties of the original. We give herewith a few stanzas as illustrations:]

I.

Una fosca media noche, cuando en tristes reflexiones,
Sobre más de un raro in-folio de olvidados cronicones,
Inclinaba soñoliento la cabeza, de repente

A mi puerta oí llamar:

Como 'si alguien, suavemente, se pusiese con incierta

Mano tímida á tocar:

"Es—me dije—una visita que llamando está á mi puerta;
Eso es todo, y nada más!"

II.

Ah! bien claro lo recuerdo: Era el crudo mes del hielo,
Y su espectro cada brasa moribunda enviaba al suelo.
Cuán ansioso el nuevo día deseaba, en la lectura

Procurando en vano hallar

Tregua á la honda desventura de la muerte Leonora,

La radiante, la sin par

Virgen rara á quien Leonora los querubes llaman hora

Ya sin nombre. . . . nunca más!

XVII.

"Esa voz, oh cuervo, sea la señal de la partida—
Grité alzándome—'Retorna vuelve á tu horrible guarida,
La plutónica ribera de la noche y de la bruma. . . .

De tu horrenda falsedad

En memoria, ni una pluma dejes, negra! El busto deja!

Deja en paz mi soledad!

Quita el pico de mi pecho! De mi umbral tu forma
aléja."

Dijo el cuervo: "Nunca más!"

XVIII.

Y aun el cuervo inmóvil, fijo, sigue fijo, en la escultura,
Sobre el busto que ornamenta de mi puerta la moldura. . . .

Y sus ojos son los ojos de un demonio que, durmiendo,

Las visiones vé del mal;

Y la luz sobre él cayendo, sobre el suelo arroja trunca

Su ancha sombra funeral;

Y mi alma de esa sombra que en el suelo flota. . . . nunca

Se alzará. . . . nunca jamás!

How often have we not heard the pusillanimous manifestations of fear of some bigots who keep crying that if this country ever becomes Catholic it is done with our republican institutions and Government! As a sure cure for their morbid chronic trepidations we beg them consider the few significant figures which follow: There are in the world 20 Republics, 2 of which are Protestant and 18 Catholic; and 21 Monarchies, 10 of which are Protestant and 7 Catholic, the 4 others being of different religions.—*Ex.*

NOTRE DAME SCHOLASTIC.

Notre Dame, June 4, 1887.

The attention of the Alumni of the University of Notre Dame and others, is called to the fact that the NOTRE DAME SCHOLASTIC has now entered upon the TWENTIETH year of its existence, and presents itself anew as a candidate for the favor and support of the many old friends who have heretofore lent it a helping hand.

THE NOTRE DAME SCHOLASTIC Contains:

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Personal gossip concerning the whereabouts and the success of former students;

All the weekly local news of the University, including the names of those who have distinguished themselves during the week by their excellence in Class, and by their general good conduct.

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The Editors of the SCHOLASTIC will always be glad to receive information concerning former students and graduates of the University.

The English Course.

A change is coming over American colleges with respect to the teaching of English. Till a very recent period, the higher branches of Rhetoric and Literary Criticism did not receive all the attention they deserved. The last decade has witnessed a marked improvement in this point, and the importance of the higher study of English is rapidly being recognized at all the great educational institutions of this country and of Europe. It has been remarked by a great authority that, "when once the English language and English and American Literature become recognized as a regular educational course, the advantages will be so great as to constitute nothing short of a national benefit."

The Faculty of the University of Notre Dame, recognizing the fact that the exclusive study of the ancient languages and of pure science is not in itself sufficient for a liberal education, have determined to institute a course which shall provide for a more than ordinarily thorough acquaintance with the English language and with English and American literature. At the same time, all that is most serviceable in the Classical and Scientific courses will be made an indispensable requisite.

The course will extend over a period of four years, and those who have completed the prescribed studies and passed the examinations satisfactorily will receive the degree of Bachelor of Letters.

A high standard will be kept up throughout the course in all English branches, and the degree will be conferred on no one who, besides giving evidence of proficiency in the Classics and Science, has not also given proof of ability to apply the principles of composition; and shown an acquaintance with the writings of the best authors in English and American literature.

The scheme of the course is fully set forth in the Catalogue and explains itself. It will not be out of place here to emphasize the following points:

(1) From the beginning of the course to the end special attention will be paid to essay-writing, and each essay will be read and criticised in its author's presence.

(2) Facilities are afforded for a training in journalism by the publication, weekly, of the NOTRE DAME SCHOLASTIC—a twenty-four page paper devoted to the interests of the students—the columns of which are always open to their contributions. Every student of the course will be expected, after the expiration of the first year, to contribute to the SCHOLASTIC at least two articles per session.

(3) A familiarity will be required with the masterpieces of the leading English and American authors, and students will be encouraged to peruse the works of such authors during their leisure hours by having access at all times to a library containing a complete collection of all the English Classics.

(4) A Graduation Thesis will be required of every student; this must show, besides grace of style, a scholarly treatment of the theme selected. The choice of themes will be left to the graduates, subject to the approval of the Faculty.

The preparatory studies for this course are the same as those introductory to the Classical Course, with the exception that Latin or Greek may be replaced by one of the Modern Languages.

The Faculty have determined to spare no pains to render this course of the utmost value and interest to the students, and to encourage them to acquire a thorough familiarity with their native language and a facility in speaking and in composition, which is everywhere recognized as an indispensable requisite for success in any profession in which they may be engaged in after life. *

Pleadings.

An avowry in replevin is an admission of the taking, with a statement of matter in justification. For example, it may be stated that cattle, which it is sought to replevy, were taken damage feasant. Where the plaintiff recovers, he gets not only the property in question by judgment *de retorno habendo*, but also the damages proved; and where the property cannot be had, he gets its value. A cognizance signifies the answer of the defendant in an action of replevin when he is not entitled to the distress or goods which are the subject of the action, acknowledging the taking, and justifying it as having been done by the command of one entitled to them.

