

The Dalhousie Gazette.

"ORA ET LABORA."

VOL. XXV.

HALIFAX, N. S., - APRIL 12, 1893.

NO. 9.

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It will be greatly to the advantage of the GAZETTE for Students to patronize our advertizers.

AT the present day the method of fixing the status of the student by putting him thro' an ordeal of written examinations exists only by sufferance. It is tolerated as a necessary evil. Nobody praises the method; everybody is ready to point out its defects; but all agree that it must stand until some better method is found to take its place.

To the intelligent observer an examination paper is as good as a character sketch; for in it, as in a mirror, the traits of the professorial mind are reflected. There you can see the indulgent examiner, the stern examiner, the tricky examiner, the unfair examiner. Notice this paper: its questions are short and easy, just such questions as would suit even the dull and lazy. The good humor of the examiner shines out all thro'. He is probably a favourite with the boys; he is full of the milk o' human kindness. Ten to one, when some unfortunate lad, obedient to the dread summons, appears before the senate, to answer for scrimmaging, or, it may be, for cutting off his beard without leave, this indulgent prof. stands between him and punishment.

Glance now at the other side of the shield. Look at this paper and mark how it bristles with nice and difficult points; it is the pluggers' delight, but the idler's terror. You may safely prophesy a goodly number of 'plucked'—a goodly number of victims offered up to propitiate the wrath of the stern examiner. He is probably a hard-visaged man, with cold, steel-gray eye; he loves order and decorum, dislikes any ebullitions of esprit de corps, and would like to have convocation conducted after the manner of a Sunday School convention.

See yet another paper, full of catchy and ambiguous questions, depending for answer or solution on a kind of mental legerdemain. This paper has been set by the tricky examiner. Depend upon it, he is a man of ungenerous nature, credulous and easily moved to suspicion. You would suspect to find him stealing round the corner on tip-toe that he might catch unawares some offending student. He is chief of the professorial detective force, and in that capacity finds ample opportunities for exercising his varied gifts.

Notice, once more, the characteristics of another paper. This one has been framed with the deliberate intention of confounding the student. The examiner has taken pains to go beyond his class work and to ask questions which no knowledge of regular work, however thorough and accurate, will enable the student to answer. This professor corresponds to that biblical character who is described as reaping where he has not sown and gathering where he has not strawed. The feeling of the student who is called upon to wrestle with such a paper is one of mute anger and rebellion.

We now turn with pleasure to that examination paper which bears on its face the honesty and fairness of its framer. There is not a question there, but is representative of the character of the work done in class thro' the session; there are no catch questions, none demanding antiquarian and trifling knowledge. You could not imagine such an examiner requiring the length of Cleopatra's nose or the location of Virgil's tomb. He has risen superior to humbug, and we honor and respect him for having done so. If all examiners were such, the abuses and defects of our system of written examinations would be reduced to a minimum.

WILL our readers pardon a few words on *Prejudice*?—a subject somewhat stale, and yet one whose many-sided aspects may give fresh glimpses of truth. Prejudice is a mental vice as widely spread as the human race. It is found among all ranks and conditions of men. Its natural home is in the sunless cave of ignorance; in the mind whose understanding is darkened from want of knowledge. Where it grows and flourishes, just as noxious herbs thrive best in unwholesome places. But education and an enlightened understanding do not always imply the absence of this vice. The fairest minds are not exempted from its sway; its dark shadow is thrown over the genius of a Milton or a Carlyle. Indeed so rare are the men who are entirely untainted by it, that, when we find them, we hail them as grand Originals. Such a grand Original was Shakespere—one of the very few examples that can be pointed out. Still, it may be said that, on the average, the strength of a man's prejudices is measured by his mental culture.

When we say that one thinks or acts from prejudice, we mean that he thinks under the influence of some bias, that he acts without having calmly and dispassionately revolved the issues in his mind; in other words that he has pre-judged his case. Is it an exaggeration to say that in some of the most important particulars of life, the vast majority of men think and act in the above manner? Such a view, despite its variance with our theoretical notions of the free play and domination of reason, unhappily finds too strong a confirmation in the history of the race. Take, for instance, the grand departments of Religion and Politics. Is it not a familiar fact that, in the vast majority of cases, a man's religion is a mere circumstance of birth and education, perhaps even of locality. By close and careful education the child is indoctrinated in the principles and religious notions bred by his parent and the sect to which his parent belongs. He takes on faith what is given him; for he has not the mental capacity to test its truth. When years of maturity have been reached, the bonds of training and education have become too strong to break, the man's condition is fixed. He has been brought up a Protestant; he will live a Protestant, and will die in that faith. Similarly the Catholic lives and dies in the religion of his childhood and youth. Hanging and wiving

go by destiny, according to the proverb. Does a man's religious creed or faith also go by destiny?

Next in strength to a man's religious prejudices come his political prejudices. If the reader were asked regarding the average Grit or Tory, whether he were born or made, his answer, if consonant with experience, would be 'he is born.' Fixity in politics is greatly admired by the general public, and especially by politicians. It is convenient, you know, to count your electoral votes before hand with ease and certainty. Consequently the man who breaks away from his party is regarded by the friends of the former faith with distrust and suspicion, and all because he has risen superior to prejudice; because he found his grand-father's and his fathers religion not good enough for him. We see upon what a basis the boasted fabric of democracy is reared.

The fact of the matter is that our young people at the present day are not really taught at all, in the true sense of the term, but rather they are stuffed. The true aim of teaching ought to have for its aim the formation of careful habits of thought. The teacher—whether he be a natural or paid teacher ought not to force his own opinions on the pupil; he ought rather to refrain from all expression of decided and dogmatic opinion, except in relation to its palpable truths. Let all the data be placed upon the youth; teach him how to form a correct judgment, and leave the rest to himself. Then we may hope to find the coming generation somewhat less biased, somewhat less slavishly obedient to authority, somewhat more original than the preceding.

THE ARTS LIBRARY.

The great value to every student of a well furnished library cannot be over-estimated. To possess one of his own is 'no unworthy aim' of a true student, and to learn to make the best use of books ought to be no small part of his college education. Our library is rapidly becoming suited to a student's needs and we notice is more used than ever before. To be available to all, the hour of opening should be early—of closing, late. Students of the First and Second years have little time for reading, before noon, while those of the Third and Fourth

years frequently have an hour between classes to spend in the library. The ideal hours would, we think, be 9 a. m.—1 p. m. and 3-5 p. m. daily. We hope something approaching this will be continued next session.

During the past year the library has been the recipient of some very valuable gifts. Dr. MacMechan has presented the English department with 204 volumes purchased from the proceeds of a course of public lectures delivered by him on Shakespeare. Dr. Furnivall has presented the library with 41 volumes, the publications of the new Shakespeare Society.

Last year Prof. Seth handed over \$220, the proceeds of a course of lectures on Psychology to Teachers, to the library to be expended on books for the Philosophical Department. Already 58 books have been purchased with the fund. THE PHILOMATHIC SOCIETY is making a collection of Canadian books and pamphlets and has already presented the library with 32 volumes. The Y. M. C. A. has made a very valuable collection of works on missions and presented 22 volumes to the library. From the GAZETTE the library received 32 volumes; from MacMillan & Co., 45 volumes; from Heath & Co., 8; from Alumni Association, 6; from President Forrest, 8; from Prof. Murray, 6; from Dr. McGregor, 4; from Mrs. W. H. Harrington, 2; from Angus Murray, Esq., 2 volumes; from the following—Dr. A. H. McKay, Alex. McKay, Esq., W. H. Johnston, Esq., John Montgomery, Esq., B. L. Miss Margaret McPhee, Prof. Chandler and Dr. McNutt, 1 volume each. Reports have been received from the following:—United States Government, 6; Dominion Government, 4; Geological Survey of Canada, 4; Smithsonian Institute, 4; Royal Society of Canada, 1; Mining Society of Nova Scotia, 2; Bridgeport Scientific Society, 1.