Trespass may be defined as any unlawful act committed with violence, actual or implied, to the

person, property or rights of another. When force is employed, it is said to be trespass *vi et armis*. When committed by entering upon another's land, it is trespass *quare clausum fregit*—on account of breaking the close. It is a form of action which lies to recover damages from a wrong-doer for an injury sustained by the plaintiff at the hands of such wrong-doer as the immediate consequence of some wrongful act done forcibly to his person or property. It lies for injuries to the person, as assault and battery, wounding, imprisonment, etc. It lies for a forcible injury to the person of another whereby a direct injury is done to the plaintiff in respect to his rights as parent, master, etc. It lies for forcible injuries to personal property and chattels, as animals, by striking, chasing and carrying them away, to the damage of the plaintiff. It lies for the wrongful removal of or injury to personal property, even when in the actual or constructive possession of another. A wrong-doer is charged with an intention to do the things that naturally and legitimately result from his acts. It is not a defense to show that other causes for which the defendant is not responsible contributed to effectuate the injurious result.

Trover is a form of action which lies for the recovery of damages where one has, without right, converted to his own use goods or personal chattels in which the plaintiff has a general or special property. Originally it was an action of trespass on the case where goods were found by the defendant and retained against the plaintiff's rightful claim. But the manner of acquiring possession was in time disregarded, and the conversion came to be used as the substantial part of the action. It lies where the defendant refuses to deliver the plaintiff's goods, no matter whether possession was acquired by finding them or otherwise. It differs from replevin and detinue, in that it is brought for damages, and not for specific articles. It differs from trespass, in that the injury is not necessarily a forcible one. Where possession was gained by trespass, the plaintiff by bringing trover waives his right to damages for the taking, and is confined to the injuries resulting from the conversion. Trover lies for the conversion of any kind of personal property, whether animate or inanimate, and in many instances it is concurrent with trespass and case. It is concurrent with trespass where goods are forcibly taken and converted. Where there has been simply a wrongful taking, without conversion, trespass lies. Where the taking was lawful, but followed by a wrongful conversion, trover lies. Where there has been an unlawful taking and conversion either remedy is available. The plea of "not guilty" raises the general issue.

A mixed action partakes of the nature of both real and personal actions. Ejectment and waste are of the mixed class.

Ejectment is a form of action which lies to regain possession of real property, with damages for the unlawful detention. Some of the authorities treat ejectment as a real action. In fact, too, at one time, it was regarded as a personal action. It has undergone radical modification by statutes in

the different States. The general issue is raised by the plea of "not guilty."

Waste signifies spoil or destruction, done or permitted, to lands, houses, or other corporeal hereditaments, by the tenant thereof, to the prejudice of the heir, reversioner, or remainder-man. Permissive waste means the mere neglect to do what will prevent injury. Voluntary waste means the commission of some destructive act, as to pull down a house, to destroy the fences, to cut trees, etc. The common law remedies are two-fold: By writ of prohibition where waste is threatened, and by writ of waste for the injury actually done. But an action on the case in the nature of waste for the injury actually done has also become a common remedy. The remedy for waste may take a variety of forms. Where there has been a wrongful removal of timber, hay or fixtures, the plaintiff may seize them if he can find them, or bring trover for their conversion, or replevy them, or bring trespass *de bonis asportatis* for the taking of them. A bill for injunction to prevent waste is a common remedy. It is not granted, however, to prevent a mere trespass.

Attachment means the act of taking into the custody of the law the person or property of one already before the court, or of one whom it is sought to bring before it. As to persons, it is a writ issued by a court of record, commanding the sheriff to bring before it a person who has been guilty of contempt of court, either by neglect or abuse of its process or subordinate powers. As to property, it is a writ issued at the institution or during the progress of an action, commanding the sheriff or other proper officer to attach the property, rights, credits or effects of the defendant to satisfy the demands of the plaintiff. Attachment is a special remedy at law, and is authorized by statute in chancery in only a few States. In the New England States it is an incident of the summons in actions *ex contractu*. In other parts of the country it is based upon cause shown by affidavit. The affidavit should verify the cause of action and the existence of one or more of the grounds of attachment prescribed by the statute. As a rule, damages in claims of an *ex delicto* nature cannot be reached by this writ. Persons in a representative capacity, as heirs, executors, administrators, trustees, and the like, are not, as such, liable to attachment. An affidavit and bond must usually be filed to protect the defendant against loss and annoyance before attachment proceedings begin. The officer who takes the property acquires a special interest while it is in custody of the law, and he may maintain trover, trespass and replevin, as the case may require, for violation of his possession. When necessary during the pendency of an action, the officer may turn the property over to a receiptor or bailee for safe keeping, taking a sufficient receipt or pledge for it. In numerous States provision is made for the dissolution of the attachment by the defendant's giving bond and security for the payment of such judgment as the plaintiff may recover. In effect, this is special bail, and after it is given the cause ceases to be

one of attachment. It proceeds as though it had been instituted by summons. The attachment is dissolved by final judgment for the defendant, by motion based upon defects apparent on the face of the plaintiff's pleadings, by the death of the defendant *pendente lite* in some States, by the civil death of a defendant corporation, etc.

The remedy by attachment may be traced to the custom of Foreign Attachment of London. This existed even prior to the reign of William the Conqueror. It enabled the creditor to attach the money, debts or goods of his debtor in the hands of a third person, and so to deprive the debtor of them until the claim was satisfied. This proceeding is now known in most States of the Union as garnishment or garnishee proceedings. In the Eastern States it is known as the trustee process, except in Connecticut and Vermont, where it is called factorizing. It is a special statutory remedy in the United States, and is in the nature of a proceeding *in rem*. It means the attachment of the defendant's effects in the garnishee's hands. For example, A gets judgment against B, but finds that he cannot make it effective, as B has no property. The execution is returned "*nulla bona*." He then learns, or he may before have ascertained, that C is indebted to B. Proceedings are then begun by A against C to collect the amount due to B. If paid under judgment of court, it discharges the debt *pro tanto* among all the parties. Any defense the garnishee has against the defendant may be pleaded against the plaintiff.