Contributed Articles.

THE MODERN NOVEL.

To write an article of any weight on a topic so hackneyed, if I may be permitted to use the word, requires study, knowledge and experience, which the writer would in vain attempt to claim. Yet it may be that as one who has dipped pretty extensively into the current light literature of the day, I may strike a responsive chord in the breast of some of my readers.

The modern novel! what a host of ideas rush to the mind on hearing these words. We think of the pragmatic authors, of the sentimental writers, of the semi-historic romancers, of the real and pseudo-philosophic novelists, and of those who paint in bright colors wild adventures and daring deeds. But none of

these works strike us as peculiarly characteristic of our present time literature. I take it that it is to the writers of the so called realistic school that we must look for works that future ages will speak of as the characteristic novels of our time.

Some one has said or written, I plead ignorance as to which, that if you wish to know the character of a people you need but know their literature. What a reflection of the Greek mind and character is to be found in the works of authors who wrote while Greece was "Living Greece" indeed. The admiration for beauty in nature and beauty of soul; the devotion to music and the arts; and the love of the noble, the true, and the great shines forth in letters of gold from the pages of Doric, Ionic, and Attic literature. How we seem to hear the tramp of martial men and the pæon of victory, and stand awed before the proud dignity of the would-be conquerors of the world, in the great writers who dwelt in her days of prosperity and growth amid the seven hills of the queen of the yellow Tiber; and how too we see low aspirations, corrupt thoughts, debasing subservience and life-sapping effeminacy of the people amongst whom the caustic or prurient writers of the later Roman Empire penned their biting sarcasms, or their disgusting biographies and vile prose or poetical ebullitions.

What would the student of mankind who made the literature of a people the reflex of their character say of the people of our own times? He would, I think, be compelled to say that the realistic novel is the typical literature of the age. Without entirely agreeing with me in this regard, many would venture to affirm that the realistic novel certainly is a feature of the literature of the present, passing stage of history, both of the Gaul and of the Anglo-Saxon. And the question arises whether we are to congratulate ourselves on this state of affairs or to deplore its existence? I certainly think that, however the realistic novel may be denounced, the readiness to write such works, and the eagerness to read them, frequently so much and so loudly deplored, is evidence of a fearless desire to look things in the face as they are; to tear down the veil from the hidden face of nature and ask what is behind all this. The tree of knowledge may bear on its branches the fruit of death. The *mala prohibita* may prove to the daring hand that violates the rules of conduct laid down for man's guidance very Dead Sea fruit upon his lips. But what would we wish? The unsuspecting innocence of Eden, or the knowledge of good and evil? Knowledge is power. Its acquisition may be costly to one generation, but it is invaluable to all others. The panting for liberty that convulsed France in the eighteenth century seemed as a death blow to the stability of governments. But from that horrible pit of human passion, suffering, crime, and sin has grown up the

world-wide recognition of the principle of responsible government. Not that I say that the realistic novel is in itself evil or productive of evil, not at all. But I have heard and read so often of the denunciations hurled at this offending creature, that I have thought I might be excused for addressing myself however briefly and however imperfectly to the crusaders who have taken up the white cross against this offender.

Is not the realistic novel an outgrowth of the restless desire of our age to get at the bottom of things? Have we not portrayed herein the very thoughts of the people? Why should we fear to lay bare our own souls before our own eyes and see and reflect on our own thoughts? Self-knowledge, introspection is surely a good thing for a man, and why should it not be for a community, a nation, yes for a world? Is it not by a study of the defects in a system that we arrive at a conclusion as to how it is to be perfected? Even if in some cases the picture is overdrawn, and strong, unnatural or improbable situations are depicted, I think the healthy minds of a free and intelligent people will soon lop off the decaying branches and prune the tree of knowledge for the development of a sound and healthy growth.

Secrecy, concealment, a repression of well-known facts, is rarely a good thing. A free, open, frank disposition is as admirable in a people as in an individual. I believe myself that to a large degree the Spartans were on the right track. There are many admirable points in the polity of Plato's ideal Republic that are not much discussed, but will well bear consideration. The false modesty so ably depicted by writers like Fielding, that sentiment which hugs the shadow as dearer than life while it is ever seeking an opportunity to surrender the reality, is an outgrowth of the glamour which man has thrown over facts known to all and ignored by those that know them.

I believe the realistic novel in its present stage is a temporary outburst in the world of fiction, and that it has a great purpose to serve in the moral and social life of the nations. It is the marking point of an epoch in the history of our race. We are in the throes of a great struggle between true virtue and degrading vice. The old props have been taken from below the edifice of social life, and the building is found to be standing on a bed of sand. The rotten timbers must be cleared away, and deep must we dig for the foundation of stone far below. The realistic novel is the thick cloud of dust that rises from the battle-field. Mark well the direction that it takes, and you will surely see that in time the corrupt authors of social ruin, be they laws, customs, or ideas, will be swept away before the armies of noble aspirations, material growth and true virtue that are steadily driving them from our midst; and then, when

victory is won, the smoke of battle will roll away and the dark cloud, as it disappears into thin air, will let the sun shine all the more brightly on the victors in the struggle for the highest development of our common humanity.

M. G. A.

THE NEED.

I had a dream and in my dream I saw a statue cut in marble, cold and grey. The head was magnificently shaped, the features were exquisitely chiseled and the limbs were beautifully formed, but the statue was cold and grey.

An artist passed by and looked at the statue and cried, "Tis colour, ah, 'tis colour she wants," and he painted beautiful scenery about her and he hung the walls with brightly coloured curtains and he spread the floor with glowing tinted carpets, but still the statue was cold and grey.

A musician came up and beholding said, "She would have song, she must have song," and he gathered masters from other lands and day and night they sang before the beautiful statue which remained as ever, cold and grey.

And when the poet came he whispered that she should have love, and so he stayed with her the whole day long and held her to his heart and kissed her lips and chafed her little hands in his, but when night came the statue stood there just as cold and grey as she had been at early dawn.

And one dark night a man of God came passing down the road. So dark the night, he groped to find his way, when suddenly as he stretched forth his hand, he felt it grasped by something hard and cold and much in fear, he sank upon the ground to pray, and this is what he said: "Oh Thou great and mighty One who hath made the earth and man, hear my petition. Let not my soul depart this world; let my body be crumbled in the dust; but let my soul live on and living, live to praise Thee evermore." And even as he spake his prayer was answered. The fastenings of his soul were loosed and she departed and entered into the statue once so cold and grey. And as life entered in, the darkness moved and it was day.

I looked and looking I beheld the hand no longer cold and grey stretch forth and grasp the gold. I beheld the features of the face take on expression and as the eyes gazed on the artist's work the tender lips curved in a softening smile, and as the ear caught the sweet strains of music the heart of woman melted into song. And as the velvet cheek felt the warm kisses of the poet the sweet voice quivered and the music ceased, the eye-lids trembled and the eye-lids dropped, the queenly head sank down to rest and she yielded kiss for kiss.

She gave herself to life, to love, to feeling and to God. She was no longer cold and grey as yesternight, for in and over her and round about had dawned the quickening sunlight of a soul.

J.

Selected Articles.