After the plaintiff has stated his case or set out his claim in the declaration, it is in order for the defendant to set up his defense. The defense is of two kinds: full defense and half defense. The form of full defense is, "And the said C. D., defendant, by E. F., his attorney, comes and defends the wrong and injury when and where it shall behoove, and the damages, and whatsoever else he ought to defend." The form of a half defense is, "And the said C. D., by E. F., his attorney, comes and defends the wrong (or force) and injury." Half defense is appropriate where there is a denial of the jurisdiction of the court or the legal competency of the plaintiff to prosecute. A full defense waives these fundamental grounds of objection. The undertaking of the defendant to defend "when and where it shall behoove him," acknowledges the jurisdiction of the court, and to defend "the damages and whatsoever else he ought to defend," admits the plaintiff's competency to sue. In the two instances indicated there must be a half defense; in all others, a full defense. In practice, however, the distinction between the full and the half defense has become unimportant. Neither of the old forms is used. The defendant simply adds "when, etc.," to the form of the half defense, and that addition gives it a flexibility which makes it appropriate either to the full or the half defense, as the exigencies of the pleading may require.

The order of pleas is as follows: 1st, To the jurisdiction of the court. 2d, To the disability of the person, whether of the plaintiff or of the defendant. 3d, To the count or declaration. 4th,

To the writ, as (a) to its form, for matter apparent on its face, or for matter *dehors* or outside of it; (b) to the action of the writ. 5th, To the action itself in bar thereof. All these may be successively pleaded in their order. Should the first be to the jurisdiction, upon demurrer and judgment of respondeat ouster thereon, the next may be to the disability of the person, etc. But there cannot be two successive pleas to the jurisdiction, disability of the person, declaration, etc. If one plead first to the writ or declaration, he admits the jurisdiction of the court and that the action is brought by the proper party. If he plead in bar, or to the action itself, he waives his right to plead in abatement, or to oppose the action on any of the grounds preceding.

Pleas are dilatory and peremptory. Those to the jurisdiction of the court, in suspension of the action, and in abatement of the writ, are dilatory. Those in bar are peremptory.

In a plea to the jurisdiction the defendant excepts to the jurisdiction of the court to entertain the action. A plea in suspension of the action admits jurisdiction, but shows some ground for not proceeding therein at the time. It prays that the pleading and action may be stayed until such ground is removed. A parol or speaking demurrer founded upon the nonage of one of the parties is of this class. A plea in abatement shows some ground for abating or quashing the writ, as if there be a variance between the declaration and writ, or if the writ has been sued out pending another action for the same cause, or if it name but one person when it should name several, and so on. It should be verified by affidavit. If successful, a plea in abatement defeats that particular action, although the plaintiff's right to sue again is not thereby prejudiced.

A plea in bar of the action shows some ground for barring or defeating it. Pleas in bar are divided into pleas by way of traverse and pleas by way of confession and avoidance. They differ from pleas of the dilatory class, in that they deny *in toto* the right of action. If a plea in bar deny all or some material part of the averments of fact in the declaration, it is called a traverse. If it admit the averments to be true, but alleges new matter to obviate or repel their legal effect, it is said to confess and avoid them. As a rule, dilatory pleas are not allowable after a full defense, nor after a general imparlance, nor after oyer or a view, nor after voucher, nor after a plea in bar.

Affirmative pleadings not concluding to the country must conclude with a verification. In concluding to the country, which means that a trial by jury is demanded, the common formula is: "And of this the said C. D. puts himself upon the country." The like conclusion by the plaintiff in his replication is, "And this the said A. B. prays may be inquired of by the country." The verification does not demand a jury. It is of two kinds: common and special. The common is the ordinary form, to wit, "And this the said A. B. is ready to verify." The special applies when a matter is to be tried by record, or in some other manner dis-

pensing with a jury. The forms are: "And this the said A. B. is ready to verify when, where and in such manner as the court here shall order, direct or appoint;" also, "And this the said A. B. is ready to verify by the said record." Formerly every plea, replication, etc., had to conclude with a verification, which was called an averment. Whenever new matter is introduced the pleading should conclude with a verification. Pleas in confession and avoidance, in common with all pleas which do not tender issue, must conclude with a verification and prayer for judgment; as, "And this the said A. B. is ready to verify, wherefore he prays judgment."

The affirmative part of a special traverse is called the inducement; the negative part, the *absque hoc*, as "Without this, that," etc. The special traverse must have an inducement, a denial and a verification. The *absque hoc* introduces the denial. It does not tender issue, although the common traverse does. It has, however, fallen into "innocuous desuetude."

Every pleading must be an answer to the whole of what is adversely alleged.

[On account of the pressure of matter possessing a more general interest upon the columns of the SCHOLASTIC during these closing days of the school year, it is deemed proper, if not necessary, to conclude with the present instalment this series of articles.]

Books and Periodicals.

—With the June number, *Wide Awake* begins its 25th volume and presents a number of singular richness and promise. Among its contents are the following: "Story of Keedon Bluffs," by Charles Egbert Craddock (Miss Murfree); "Secrets at Roseladies," by M. H. Catherwood; "Lost Medicine of the Utes," by Lizzie W. Champney. Edwin Lassetter Bynner writes a fiery scare-story on a runaway railroad train. Grace Denio Litchfield tells how the earthquake shook Mentone last winter. Selden R. Hopkins takes "A Young Prince of Commerce" into what goes on inside the railing in banks. And other good things too numerous to mention, to say nothing of the many beautiful pictures which add greatly to the pleasure of reading.

—*St. Nicholas* for June opens with a charming frontispiece by Frank Russel Green, entitled "A Day Dream." It reminds us that summer is at hand; and Frank Dempster Sherman's poem, "June," leaves no doubt upon the subject. Those who intend going abroad will not skip Frank R. Stockton's delightful "King London"; while the stay-at-homes will read it and be able to give points to the travellers on their return. After perusing Mrs. Poultney Bigelow's interesting "Story of a Lost Dog," it may strike the reader that, if stray animals are so well taken care of in London, it will be quite unnecessary for humans to know their way about. Though the musical season is supposed now to have ended, we learn by "Elizabeth's Concert" that it has just begun—at least for those who spend their vacation in the country. But while all

boys and girls are ready for vacation at this time, some must be getting "Ready for Business"; to these George J. Manson's article on "A Banker and Broker" will prove very interesting. Curiously enough, there are some young men who will camp out this summer, by way of getting ready for business. They are the West Point cadets, and their life in camp is capitally described in "Winning a Commission," by Lieutenant George I. Putnam; while General Adam Badeau shows what an unpleasant business theirs may be in his stirring paper on "Sheridan in the Valley." The story of "The Child-Princess, Charlotte," is cleverly told by Ellen M. Hutchinson, and there are some interesting items in "Editorial Notes" about another historic maiden, Grizel Cochrane, whose story was told in the February number. "Juan and Juanita" and "Jenny's Boarding-house" grow better as they grow older; the "Brownies" have an adventure with a bee-hive, and there is a great deal more than there is room to tell of.