CRAMMING.

In view of our present examinations and the discussions which have recently appeared in reference to overwork in Nova Scotia High Schools the following extract may prove interesting:

In educational circles there is probably nothing that is subjected to more general, uniform, unmitigated condemnation than the practice known by the name of cramming. But, as Shakspeare has told us, "There is some soul of goodness in things evil"; and Herbert Spencer has aptly added that there is some soul of truth in things erroneous. It is, therefore, by no means an inappropriate inquiry, whether there is not some soul of goodness even in this evil thing which educationists are so eager to banish from our educational systems; and it may be that the evil of cramming will be most completely suppressed by giving it full rights to the good which it involves.

In order to do this we must, first of all, make ourselves perfectly clear as to what cramming really is. In answering this question it need scarcely be observed that the word *cram*, as applied to a mental process, embodies a coarse, though forcible, figure — a figure so obvious that it must have been adopted in language at an early period.

Now, as a mental phenomenon, cramming is a peculiar form of memory. It is not difficult to define its peculiarity. All memory, as pointed out long ago, presents two phases, retention and production. It is the retention of knowledge as a possession of the mind that seems to be most prominently implied in the word *memory*, whereas the readiness with which past acquisitions can be reproduced in consciousness when wanted is more distinctly expressed by *recollection*.

The characteristic of cramming—that which distinguishes it from the more valuable form of memory — is that it aims merely at the retention of facts for a limited period, and their recollection on a specific occasion. This, in fact, constitutes the most limited sense in which the term is employed to denote the process of preparing for an examination, a use of the word which seems to be comparatively recent. Accord-

ingly, the psychological problem presented by cramming is, to explain how memory is limited in this peculiar way.

Connected with the two phases of memory is a doctrine occasionally met with among older psychologists, that retention is cultivated, mainly or exclusively, by intensity; readiness, by repetition. This doctrine, however, cannot be accepted as an adequate expression of the facts; it must be modified by important qualifications. The truth is that intensity and repetition, like other agencies in mental life, and like the forces of nature in general, are not to be viewed as abstract influences, each working out its results in isolation from others. In all the most important phenomena of memory intensity and repetition co-operate, the value of repetition depending on the intensity with which it is started, while the value of intensity consists in the initial impulse which it gives to repetition.

It is scarcely necessary, by way of illustration, to point out the educational value of this fact. Every student is well aware that the acquisition of knowledge, which is not only to be a permanent possession, but to be readily available for service when wanted, requires an intense concentration of the mind on the subject of study; and every teacher knows how hopeless is the task of training pupils to recall anything readily, if he fails to awaken their interest and thereby to arrest their attention.

It appears, then, that for ready recollection it is not merely repetition that is called into play; the effect may be produced by a single impression of unusually powerful intensity.

All this, however, is qualified by the additional fact that the effect of intensity is shown, not so much in the reappearance of the intense impression after a long interval of time, as rather in the persistence with which it continues to be intruded into consciousness, whether welcome or not. Without breaking down the old distinction between retention and recollection, it may be said that the permanent retention of an impression is commonly revealed in consciousness under the suggestion of facts which have been linked with it by some law of association. Consequently, the influence of intensity is comparatively insignificant when divorced from repetition; its significance, as already stated, it to be found in the initial stimulus which it gives to suggestion. And therefore an impression, however intense in its origin, may lose its influence over the mind, and fade irrecoverably from memory, if it is not repeatedly revived.

Here, then, we reach the psychological explanation of cramming, that is, the process by which knowledge is retained for a limited period, and recalled on a specific occasion. First

of all, it elevates into prominence the power of intensity, subordinating that of repetition. For intensity, being one of the conditions of suggestiveness and suggestibility, results not only in retention, but in ready recollection.

The interest of the crammer, however intense, is expressly limited to a particular occasion; and when that occasion is over, the impulse which its interests created collapses. Of course there is a fact which is not to be forgotten in this connection; and that is that a subject of study may possess many varied interests in itself, and that therefore the cramming of it for a particular occasion may awaken the mind of the crammer to its intrinsic interests, and thus make the subject for him a permanent intellectual property. This, however, is not the essential purpose of the crammer, but merely an incidental result of his work.

This limitation of the crammer's interest in his subject is aggravated by his method of study. His aim is merely to recall what he learns at the appointed moment; and consequently he does not seek to comprehend its larger bearings—to grasp particular truths in their dependence on general principles, and still less in their vaster connection with the universal order of things. He prefers to practice any mnemonic artifice, though it may be based on some very superficial association, if it will only kindle, for one brief moment, a spark of intellectual light to flash upon his consciousness the facts required at the proper time.

With this analysis we are in a position to estimate the practical value of cramming, and thus to indicate its legitimate use as well as to guard against its abuse. It has a perfectly proper function and therefore a real utility in human life. Every occupation demands a certain acquaintance with facts for purely temporary purposes, and success depends on the mastery of these facts so as to make them readily available for intelligence when required.

But from this it follows that, while the faculty of cramming is an acquisition the culture of which should by no means be wholly deprecated, on the other hand its essential nature evinces the serious blunder of giving it undue prominence in an educational system. So far indeed as its just recognition is concerned, it will probably be admitted that no specific provision for its culture is required; the daily necessities of educational methods, however perfect, will incidentally give sufficient opportunities for developing a power of committing to memory merely for the temporary purposes of scholastic work. The danger, therefore, is not that the value of this power will be ignored, but rather that it will receive an unfortunate encouragement. For the education of this power, though it may be accorded a place, can

claim at best but a very small place, in the general education of the human mind. It is not in truth to be considered education in the proper sense of the term at all. For real education is always education in some particular subject of study, and implies that the subject studied has been so mastered as to have become a permanent possession of the mind. No man, therefore, can be said to be educated in a subject, who has merely crammed it for the use of an examination or for any other temporary purpose.

It is not necessary to point out in detail the bearing of all this upon the educational life of the present day. One feature, indeed, will be naturally suggested; that is the prominent position and frequent recurrence of examinations in our educational methods. It is not of course to be supposed that examination can be dispensed with altogether, or that it does not form a legitimate stimulant of intellectual effort. But it is impossible to overlook its dangerous tendency to substitute the temporary cramming of a subject for that permanent mastering which alone is entitled to be called education. Precautions against this tendency may become all the more earnest and intelligent, if an analysis of the real nature of cramming reveals more clearly its futility as an effort to gain that real knowledge at which education aims. If we could conceive cramming to become the habitual process of any man's intellectual life, he would be doomed to stand by the shore of the great ocean of truth, not like Newton to pick up a precious pebble here and there, but to play the hopeless part of the daughters of Danaus by trying to gather its waters in a sieve.—*J. Clark Murray, in April number of Educational Review.*

SOME VIEWS ON THE DISCOVERY OF AMERICA.

In the first number of *The Canadian Magazine* Rev. W. S. Blackstock ably states the contentions of the rival claimants for the honor of being the first to see America:—

The Chinese, as becomes their high antiquity as a nation, and the fact that they possessed the mariner's compass more than two thousand years before Marco Polo brought it to Europe, make the first claim to this distinction. They claim that as early as the fifth century their seamen visited America, to which, or at least to the part of it visited by them, they gave the name Fan Sang, or, as it was afterwards called, Fusang. Where Fusang was situated is in debate, some locating it in the region of California and Mexico; others thinking that from the fact that it was reported, among other things, to contain deer and copper, it must have been farther north. Some eminent authorities,

Alexander Von Humboldt among the rest, entertain doubts respecting Fusang being in America at all, but the passages in Chinese history are too remarkable, and the account of the voyages to this far-off country which they give too circumstantial to be ignored; and until Fusang has been clearly identified with some other land, probably a good many will continue to believe, as they do at present, that it was in America, and that this continent was known to the people of the Flowery Kingdom in the early Christian centuries. It may be even true, as is alleged, that Hoer Shin, a Chinese Buddhist priest, was the first religious missionary to visit these lands, though this is not thought to be supported by as high a degree of probability as the location of Fusang in America.

It is claimed in behalf of the Arabs that they crossed the Atlantic some time in the 12th century. M. de Guignes, who is one of the principal champions of the Chinese claim, in certain memoirs drawn up by him, published in Paris in 1789, and preserved in the Institute de France, gives the account which he says he found in a manuscript in the King's library, by Ebnal-Onardi, from which he concludes that they must have reached America. The story, however, does not appear to be supported by sufficient evidence to entitle it to a very serious consideration. There seems to be a pretty general agreement among scholars who have studied the subject that the Arabs probably reached the Canaries, but that they proceeded no farther.

The claims of the Welsh to be reckoned among the discoverers of America seem to be supported by a higher degree of probability than that of the Arabs. It is related in the ancient chronicles of Wales that Madawc, son of Owen Gwinedh, left that country in 1170 and sailed westward, "and leaving Ireland on the north, he came at length to an unknown country, where most things appeared to him new and uncustomary, and the manners of the natives far different from what he had seen in Europe." But, though some of those who have examined the account are of opinion that Florida or Mexico was the country to which he came, others think that it was one of the West India Islands, and that he did not reach the continent. But whether Madoc did or did not set foot upon American soil, this one thing at least is certain that he got as near to the American continent as Columbus did on the occasion of his first voyage of discovery.

It is not surprising that the Venetians, considering the part which they have played in history, especially as a sea-faring people, should lay claim to a share in [the honor of independent American discovery. Nicolo Zeno's story of the achievements of his countrymen and ancestors in this respect, has, moreover, a considerable degree of probability to commend it. In 1558

Nicolo published a series of letters which, as he avers, had passed between his ancestors, Nicolo and Antonio Zeno, in the years 1380-1404. Assuming the genuineness of this correspondence, which the publisher says had been preserved in the family, though they had never been published until by the progress of events their importance had been made known, there can be no doubt that these mediæval navigators visited Newfoundland, to which they gave the name of Estotiland, and either the coast of Labrador or Nova Scotia, which they called Drogio. There is nothing improbable about Nicolo Zeno's story, and the probability is that it is entirely trustworthy.

Whatever may be thought of the claims of others to be reckoned among the independent discoveries of America, there does not appear to be any reasonable ground to doubt that the Norsemen are entitled to that honor. Even many of those who believe most firmly that Columbus carried on his explorations on purely scientific principles, and that his discovery was made independently of any hint of the existence of this continent except from his own abstract reasoning—if indeed when he set out he had any hope of finding a new continent at all—have nevertheless been forced to the conclusion that it was visited by the Vikings in the 10th and 11th centuries. The literature of the subject is so great that it will be impossible to quote authorities. All that can be done will be to give the facts upon which there seems to be substantial agreement among those who have studied the subject most thoroughly and whose special discipline fits them to speak with authority, and to do this in the most summary manner possible.

The Norseman, as distinguished from other branches of the Teutonic races, has had his home for many centuries in Scandinavia, especially in Norway and Iceland, and in the Orkneys, Shetland and other groups of islands north of Scotland. They were as much at home on sea as on land. The very dangers of the deep had a kind of grim fascination for them. Their piratical escapades made them the terror of all who went down to the sea and did business in the great waters. Hardy and brave, they were the very men to do exploits on the deep. They early distinguished themselves as shipbuilders, and though they were without the mariner's compass, their careful and persistent study of the heavenly bodies made them skilful navigators. It is not remarkable, therefore, that they were the first people in Europe to find their way to America. Indeed, in view of the facts of their history, it would be strange if they had not been the first to cross the Atlantic. They early discovered Iceland, colonized it, and established a republic there which lasted four hundred years. They planted a colony in Greenland, which brought them within two hundred miles or so of the

mainland of America and within seven hundred of Newfoundland. Strange would it have been if these Vikings—these monarchs of the sea—had not reached that island and made it the stepping-stone to the continent.

Then follows an interesting description taken from the *Sagas* or historic tales of Iceland of six voyages of discovery. The writer resumes :

Now the question arises, what bearing, if any, had all this upon the Columbian discovery? Of course it is possible that a gentleman living in Genoa and in Spain, engaged in altogether different lines of study, might never have heard anything of the discoveries and explorations of the Norsemen. Such a thing is conceivable. But Columbus was not only a scholar, in the usual acceptance of the term, but he was a geographer and a map-maker, and his calling led him to a careful study of the discoveries which had been made in every part of the world. He had, among other places, gone to Rome in the prosecution of his geographical studies and investigations, and in that city the exploits of the Norsemen in respect of this matter were very well known.

Then we have the testimony of his son, Ferdinando Colombo, that Columbus visited Iceland in 1478 and spent some time there; and it is scarcely conceivable that this man, who was a diligent reader of Aristotle, Seneca and Strabo, would have overlooked, while in that island, the work of Adam of Bremen, which was published in 1076, and gave "an accurate and well-authenticated account" of Vineland or what at present is known as New England. It is only reasonable to conclude that Columbus, during his stay in Iceland, managed to get from the learned men of the island—of whom it has always had a succession—all that they knew or that was contained in their books about the lands lying to the west of them. It would have been strange indeed if he had not done so.

In view of all these facts, it is pretty evident that when Christopher Columbus started on his memorable voyage of discovery, of which we have heard so much, he had some other assurance of the reality of what he was in pursuit of than he had obtained by abstract reasoning. No doubt his mathematics stood him in good stead in his efforts to convince Ferdinand and Isabella of the probability that off towards the setting sun there was land, of the existence of which he had obtained well-authenticated historical evidence, but concerning which he wanted to make them believe he knew nothing but on purely scientific grounds. It must be remembered that Columbus had a deep game to play. He had, first of all, to inspire confidence in his project in order to get the assistance without which it could not be undertaken; and then he had to invest it with such mystery

and make it appear to be beset with so high a degree of risk and danger, as to induce the Spanish Government to invest him with something approaching to almost absolute sovereignty over the lands that he might discover. The manner in which he accomplished all this proves him to have been a consummate tactician, but the fact that he took to himself the credit of a discovery which was made, and which he knew to have been made by others, shows that he was not the ideal man of honor.

Exchanges.

Outing for April opens with a weird story of the Orient—"In the Shadow of Nineveh," by Wm. Hinckley; "Sport with Canada Geese," by Ed. W. Sandys; "Through Erin A-Wheel," by Grace E. Denison; "Walking," by Malcolm W. Ford; and "Feathered Dancers," by J. M. Murphy, are other notable features of a finely illustrated and pleasing number.

WITH regard to the Home Rule Bill, which, at present, is causing so much agitation in both the Old and New World, the *Review of Reviews* says:—

"Every one agrees that Mr. Gladstone's speech was a great one, and at least half the electorate believes that it unfolded a great scheme for the settlement of the perennial Irish difficulty. Unfortunately it was more than that. Whatever may be its merits as a speech, or as a scheme for improving the government of Ireland, they are altogether overshadowed by the fatal proposal incorporated in the bill to insist, as a corollary of the establishment of a local subordinate Parliament at Dublin, upon the destruction of the Imperial Parliament at Westminster."