—*The Art Amateur* for June begins the seventeenth volume with a new cover and a profusion of attractive illustrations and vigorous letter press. Three figure and drapery studies in two colors, a striking full-page portrait and a number of pen drawings after pictures and sculpture accompany an interesting biographical account of Sir Frederick Leighton, President of the British Royal Academy. There is a capital notice of the Paris Salon, with an admirable two-page drawing of Ridgway Knight's picture, "In October," together with reviews of the American Artists' and Prize Fund Exhibitions and the new Seney Collection, a Boston letter on New England art progress, an amusing French account of the Morgan sale, and a timely article on composite photographs. "Montezuma" in "My Note Book" makes an extraordinary exposure of frauds and tricks in the picture trade, even among the most reputable dealers. The practical articles include a suggestive "talk" with John La Farge on the re-decoration of the American "meeting house," useful hints on landscape painting, a lesson in china painting (fish sets and game sets), and directions for an altar hanging with working designs. There are also designs for a large panel (azaleas), a sugar-bowl (anemones), a lamp shade and a newspaper rack, a page of monograms in O, and a fine study of pansies. The minor departments are lavishly filled, and in every respect the number fully maintains the high reputation of the magazine.

—The frontispiece of the June *Century* is a striking portrait of Count Leo Tolstoi, the Russian novelist, engraved by Thomas Johnson from a photograph, and presenting a personality of a unique and homely yet fascinating type, the impression of which upon an American is recorded by Mr. George Kennan in a paper entitled "A Visit to Count Tolstoi." The outdoor feeling of the season is appropriately appealed to by two articles: first, an illustrated paper, "College Boat-Racing," by Julian Hawthorne, having special reference to the New London course, and being also somewhat in the nature of a review of the history

of this sport in America, especially at Harvard. The second paper, "Boat-Racing by Amateurs," is contributed by a Yale man, writing over the name of Henry Eckford. These writers discuss, interestingly and from different points of view, the controverted question of the best style of rowing. An illustrated paper of the widest popular bearing is the second of Professor W. O. Atwater's articles on food, entitled "How Food Nourishes the Body," and presenting in compact form a large amount of the latest deductions of chemical analysis and other scientific investigation in this department. Incidentally he explodes the idea that fish is especially good for brain food. These practical papers are to be continued in future numbers of the magazine. The Lincoln History makes marked progress toward the presidential contest of 1860 by the consideration of events which form a background to a proper presentation of Lincoln's personality, events also which are necessary to an understanding of his personal career.

Local Items.

- Who got the smilax?
- Where are the debaters?
- "Freddie" has his Commencement song down fine.
- Contempt for authority is the starting-point of infidelity.
- The "music of the spheres" was heard on Friday night.
- The festive pun-jobber from "way-back" now bobs up serenely.
- The triple competitions now engage the attention of everybody.
- "Have the grass cut, if you want your lawn à la mowed," says a Boston paper.
- An interesting meeting of the Horticultural Bureau was held on Tuesday evening.
- The examination of the Musical Department will be held on Saturday next, the 11th inst.
- The Park, with its variegated flowers, begins to assume a brilliant and attractive appearance.
- "Waxie" has withdrawn from the oratorical; he had not the time to devote from his studies.
- Prof. William Hoynes will deliver an address before the military companies some evening during the coming week.
- A much used copy of Webster's Unabridged was one of the missiles thrown at the gay and festive *burro* one night last week.
- Companies "A" and "B," Hoynes' Light Guards, presented a fine appearance in the Decoration Day parade in South Bend.
- The globes surrounding the electric lights in the office are worth attention, on account of the additional brilliancy which they impart.
- The Graduating Class will be examined on Monday and Tuesday, June 13 and 14. The regular

examinations will begin June 15 and close June 20.

—The Decoration Day game for the championship between the Minim "Blues" and "Reds" resulted in a victory for the "Reds" by a score of 31 to 27.

—Among the welcome visitors during the week was the Rev. James Gleason, C. S. C., formerly Professor in the University, and now Rector of Holy Cross Church, Keystone, Iowa.

—The *Minnehaha* crews have ordered from Adler Bros. a lot of seven white "tiles," in which these men of muscle muckle much forsooth, will disport themselves at Commencement.

—Our genial gardener protests against a piece of vandalism by which a beautiful grass plot was destroyed the other day. "Keep off the grass!" is a motto for everybody at this season.

—Among the visitors during the week were: Mr. Andrew Brand, St. Paul, Minn.; Mrs. John Eberhardt, Miss Bertha Eberhardt, Burr Oak, Mich.; J. E. Farnham, Finton, Mich.; A. M. McMurray, S. J. Arado, Chicago, Ill.

—The 15th regular meeting of the Sorin Literary and Dramatic Association was held Monday, May 30, in St. Edward's Hall, at which interesting papers on various subjects were read by Masters Koester, Sullivan, Walsh, A. Williamson, Jewett, O'Mara, Nester, McDonnell, Martin and Boyd. The members voted that the composition read by James Walsh was the best.

—Prof. Wm. Hoynes, of Notre Dame University, as well as the educational institution, has every reason to feel proud of the handsomely uniformed, well drilled, fine looking body of young soldiers, known as the "Hoynes' Light Guards." They presented a splendid appearance on our streets on Memorial Day; and besides being young soldiers they are also young gentlemen, in all that the term implies.—*South Bend Times*.

—The devotions of the month of May were concluded with great solemnity on Tuesday night. The closing sermon was preached by Rev. Father Spillard, after which solemn Benediction of the Blessed Sacrament was given. The members of the choir, under the direction of Rev. Father Kirsch, cannot be too highly commended, for the manner in which they carried out their part of the services each evening during the month. The beautiful and devotional hymns with which the services began and ended, were sung with feeling and expression.

—Companies "A" and "B," Hoynes' Light Guards, will each hold a competitive drill tomorrow morning for the company medals, presented by Messrs. Adler Bros., of South Bend. The two privates who make the best showing in the drills will be awarded the medals on Tuesday, June 21. The competition will include the manual of arms, and such movements as the companies have been instructed in. Three drills will be held, the second to take place on the 12th inst., and the third on the 19th inst. The winners of the medals will be made known at dress parade on Tuesday, June 21.

—Yesterday (Friday) morning Very Rev. Father General made a delightful visit to the princes. He expressed his pleasure on seeing them so attentive and earnest at their studies, and looking so happy and bright. They all appeared to be such good boys that it would be difficult to say who was the best. He put it to the vote of the boys to decide who was the best, but as the votes were even for two boys, he said he would give them a few days to consider and have them vote again. The princes thank their venerable patron for his gracious visits which do so much to stimulate them to greater exertions in their studies and to refine and ennoble their characters. If the beloved Founder has been justly styled "the sunshine of Notre Dame," he is especially so of St. Edward's Hall.

—Mr. William Carey, of the *Century*, as a token of his appreciation of the interest Notre Dame shows in Art, has presented the University with a copy in plaster, the exact size of a portion of the Frieze of the Parthenon. The cast gives a good idea of the bas-reliefs worked by the ancient Athenians, and it is a valuable addition to our historical and art collections. The following letter accompanied the gift:

"MY DEAR SIR:

"Prompted by the suggestion of our good friend, Maurice F. Egan, I beg your acceptance of a copy in plaster, the exact size, of a portion of the Frieze of the Parthenon. I send this as a token of my appreciation of the interest your University has shown in Art, and with the hope it may contribute in some slight way to the good work you are doing. It seemed to me that this selection was not inappropriate; the hand of the Church has saved Art from the prostitution to which the Greek and the Roman too often degraded her. It has wedded her again to Morality—a spouse to whom she adds grace, and without whom she is incomplete.

"Trusting that the cast will reach you in safety—it is shipped to-day and should arrive shortly—permit me to remain, with sincere respect,

"Yours very truly,

"WILLIAM CAREY."

—The indefatigable zeal and rare discrimination of Professor J. F. Edwards, of the University of Notre Dame, have preserved from destruction or irretrievable loss innumerable precious mementos and relics of all the Bishops and Archbishops who have held dioceses within the present limits of the United States. These *souvenirs* have been collected and tastefully arranged in the Bishops' Memorial Hall and Historical Department of the University, and form a unique monument to the American hierarchy. The collection, said to be the only one of the kind in the world, includes portraits (many of them originals and very rare), busts, miniatures in ivory, autograph MSS., bound books, and pamphlets, together with mitres, crosiers, pectoral crosses and other insignia of the pastoral office. Professor Edwards, whose interest in Catholic history amounts to a passion, has taken care to verify any detail that can possibly throw light on subjects of Catholic historical research. Some day not far distant his collection will attract visitors from all parts of the country. Nowhere else in the United States can so many interesting objects, some of them fragrant of sanctity, be found; for in-

stance, the mitre worn by Bishop Neumann, of holy memory; a chalice used by Archbishop Carroll, the proto-prelate of the Union; the sandals of the venerated Bishop Flaget; the stick of Prince Gallitzin, of Loreto, Pa.; a Bible used by Mother Seton and the saintly Bishop Bruté; a lock of the hair of Cardinal Cheverus, first Bishop of Boston; sandals of the sainted Bishop Timon; the chalice of Father de Seille, whom John Gilmary Shea calls "a confessor of the faith"; *souvenirs* of Father Badin, the first priest ordained in the United States; of the learned and pious Archbishop Kenrick, of Baltimore; of Father de Smet, Bishop Baraga, etc. Mementos and relics of this kind are every year becoming fewer. No doubt there are many among the readers of the *Ave Maria* possessed of such objects, valued by them, but liable to meet with the vicissitudes likely to beset individual collections. They could not do a better service to the cause of Catholic history than by sending these articles to Professor Edwards, to form part of his great collection, which is thoroughly impersonal, and yet personal enough to be the property of every Catholic in the land.—*Ave Maria*.

THE TALE OF A BURRO.

The bray of the *burro* is at all times impressive; but when heard in the stilly night, it is sure to awaken the deepest emotions and the entire neighborhood. One beautiful night last week, when the lawn was bathed in the moonbeam's silver light and silence brooded over the scene, one of those animals skipped nimbly over the stable fence, and sauntered forth towards the college for a midnight ramble all alone. He paused for reflection near the main steps. Nature was doing her best to make everything lovely, and the *burro* was pleased at the effort. To show his deep appreciation, he lifted up his voice and brayed a long, loud bray. Such an outburst of melody might have awakened the dead, much less those who were only sleeping. Windows flew up almost instantaneously in every direction, and those whose slumbers had thus been so suddenly interrupted gazed out into the moonlight. Every one seemed to know what the fuss was about. Two or three were evidently displeased, and muttered something which it would not be nice to repeat. Another was disposed to be philosophical, and tried to induce the serenader to retire by muffled exclamations of ahoy! avault! etc.; the falling inflection was employed, the stage whisper, but all in vain. The white knight—it was his first appearance this year—was boiling over with indignation, too deep to be expressed. Meantime mellifluous expletives, ending in *etto*, rent the air; but they fell harmlessly on the cement walk, or died away in the transformation of the moonlight.