CANADA, MY COUNTRY.

Hail! Land of Winter, Snow, and Ice,
Of winds that sweep from northern seas,
Of clear cold moons and star-gemmed skies,
And frosted lakes reflecting these,
Where ruddy strength, and manhood sound,
And perfect womanhood, are found.

Hail! Land of Summer! o'er whose face
Cool breezes roam from northern seas,
Whose radiant sun sheds tempered rays
Where smiling lands yield glad increase,
Whose stalwart sons and maidens fair,
The blush of health and vigor wear.

Home turn my eyes to thy lov'd shores,
Back to thy busy useful life,
Where Industry its forces pours
To meet the world in peaceful strife;
And so where'er my lot may be,
My prayers, my Country, are for thee.

—MARCH "OWL."

THE publishers of the *Cosmopolitan*, with a view to increasing the circulation of their popular magazine to half a million, are making very liberal offers to any persons who are willing to act as agents, and solicit subscriptions during the present year. No less than one thousand prizes or scholarships are offered for competition, and will be awarded on condition of the canvasser receiving a certain number of new subscribers. The value of each of these scholarships is an amount sufficient to defray expenses for a year at any of the leading universities in America. The GAZETTE has received a number of booklets with full information on the subject, and will be pleased to present a copy to any of our students who intend entering upon such work during the coming vacation.

In the April number of *The Forum* Frederic Harrison clearly and forcibly gives expression to his views on the "Decadence of Romance." He says—"This is the lady-like age; and so it is the age of ladies' novels. Women have it all their own way now in romance. They carry off all the prizes, just as girl students do in the studios of Paris. Up to a certain point, within their own limits, they are supreme. Half the modern romance, and many people think the better half, is written by women. That is perfectly natural, an obvious result of modern society. The romance to which our age best lends itself is the romance of ordinary society, with delicate shades of character and feeling in place of furious passion or picturesque incident. Women are by nature and training more subtle observers of these social *nuances* and refined waverings of the heart than any others but men of rare genius. The field is small and home-like area, the requirements are mainly those of graceful intuition, the tone must be pure, lady-like, subdued. In this sphere it is plain that women have a marked superiority; it is the sphere in which Jane Austen is the yet unapproached queen.

Try to get out of modern democratic conformity and decorum and you may as well try to get out of your skin. Mr. Stephenson is playing at Robinson Crusoe in the Pacific, and Mr. Rudyard Kipling wants to die in a tussle with Fuzzy-Wuzzy in the Soudan. But it is no good. A dirty savage is no longer a romantic being, and, as to the romance of the wigwam, it reminds me of the Jews who keep the feast of Tabernacles by putting up some boughs in a back-yard."

THE Montreal *Witness*, which is to move into its own building next spring, will be by far the best equipped newspaper in a mechanical point of view in Canada. Its immense Hoe quadruple machine will be capable of turning out 60,000 eight-page, or 30,000 twelve or sixteen-page papers an hour, printed complete on both sides, cut, pasted, and counted in piles of fifty.

This will be one-third faster than any other press in Canada. In addition, its matter will be set on the Mergenthaler Linotype, which gives a new, clean face of type every issue, and its form will be compact and beautiful. The *Witness*, although old and reliable, is up to the front in respect of enterprise, and its readers expect and are not satisfied with anything but the best. The price of the *Daily Witness* is three dollars a year, of the *Weekly Witness* one dollar, and the *Northern Messenger*, published from the same house, is thirty cents. Agents wanted in every town, village, and P. O. Specimen copies will be sent free to any of our readers, on application to the publishers, JOHN DOUGALL & SON, Montreal.

THE latest issue of *Review of Reviews* thus considers the subject why England cannot come out of Egypt:

The British went to Egypt imagining that they had simply to put down a military mutiny. They found that the whole system of government, order and society had fallen to pieces, and could only be slowly built up again piece by piece and step by step. The army had gone, the Khedive's prestige had gone, and, except to hand Egypt over to Turkey, to be pacified, *a la* Bulgaria, there was nothing to do but to reconstruct the whole of the administrative machine, to overhaul the government in all its branches, to stamp out the corruption which lay at the heart of Egypt's misfortunes, and to secure to all its citizens at least some elementary form of justice. But to do this implied long years of toilsome effort in the discharge of a difficult and invidious task. It was, to begin with, quite incompatible with the pledges and assurances of which England had been so profuse when he dispatched Lord Wolseley's expedition. She went to Egypt to do one thing, and stayed there to do another. No one who has even an elementary grasp of the problem can deny that the second task was as indispensable as the first. It would be absurd to insist upon a literal fulfilment of the pledges which had been given to Europe in all good faith at the time when England undertook the first and much the most simple operation."

College Notes.

SOME evenings ago, Prof. McDonald delivered a lecture in the basement of St. Andrew's Church. His subject was "Our Celestial Neighbors." There was a large audience present, and the students were out in force. It is almost needless to tell that the learned professor handled his subject in a very masterful way.

AS we go to press we learn with great pleasure that a prize of \$50.00 is to be offered next fall to the matriculant who stands highest in the entrance examinations. The conditions of competition and other particulars can be obtained from the calendar. The Alumni Association of New Brunswick are the donors. This generosity and interest in the affairs of their Alma Mater is worthy of imitation among all graduates of Dalhousie.

THE Philomathic Society held its last meeting for the session on the evening of March 16th. Miss Hobrecker compared and contrasted Shakespeare and Goethe; Mr. Albert Martin discussed the Solution of Liquids; and Mr. W. S. Thompson read a paper upon the Banking System of Canada. The meeting was a good one in every respect.

THE Y. M. C. A. also held its final meeting Saturday evening 1st inst. The chairmen of the different committees presented their reports for the work done during the winter. Mr. W. H. Smith was chosen a delegate to Northfield, the society undertaking to defray half his expenses. Several of the graduating class were present, and addressed the meeting in kindly words of farewell.

THE GAZETTE was prompt to express its regret that some slang words, or worse, crept into a late issue under Law School Facetiæ. Still the *Halifax Acadian Recorder* sheds crocodile tears. The harm our mistake has done for us will probably be more than balanced by the good we shall receive from the animosity of the *Recorder* becoming more widely known. A brief review of some sample copies of that newspaper should convince anyone that neither its common sense, its literary merit, nor its decency makes it a desirable ally.

THE boys turned out well to hear the concert given by Dalhousie's Glee Club, in the Academy of Music, on the evening of March 30th. To Dalhousians unable to be present we can say that the affair was first class, and reflects credit upon the persevering practice of the club. No just account of the concert can be given in the small space at our disposal. The programme was printed in neat and suitable form, and was well carried out. The music was good, and the serious and funny were varied with splendid taste. Again and again some medley or original gibe brought down the house, and there were encores galore. Some rhymes made for the occasion, reciting a few college pranks, and telling of the fines therefor being paid in "black copper cents," took particularly well. We are sorry that the audience was not so large as might have been wished, due principally to the fact that circumstances made it necessary to hold the concert during the lenten season. However, the proceeds were sufficient to cover all expenses; besides, the members of the club have the benefit of their musical training.

DEAR GAZETTE,—I beg leave to present a brief report of the Philomathic Society as it was this winter, hoping the same will not be uninteresting to your readers. We have held 9 regular meetings this session, all of which have been well attended. The papers read, and the work done, should encourage all

Dalhousians that this society has come to stay, and that it can be made a grand success. Nineteen papers were read, of which 6 were literary, 6 scientific, 3 philosophic, 3 historic, and 1 dealt with Canada's banking system. Three of the papers were contributed by graduates, viz., "Progress of Literature," by Miss Harrington; "Three Canadian Heroes," by Mr. Patterson; and "French Settlement at Chegoggin," by Mr. Webster. Prof. MacMechan gave one paper, entitled, "Historic Halifax." With these four exceptions, the papers were prepared by students attending the college. We expected that Prof. Roberts would deliver a lecture before the society, but he will likely be able to redeem his promise next winter.