The *burro* wouldn't budge. There he stood gazing serenely upward, preparing to acknowledge the *encore*, such as it was. It didn't take him long; he cleared his throat, and ejected notes that seemed to be drawn from the end of his tail through paper-covered teeth of miles of coarse comb, with

great reluctance on the part of the tail. This roused two others, who had been dreaming the gentle hours away, and they soon made their appearance at the windows; one of these was darkened for a moment, and then a black mass fell heavily to the ground. Luckily for the *burro* he was not standing where it struck, or he would have been found dead in his tracks in the morning—and buried, too, for that matter. Next day some one was seen wearing one slipper, and the obstruction was carted away. The impatience of the other would-be sleeper vented itself in polysyllables: "Well, well!" he exclaimed, "the serenity of our territorial environment is practically annihilated on this occasion!" [To the beast] "Whoa! be-gone!" But the beast wouldn't. He was too far off to hear what was said, and he would not, probably, have heeded it anyway. It was truly provoking; but relief was at hand. Just as the *burro* began a third canto, another irate disciple of Morpheus threw up his window and leaped out, clothed only in the diaphanous drapery of repose. The window is low, or he would probably have hurt himself; but his excitement was such that he didn't think of danger. He was thinking of the *burro*; and by this time the latter having made up his mind that mortals hereabouts have no appreciation either for the beauties of nature or the charms of music, was about to take his departure. But a scene of combat was yet to be enacted, a wild race to be run. The one who was to give chase had armed himself with a stick, and was approaching cautiously, in order to get a fair start. The *burro* saw him and thought it was a spook. Without waiting for the word "go," he went and ran for dear life, waving his tail frantically as a signal of distress. With singular inopportuneness some one shouted in the distance: "Let her go, Gallagher!" It was nip and tuck. The *burro* seemed to be more frightened at every jump, and went tearing across the lawn. The pursuer, too, was thoroughly roused by this time, and the more angry he became, the faster he sped. But the longest race must have an end somewhere, and soon the affrighted beast had cleared the last fence between himself and his foe. Not a single whack had he received, and as he turned to see if the spook was still at his heels and discovered that it was not a spook, he raised his voice in triumphant vociferation. It was what any *burro* would have done under the circumstances. But the effect on the mind of the vanquished was to make him feel "sad, dejected, weary"; besides, he was beginning to realize that his vesture was inadequate, and he concluded that the only thing to be done now was to return to his couch and dream dreams of dire vengeance.

Woe to the *burro* that ever again disturbs the good man's repose, or awakens the midnight echoes of our gloomy pines! The fate of that offending beast is sealed. But we would remind the wakeners, each and all, that recourse need not be had to harsh measures. There is a way of abbreviating the solos of all such quadrupeds which the experience of the world since the days of Balaam has proved efficacious. One has only to attach a weight to

the protruding extremity of the vertebral column—a brick will do. Somehow, it has a depressing effect, and the animal has no longer any inclination to sing the old songs. Let this suggestion be heeded, should occasion demand; then there will be an end of all complaints of "scandalous jollifications" on the part of the festive *burro*, and those whose slumbers were cut short the other night have our solemn assurance that thenceforth they may sleep and take their rest in peace.

J. McBOKUM.

Roll of Honor.

[The following list includes the names of those students whose conduct during the past week has given entire satisfaction to the Faculty.]

SENIOR DEPARTMENT.

Messrs. Ashton, Aubrey, J. Burke, Britt, P. Burke, Baca, Barnes, Bush, Barrett, Beaupre, Burns, J. Brown, Colina, Craig, Cusack, W. Cartier, C. Combe, Coady, Crilly, Craft, Cassidy, Dwyer, W. Dorsey, S. Dorsey, Dillon, Dreever, Duffield, Dempsey, Eyanson, Finckh, Fehr, Gallardo, Gordon, Gibbs, Griffin, Houck, Hiner, Hummer, Hagerty, J. Judie, Jordan, Jeffs, Kelly, Kreutzer, Kleiber, Kingsnorth, Kramer, Lally, Ley, Langan, Leonard, McManus, McKeon, J. McDermott, T. McDermott, McErlain, McGinnis, Mul-kern, V. Morrison, McNamara, L. Meagher, McNally, P. Neill, J. Nester, F. Nester, Andrew Nicholl, Alfred Nicholl, O'Rourke, O'Regan, O'Connell, O'Kane, L. O'Malley, V. Padilla, P. Prudhomme, Paschel, Poole, Prichard, Pender, Quigley, Quill, Rheinberger, Rohin, Rothert Rodriguez, Regan, Rochford, Ryan, Suing, W. Sullivan, Shields, C. Stubbs, Triplett, Woodman, Wilson, M. White, W. White, Weber, Wagoner.

JUNIOR DEPARTMENT.

Masters Adelsperger, Austin, Adams, Anderson, H. Bron-son, Blessington, Badger, Bunker, Bull, W. Boland, Benner, H. Boland, Burns, Burts, Baca, E. Campbell, Carney, Cavanagh, Clifford, B. Clarke, Cooney, Coad, L. Chute, F. Chute, Curtis, G. Cooke, Coman, Duffield, Dempsey, Dunning, Darragh, Fitzharris, Falter, Flood, Fisher, Flynn, Freeman, Galarneau, Goebel, Girten, Hoffman, Houlihan, Hart, A. Hake, T. Hake, Henry, Hannin, Hayes, Hampton, Hoyer, E. Higgins, H. Higgins, Handly, Hebbard, Howard, Heller, Inks, C. Inderrieden, Joyce, Jacobs, Johns, F. Konzen, W. Konzen, Kern, Kutsche, Kinsella, King, Landen-wich, Long, Lane, McKenzie, McCart, W. McCormick, McIntosh, Macatee, McPhee, Mulberger, Moncada, Mc-Nulty, Morrison, Mitchell, McGuire, McDonald, McCam-bridge, McCabe, Nations, Noud, O'Connor, Ormond, O'Brien, M. O'Kane, B. O'Kane, O'Shea, O'Hearn, Pfau, L. Paquette, C. Paquette, Quealy, Ramsey, Riedinger, Sweet, Steele, J. Stephens, F. Smith, M. Smith, Schloss, Sullivan, Taliaferro, Tewksbury, Tarrant, Tedeus, Vhay, Warner, Wilbanks, L. White, Wagoner, Walker, Welch, Walsh, Wade, Wageman, Wilkin, Weimer, H. White, Wood, J. Keating.

MINIM DEPARTMENT.

Masters W. Ackermann, Boettcher, Bloomhuff, Black, Blumenthal, H. Backrack, S. Backrack, A. Backrack, C. Clendenin, Crotty, Cooke, Cohn, C. Connor, W. Connor, J. Conners, E. Conners, Corbett, Doss, Dahler, J. Dungan, Jas. Dungan, Davidson, L. Dempsey, J. Dempsey, G. Franche, C. Franche, Foote, T. Falvey, F. Falvey, E. Falvey, Graham, Gale, Griffin, Grant, Goldmann, Garber, H. Huiskamp, J. Huiskamp, Haney, Hagus, Hillas, Jewett, Koester, Kutsche, Keefe, Kane, Klaner, Kerwin, Kraber, Kinsella, Löwenstein, Lewin, Lane, C. Mooney, H. Mooney, Martin, A. Mayer, L. Mayer, G. Mayer, Munro, Mainzer, Mason, Morgenweck, Mahon, McPhee, McGuire, McIn-tosh, McDonnell, Nester, O'Mara, O'Donnell, Priestly, L. Paul, Quill, Quinlan, Riordan, Rowsey, Rogers, Smith, J. Sullivan, F. Sullivan, Stone, Sweet, Savage, F. Toolen, F. Toolen, Tompkins, Triplett, Taft, A. Williamson, W. Williamson, Walsh, Witkowsky, Weckler, Ziemann.

Saint Mary's Academy.

One Mile West of Notre Dame University.

—Thanks for kind favors are extended to Miss Pierson.

—Rev. Father Walsh preached a beautiful sermon at the closing of the month of May.

—An excellent sermon in honor of the Blessed Virgin was preached by Rev. Father Zahm on Monday evening.

—On Friday morning Very Rev. Father General delivered a beautifully appropriate and instructive discourse to the Children of Mary in the Chapel of Loreto.

—The promptitude and constant attendance at the meditation, Mass and May devotions of the Children of Mary during the month have been most edifying.

—A flying visit from Miss Clara Ginz and Miss Sarah Dunne, both of Class '85, was received on Thursday. The last-named was on her way to the far West, where fortune promises to await her.

—The careful observance of the Academic rules by the pupils of the language classes on the occasion of the picnic last Thursday is noteworthy. The teachers in attendance were well pleased with them.

—An interesting letter has been received from Miss Frances Howe, the well-known and graceful contributor to the pages of the *Ave Maria*. She is always remembered most affectionately by her many friends at St. Mary's.

—The badge for politeness in the Minim department was drawn by Mary Becker; but she waived her claim in favor of her sister Ivy. Those who drew with them were the Misses Caddagan, McCormick, O'Mara, Pugsley and E. Quealy.

—On Tuesday, the Feast of St. Angela, Very Rev. Father General sang High Mass for the late Mother Mary of St. Angela, whose loss is so deeply deplored, both far and near. An exquisite floral offering was sent from Michigan City in honor of the dear departed, for which grateful acknowledgments are tendered.

—The familiar faces of old-time friends are always welcome at St. Mary's; but few are more so than two now upon the list of visitors; Mrs. M. A. Stace, of Marshall, Mich.—the learned and distinguished writer,—and Miss Mary Kaul, of Lancaster, Penn., the sister of Rev. Anthony Kaul, pastor of St. Anthony's Church of that place.

—The Princesses are rejoicing in a late honor paid to them by the Superior of St. Mary's of the Rosary Academy, Woodland, Cal. It is an invitation to the closing exercises of that new and flourishing institution, which they would most gladly accept through personal affection for the beloved Superior. But since they cannot go to Woodland, they will do their best, and pray for her with all their hearts.

—Among the late visitors to the Academy are the following: Mrs. Col. Steele, of Columbus, O.; Mrs. James Meehan and her two little daughters,

Lucy and Gertrude, Covington, Ky.; Mrs. Alfred Eddy, Miss Frances M. Eddy, Mr. and Mrs. E. L. Hamilton, Mrs. W. I. Gilbert, Niles, Mich.; Mrs. S. G. Fisher and Miss E. F. Fisher, Mrs. W. A. Tomlins, little Helen Armor, Mrs. Wm. Curran, Chicago; Mr. Wm. Crotty, Rockford, Ill.; Mr. P. Coad, Pana, Ill.; Mrs. G. C. McMahon, Dwight, Ill.; Mrs. Charles Reynolds, Jacksonport, Wis.; Mr. M. A. Hartigan, Plattsmouth, Neb.

—The examination of the Graduates in English Composition was held this week. The Bureau consisted of Very Rev. Father General Sorin, Rev. President Walsh, Professors Hoynes and Fearnley, of the University. The examination of the first class in French Composition took place in the presence of Very Rev. Father General Sorin, and Rev. Father Saulnier; that of the first class in German Composition was presided over by the Rev. Father Kirsch, of the University. The most encouraging commendations were given to the young ladies in each department. Will the kind and lenient examiners accept the heartfelt thanks of the young ladies?

—On the Feast of Pentecost, *Rosa Mystica*, Vol. XIII, No. 3, was read at the regular Academic reunion. Editresses: the Misses Mary Dillon, Bertha Kearney, Jennie McHale and Catherine Scully. Very Rev. Father General gave this the preference before any number which has been read during the scholastic year. By right, strictly speaking, *Rosa Mystica* should number the volume as XXX, as it was issued in its English name—*The Mystical Rose*—in the winter of 1857; and it was for years the only manuscript paper read in the Academy. In 1874 its Latin name was assumed, hence the number of the present volume. The range of articles read on Sunday was wide, and the subjects varied. The "Valedictory of *Rosa Mystica*," penned and read by Miss Mary Dillon, touchingly brings up reminiscences of the past year, and gratefully alludes to the temporary resignation of the beloved chaplain of St. Mary's, Rev. Father Shortis, who has for so many years served the interests of St. Mary's. Age and increasing debility obliged him to seek a rest. It is to be hoped he will soon recover and resume his priestly duties, so dear to his truly religious heart.

The Picnic of the French and German Classes.