The society has a membership of thirty-three, and twenty-eight of these have paid me the annual fee of 50 cents; so that after paying out \$5.70—exactly the amount on hand last autumn—I am able to leave my successor the snug little balance of \$14. The expenditure consisted chiefly of material purchased to mount plants, some labels for those collecting specimens next summer, and a book to register donations to the Canadian corner of the library. A large number of the students have arranged to gather botanical specimens during the coming summer. We hope that Dalhousians will enter heartily into the scheme of collecting books, either written by Canadian authors or bearing upon Canadian subjects. These books and plants will be properly cared for, and must be of use some day.

In closing these few remarks, let me say that those of us who were more directly responsible for the character of the meetings have to thank all who assisted in any way.

H. PUTNAM,
Sec'y Philomathic Society.

'Tis said that scrimmaging has died;
We don't believe that quite,
It only sleeps in easy way,
Not ended is the fight.

Perhaps 'tis true by Logic's rule,
Or ethical debate,
We can't defend this little fun
The Faculty so hate.

May be the noise no music seems
To ears attuned for lore,
And Stoic's eyes may not approve
Those tussles on the floor.

May be those Fines shall cease to be,
From this most simple cause,
That two years' classes may refuse
T' endure oppressive laws.

Within Dalhousie's lovely halls
Must death-like silence reign?
Shall no quick charge and must'ring calls
Disturb the spell inane?

Shall Freshmen strut as fresh and fly
As when they enter here?
Shall Sophomores stand idly by,
Filled with this new-born fear?

Ye Gods! the thing can never be,
It never was before.
The hearts of oak cannot be quelled
By threats, or fines, or more.

Long live Dalhousie! is my wish,
And may she flourish well!
And, boys, sometimes the scrimmage rush,
Till clanging of the bell!

'RAH, '93.

Personals.

READERS of the GAZETTE will be pleased to learn that "Tutor" Morrison is pursuing post-graduate studies in Mathematics and Physics at Johns Hopkins.

ALEXANDER ROSS, B. A. (Dal. '67), is principal of the Restigouche Grammar School at Dalhousie, N. B.

MISS ELIZABETH MCNAUGHTON, B. A., '91, has charge of the Grammar School at Sheffield, N. B.

THE following from the N. B. School Report: "The Campbelltown Superior School has been well conducted during the year by Mr. E. W. Lewis, B. A. He has established a reading room in connection with his department, and hopes by means of it to give his pupils a taste for good reading." Dalhousians will gladly hear of Mr. Lewis' success.

W. C. McDONALD, who has given three quarters of a million dollars to McGill, has now expressed his intention of making a further gift of half a million dollars, the same to be applied to the Arts and Law Faculties.

THE Oxford and Cambridge Inter-University sports took place March 23rd. Of the nine events Oxford won seven. The 100 yards dash, made in 10½ seconds; the best hammer throw, 105 feet, 1½ inches; the high jump, 5 feet, 11 inches; the long jump 23 feet, ½ inch were all won by Oxford. The mile race went to Cambridge, time 4 minutes, 22 seconds.

AN attempt has been made at Yale this year to bar out from college athletics the semi-professional element. The rule agreed on is as follows: "No member of a graduate department or special student shall be eligible, nor any undergraduate who has registered or attended lectures or recitations at any other university or college, nor any undergraduate who is not pursuing a course requiring for a degree attendance for at least three years."

A *SUNSET.

I stood by the lake where the lilies grow,
And I pulled the lilies one by one ;
The rain had ceased ; but the clouds hung low,
The lilies were closed, for the day was done.

I paused to wipe from my heated brow
The bead-like drops, when lo ! in the West,
The sun's red glory—I see it now—
As he shook his locks, ere he sank to rest.

Deep banks of white, with the richest hue
Of crimson and gold-tints caught from him—
And trailing clouds, which the soft winds blew
Like lost white robes of the seraphim.

The lake rejoiced with a calm, sweet joy,
The glory above was seen below ;
And I gathered the lilies that grew near by ;
And looked to the West again, but lo !

The scene had changed, and a purple light
Came floating out of the silver-grey ;
And the purple deepened to darkest night ;
The sunset's glory had passed away.

Covehead, P. E. I.

B.

New Books.

DIFFERENTIAL CALCULUS FOR BEGINNERS. By Joseph Edwards ; Macmillan & Co., London and New York.

This book is no more truly for beginners than Todhunter or Williamson. But it is intended to carry the beginner over the first stages only of his study of the calculus, or rather perhaps to provide a less detailed discussion of the subject than the ordinary college text-book. The publication of such books encourages the hope that at no very distant date the teacher of Physics may be able to assume the ordinary student to be familiar with the laws governing rates of change, and may therefore be delivered from the necessity of clumsily "dodging the calculus."

The order of treatment differs little from that usually adopted. The differential co-efficient of the various functions and of sums, products and quotients are first determined. Successive differentiation is then discussed ; and chapters on Expansions and Infinitesimals follow. The latter is a capital little chapter. Next comes the application to curves, tangents and normals, asymptotes, curvature and envelopes, being treated. Chapters on Maxima and Minima, Undetermined Forms, and

the limitations of Taylor's Theorem complete the book. The first of them, though short, is especially good, the criteria being obtained geometrically.

The book is clearly written, and beginners' difficulties are anticipated and met in a way which shews the author to be a successful teacher. His selection of problems is large and seems to be judicious. The reader who works through them will acquire a very thorough command of the elements of the calculus.

COMMERCIAL ARITHMETIC. G. S. Jackson, M. A. Macmillan & Co., London & New York, 1893.

It is assumed by the author "that the reader has a competent knowledge of elementary arithmetic." The greater part of the book is devoted to the actual operations of business. An attempt has been made to give full and accurate information on all commercial subjects of first-rate importance, including British and metric weights and measures, stocks and shares, banking, bills of exchange, the London money market, the Foreign exchange, etc. The author advocates the "immense superiority of decimal operations over all others in the adoption of the metric system, and a decimal coinage would simplify arithmetic enormously." The information in the work is a prominent feature. This work will prove a saving of time and labor to the student whose aim is a mercantile life. It should be found most useful in business colleges, and would not be out of place in the merchant's office.

BOOKS RECEIVED.

Ethics an Introductory Manual. F. Rylands, M. A. Macmillan & Co, Price 3/6.

Chaucer. Alfred W. Pollard, M. A., St. John's College, Oxford, Macmillan & Co. Price 1/—.

SPENSER'S Faerie Queene, Bk. I. Edited by H. M. Percival, M. A. Professor of English Literature, Presidency College, Calcutta. Macmillan & Co. Price 3/—.

TENNYSON'S Holy Grail. Edited by G. C. Macaulay, M. A., formerly Fellow of Trinity, Cambridge. Macmillan & Co. 2/6.

THE following letter from a part of the country infested by tree agents is genuine, the punctuation and capitals are as in the original :

HERRICK & CO.,

Sir.—It is time for you to Stop of you foolish Expenses I paid. too much for What I never Received And What never Grew If You wish to report my name in documents or reports I Cant Stop you first of Doing So but I will Look After you in a Legal way.

therefore engage all the Lawyers Attorneys and barristers from New York to this place And I will face you I am only a Single boy of 25 Years and possesseth nothing nothing but what I wear on my back If I will get any more letters or cards I will teach you another Lesson

Respectfully yours
&c., &c.