On Thursday morning, a clear sky decided the programme of the day. The absence of any prospect of showers announced that the pleasure deferred for a week, for one reason or another, should no longer be denied to certain diligent young ladies and little girls who, like their predecessors for several years past, have looked upon the "Picnic in Mr. Coquillard's Grove" as one of the "fixed institutions" of the Academy. The aforesaid young ladies and little girls constitute the members of the department devoted to the study of the languages, and which embraces the most interesting portion of the Academy—that is to say, those

children who are so shrewd as to realize the importance of a *liberal education*, and whose aspirations are something above a meagre course; who are wise enough to consider the acquisition of two or more languages, beside the vernacular, as indispensable in a social and educational point of view, to say nothing of the great advantage in numerous other respects.

At eight o'clock precisely the pupils of the German classes were at the Academy door, and a spacious open omnibus was in waiting to take them to their destination. With merry hearts and pleasant chatter they seated themselves in the vehicle, and the sun danced gayly on the leaves of the beautiful trees that line the avenue to the gate, as they drove swiftly along, enjoying the fresh morning air and the delightful landscape. About one hour later, the pupils of the French classes were also speeding over the way from the Academy to the grove, and the picnic was fully inaugurated by ten o'clock. The morning past in rambles through the pleasant walks, in the vigorous use of the swing, and other playful pastimes.

Mr. and Mrs. Alexis Coquillard, in their own cordial and charming way, invited the entire party to their residence, and the afternoon was enjoyed, even more than the early part of the day. The thoughtful host and hostess had provided so generously for the entertainment of the young ladies, and so genial was the atmosphere of the place, that all were delighted beyond measure.

As a matter of course, the young ladies were not reluctant to furnish their share towards the pleasure of the youthful assemblage. They had prepared a beautiful *souvenir* of the occasion in the form of an address, complimentary to Mr. and Mrs. Coquillard, exquisitely adorned by the hand of Miss Harriet Birdsell, and transcribed by Miss Lillie Van Horn, who read the effusion in a modest and entertaining manner, the gracious lines finding a quick and evident response in the hearts of the recipients.

The Misses Belle Snowhook, Minnie Rend, Lillie Van Horn, and Mable Barry skilfully performed artistic pieces on the piano, and the Misses Mary Frances Murphy and Kathleen Gavan furnished beautiful songs. Miss Lulu Koester, who had considerably brought with her her magic violin, in her admirable execution on that instrument she afforded much pleasure.

To break the solemnity, or rather quiet dignity, of the programme, Erna Balch, and Nellie Quill sang very amusing songs, which had the effect of rousing the mirth-loving propensity and the unrestrained merriment of youthful guests, and the amiable host and hostess proved their appreciation of the facetious interlude.

Miss Alice Cary's "May Days" was well recited by Miss Frances Carmien, and though the excellent rendering contributed pleasure to every one, the interesting little two-year-old Joseph Coquillard was completely enraptured from first to last; never moving his wondering and admiring gaze from the face of the speaker till the long recitation was concluded. He formed a truly charming picture with his attitude of absorbed delight,

and his beautiful features kindling as he read in the action of the young lady that which appealed to his rich unfolding mind. "Action speaks louder than words," and this adage was fully verified in the rapt attention given by this dear little one to words he could not, of course, be supposed to understand.

Miss Eleanor C. Donnelly's very striking "Contrast" of an æsthetic young lady, whose delicate

"Fingers that like lily leaves
Neither toil nor spin,"

and her poor drudge of a mother, with

"Fingers hard and brown as nuts
When the frosts begin,"

was rendered by Miss Rhoda Sterns, who, for a pupil who has taken Elocution lessons for but a short time, certainly recites well.

Quite unwelcome was the intelligence that the time had arrived for the "first load" to return home. Those who ranked with them in the morning were not all to be found. The springs of the carriage were not weighed down as they had been in the morning. Not till the wheels receded from sight, did the missing ones make their appearance. If a look the least indicative of surprise then met them, it was hailed with the reiterated declaration: "Sister, I am to go last!" "Sister, I am to go last! Sister said so."

The omnibus was full to overflowing when the merry group at last reluctantly bade farewell to their kind entertainers who invited them to come again in May 1888, and have their usual picnic in the same place, with the same enticing adjunct, the visit to Mr. Coquillard and his amiable and accomplished wife, who for a length of time before her marriage was a beloved resident of St. Mary's.

Warm thanks are over and over again tendered for the picnic, not alone to Mr. and Mrs. Coquillard, but to the ever kind Prefect of Discipline, who secured the pleasure for the young ladies.

Roll of Honor.

SENIOR DEPARTMENT.

Par Excellence—Misses Allnoch, Brady, L. Blaine, Barry, Bub, Burke, Blacklock, Beschameng, Birdsell, Clifford, E. Coll, Coglin, Claggett, Dillon, H. Dempsey, C. Dempsey, Desenberg, M. Dunkin, Egan, Fuller, Faxon, Flannery, Fravel, Fitzpatrick, C. Griffith, Guise, Gordon, Griffin, Horn, Hummer, Heckard, Hertzog, Harlem, Henke, L. Hutchinson, M. Hutchinson, Kearsley, Kearney, Kearns, Kingsbury, A. Kennedy, M. F. Murphy, McHale, Miner, L. Meehan, M. Meehan, Morse, M. Murphy, M. McNamara, C. McNamara, M. McCormick, Marsh, Moore, McCarthy, Moran, O'Conner, Negley, Neff, Patrick, Proby, C. Quealy, Riedinger, Rend, Rose, E. Regan, Reed, Robinson, Scully, St. Clair, Shephard, Snowhook, Shields, Sterns, R. Smith, M. Smith, Stafford, Stocksdale, Sullivan, Sweet, Triplett, Thompson, Tomlins, Williams, Wolvin, Wehr, Wimmer, Weishart, Wright, Zahm.

JUNIOR DEPARTMENT.

Par Excellence—Misses Boyer, Bruus, Bridgeman, Burdick, Coll, Clore, E. Dempsey, L. Griffith, Geer, Hughes, Heyman, M. Kennedy, Knauer, Koester, Leonard, McDonnell, G. Meehan, N. Morse, Mercer, Nester, Prudhomme, Rogers, Stapleton, Stiefel, Wiesenbach.

MINIM DEPARTMENT.

Par Excellence—Misses I. Becker, M. Becker, Caddagan, B. McCormick, O'Mara, Pugsley, E. Quealy.