Law Department.

DURING the last football season considerable dissatisfaction was occasioned among the law students by the fact that on three or four days in the week the hour of afternoon lectures coincided with that of practice. We refer to those classes held from 4.30 to 5.30. As the careful student could not think of skipping his classes, he had no option but to absent himself from the campus. Where the careful student was also a good footballist, the result soon showed itself in the lessened efficiency of the college team; and, indeed, there are those who find in this fact at least a partial explanation of our reverses last autumn. We feel assured, however, that our Law Faculty were unaware of the difficulties which they were placing in the way of the success of the college team; for there is every reason to believe that they hold dear the athletic honor of the College. Now that the matter has been formally brought to their notice we hope that the new calendar will avoid the difficulty, and that its time table will contain nothing about lectures from 4.30 to 5.30—at least during the football season. By graciously answering this hope the Faculty will have earned the gratitude of all lovers of the game in Dalhousie—who, we are happy to say, form the largest part of the College.

RESULTS OF LAW SCHOOL EXAMS.

(Names in class lists are placed in order of merit; those in pass lists in alphabetical order).

INTERNATIONAL LAW.

Class I—Woodworth, Stairs, Cameron, Bennett, Graham, R. B.; *Class II*—Puddington, Grierson, Brown, Rowlings, Munro, Thompson, W. E. *Passed*—Anderson, Burns, Crowe, Fulton, J. A., Kenny, MacCoy, March, Montgomery, Payzant, J. A., Russell, Tilley.

MUNRO INSURANCE.

Class I—Graham, R. B.; *Class II*—March, Graham, R. H., Stairs, Bennett. *Passed*—Anderson, Brown, Crowe, Fulton, Kenny, McCoy, McDonald, A. F., Munro, Payzant, J. A., Rowlings, Russell, Thompson, W. E., Tilley, Woodworth.

EVIDENCE.

Class I—Cameron, Woodworth, Payzant, J. A., Munro, Hewson, March, Grierson; *Class II*—Copp, Irving, Hill, Graham, R. B., Montgomery, Rowlings.

Borden, Robertson, Anderson, Burns, Payzant, W. L., Puddington. *Passed*—Bennett, Brown, Crowe, Fulton, Graham, R. H., Kenny, MacCoy, McDonald, Russell, Stairs, Tilley.

EQUITY.

Class I—Cameron, Woodworth, Brown, Bennett, Graham, R. H., Anderson, Hewson, Payzant, J. A., Rowlings, Puddington; *Class II*—Borden, Grierson, Robertson, Graham, R. B., Munro, Russell, March, Stairs, Hill. *Passed*—Copp, Crowe, Fulton, Irving, Kenny, MacCoy, McDonald, A. F., Montgomery, Payzant, W. L., Tilley.

SALES.

Class I—Brown, Graham, R. B., Bennett, Graham, R. H., Stairs, Russell, Woodworth, Cameron, Payzant, J. A.; *Class II*—Puddington, McDonald, A. F., Hewson, Borden, Munro, March, Hill, Anderson, Grierson, Fulton, Rowlings. *Passed*—Copp, Crowe, Irving, Kenny, MacCoy, Montgomery, Payzant, W. L., Robertson, Tilley.

CONSTITUTIONAL LAW.

Class I—Thompson, W. S., Barnstead, Finlayson, Keefer; *Class II*—Borden, Hill, McDonald, A. F., Robertson. *Passed*—Copp, Hewson, Irving.

CONFLICT OF LAWS.

Class I—Thompson, W. E.; Graham, R. H.; *Class II*—Hill, Robertson. *Passed*—Borden, Copp, Irving.

CONSTITUTIONAL HISTORY.

Class I—Grant, Bigelow, Crosby, Outhit, Lovitt; *Class II*—McLean, King, Gerrior, Pineo. *Passed*—Fullerton, Gillis, McIlreith, Murray, Putman, Ross, Shaw, Tremaine, Vickery.

CONTRACTS.

Class I—Fullerton, Pineo, Outhit, Grant, Keefer, Thompson, W. S., King, Lovitt, Gerrior, Tremaine; *Class II*—Gillis, Barnstead, Vickery, McLean, Fraser, T. M., Finlayson. *Passed*—Beals, Crosby, McIlreith, McLeod, Ross, Shaw.

CRIMES.

Class I—Grant, Crosby, Keefer, King, Fullerton; *Class II*—Outhit, Pineo, Finlayson, Barnstead, Gerrior, Tremaine, McLean. *Passed*—Beals, Gillis, Gunn, Lovitt, McIlreith, Eoss, Shaw, Vickery.

REAL PROPERTY.

Class I—Thompson, W. E., Montgomery, Grierson, Gerrior, Graham, R. H., Fullerton, Grant, Pineo; *Class II*—Irving, Copp, King, Lovitt, Robertson, Outhit, McLean, Borden, McDonald, A. F. *Passed*—Crosby, Fraser, T. M., Gillis, Hewson, Hill, McIlreith, Payzant, W. L., Ross, Shaw, Tremaine, Vickery.

TORTS.

Class I—Outhit; *Class II*—Pineo. *Passed*—Beals, Crosby, Fraser, T. M., Fullerton, Gerrior, Gillis, Graham, Grant, King, Lovitt, McDonald, A. F., McIlreith, McLeod, Murray, Ross, Shaw, Tremaine, Vickery.

GENERAL PASS LIST.

(Containing the names alphabetically arranged of undergraduates in Law who have passed in all the subjects proper to their years).

FOR LL.B. DEGREE.

Third Year—Anderson, Bennett, Brown, Cameron, Fulton, Graham, R. B., Grierson, Kenny, March, MacCoy, Montgomery, Munro, Payzant, J. A., Puddington, Rowlings, Russell, Stairs, Thompson, Tilley, Woodworth.
Second Year—Borden, Copp, Graham, R. H., Hill, Irving, McDonald, A. F., Robertson.

First Year—Crosby, Fraser, T. M., Fullerton, Gerrior, Gillis, Grant, King, Lovitt, McIlreith, Outhit, Pineo, Ross, Shaw, Tremaine, Vickery.

PERSONALS.

J. A. GRIERSON, B. A., and S. E. March, '93, were admitted barristers of the Supreme Court of Nova Scotia on the 28th ult. The diligence, business ability and knowledge they exhibited as students, promise for both, useful and prosperous careers in their profession. Mr. March will open an office at Bridgewater. Mr. Grierson is not permanently located yet. The best wishes of their fellow students accompany both.

JOHN A. MCKINNON, B. A., '90, LL.B., '92, has kindly given the Law School library the numbers of the "Law Times Journal" and newspapers for the years 1888-92.

JOHN MONTGOMERY, B. L., LL.B., is booming things in St. John. We notice items from his facile pen appearing in the city dailies, which show that he is fully awake as usual.

Medical Department.

FOR many years it has been a vexed question as to why some persons upon exposure escape contagious diseases, and an equally vexed question as to what may be the *modus operandi* whereby one attack of a particular disease wards off second, or how by vaccination a person is fortified against particular diseases.

Our forefathers explained this as they explained every other problem, by attributing the phenomena to the intervention of spiritual beings. Some the gods protected, while over other less fortunate individuals, evil spirits held supremacy, visiting upon them whatsoever plagues and pestilences they saw fit. The scientific explanation, however, has long been that the particular disease cannot find in the system, the pabulum or food necessary to its sustenance; or having once found it, so far exhaust it as to prevent a second attack.

With new views as to the causation of disease come new views as to the method by which their action may become limited or prevented. Attention has been diverted for a time from the microphyte or micro organism to the consideration as to whether the prophylaxis or protection may not be found in the system itself. "If," says a recent writer, "there is one question more than another which is absorbing attention, it is that of immunity from infective diseases and the methods for

artificially securing it. Experimentalists have been most assiduous in studying the changes in the blood induced by the growth of pathogenic organisms and in more than one disease it has been found that the serum of inoculated animals contains substances which when introduced into another animal can confer immunity from that infection."

By some it has been claimed that there is a natural immunity due to such an adaptability to conditions as to secure resistance. In other cases there is an acquired immunity, as for example, when the products of bacilli are so attenuated and introduced as to prevent the pathogenic bacilli when they enter the system from carrying on their work of destruction.

Another explanation of immunity which has been attracting biological and clinical attention is that which was developed by Metchnikoff in 1884, and which is now known as the doctrine of phagocytosis. Briefly stated the doctrine is this: As soon as offending particles begin to create trouble in blood or tissues, the leucocytes, to which Metchnikoff ascribes "the prophylaxes of the body against microphytes," at once attack and devour these particles. To these leucocytes are given the name of phagocytes or destroyers. By means of experiments it has been demonstrated that such a process is actually set up during an invasion. "When the animal body is invaded by a morbid microphyte a struggle for existence occurs between phagocyte and microbe. In this struggle the phagocyte adapts itself to environment. According to Metchnikoff this adaptation is not only acquired by these leucocytes, which have actually taken part in the fray but is handed down to their posterity and so their supposed protective function is explained."

By microscopical manipulations Dr. Metchnikoff showed that a leucocyte might swallow up a certain living bacillus. By the process of incorporation and subjection he shows how the susceptibility has been annulled or diminished by previous infection. "It is the colorless corpuscles, which by virtue of the part they take in ordinary inflammatory reaction from the first defend against the invasion of microbes, and if failing at first they keep up their effort in various ways.

Immunity from disease, according to this view, would seem to depend mostly upon the quantity and quality of the white

corpuscles which in reality means upon the conditions of normal health and vitality of the individual. This may be such as is stamped upon him by heredity, environment, former exposure and various other circumstances; all turning upon the animal more than upon the microphyte in a majority of cases. Some of the vicious and malignant kind may overpower, but as a rule we ought to be able to expect the phagocyte to win.

CLINICAL OBSERVATIONS.

The specific treatment of phthisis with *tuberculin* was one of the most astonishing advances which have been made in practical medicine within the last few years when consumptives were buoyed up by the hopes that a positive remedy for tuberculosis had been obtained.

Tuberculin, which is a glycerine extract of the cultures of tubercle bacilli, when injected into an animal, may render that animal immune against an attack of tuberculosis, and its activity is said to be due to a compound belonging to the class of *toxalbumin* that is now coming into prominence.

Toxalbumin is a poisonous proteid derived from the metabolic activity of micro-organisms, which seem to play an important part in the causation of disease. The action of this compound is analogous to that of snake poison, which is an animal proteid and a powerful poison. The extraordinary effects of snake poison as a remedy in disease was well known in very early times.

Lucan relates that when *Cato* marched Pompey's shattered army through Africa, he encouraged the intimidated soldiers to quench their thirst at a spring without fear, though they saw the water full of serpents.

English navigators, about the second decade of the last century, described an exhilarating beverage with which the natives of the East Indies were wont to treat their friends. This invigorating preparation was an infusion of snakes and scorpions, esteemed not only as an efficacious remedy in leprosy, but also as an antidote against poisons. Rattle-snake wine, a preparation obtained by soaking or steeping the heads of rattle-snakes in wine, was used in London over a century ago as a remedy in leprosy and nervous diseases with extraordinary results. The wine was imported from the West Indies, where, according to report it was drunk as a stimulating cordial. The circumstances connected with the discovery of the wine as a remedy in leprosy are interesting and, to some extent, romantic.

"A very wealthy old gentleman, in the West Indies, had long been afflicted with the leprosy to a high degree, which was deemed incurable by his physicians. Apparently in a dying state he made his will, and left a large legacy to a female servant, who had lived with him many years. This circumstance being known to the servant girl, she and her lover, by the instigation of the devil, studied and contrived how to make away with him, in such a manner as to raise the least suspicion of their wickedness. They put the heads of rattle-snakes into wine and gave him it to drink, thinking it would prove an infallible poison, but as he grew better upon taking it, they, happily for him, falsely concluded they had not made it strong enough, then made it stronger; and by drinking this intended poison he was restored to perfect health. Compunction of conscience put this unfaithful and wicked servant upon falling on her knees before her master imploring his mercy, and in tears confessing her atrocious crime. He not only forgave her, but gave her a sum of money, ordering her to depart his house directly, and never see him more."

A very remarkable, but well authenticated, case of nervous affections was cured with the wine in 1763, and is astonishing in the extreme.

A lawyer in London, aged about 50, was seized ten years previous with a paralytic affection of his left arm, after which he had severe pain on the second joint of his thumb, from thence it ran up the middle of the cubit, and so on to the middle of the humerus, gradually increasing to an excruciating degree. No means was able to remove the pain effectually, but a very odd method of treatment gave temporary relief, which was tapping him very gently just at the junction of the last vertebra of the neck with the first of the back. This was done almost incessantly night and day, having a succession of servants for this purpose, and, on account of this, he scarcely ever slept. At intervals he was seized with violent spasms in the jaws and once in a while he made a horrid sonorous inarticulate jabbering. He suffered exquisite pain if anyone touched his thumb, and a straw drawn over it was like a dagger to him. He once in his agony sent for a surgeon to cut off his arm. Physicians and surgeons of the greatest eminence gave him no relief, and he had taken all the nervous tribe of medicine over and over again. Night after night he never closed his eyes, and was truly the most miserable of human beings. His physician had not the remotest expectation of recovery, but, not to appear inhuman, he sent the patient a bottle of rattle-snake wine, and directed him to take a glass frequently. The subsequent history of the patient is given in the doctor's own words:

"Last night, the third since I visited him, as I was sitting by my fireside, in walked my patient to my great surprise, which he observing.

Sir, said he, you cannot be so much amazed as I am, nor half so much pleased. I am come to thank you, and, if not criminal, to worship you. Well, sir, said I, but I thought you could not bear a coach nor a chair. I cannot, answered he, I came walking, and have left my friends and neighbors in the greatest astonishment. Sir! this change surely cannot proceed from my medicine, it seems to me almost impossible. Sir! 'tis true for all that, replied he, and I have not had one tap all this whole day, and am in a manner free from pain. Sir, said I, don't halloa, we are not yet out of the wood. Indeed, sir, said he, I am at present, but God knows how soon I may be in again. I felt his pulse, and, from a quick and irregular one, I found it regular, even, and strong. This began to demolish my infidelity, and to give me some opinion of my rattle-snake wine."

The patient's friends wondered at what they had heard and then saw. The patient himself enjoyed a fair sunshine of comfortable hope, and said "One thing I know, that, whereas I was grievously afflicted, now I am well."

ZIF.

THE PARABLE OF THE MICROBE.—The changes produced by the bacillus of consumption is termed a "tubercle." In all tubercles two processes go on, viz., the one destructive, and the other conservative. The ultimate result in a given case depends upon the capabilities of the body to restrict and limit the growth of the bacillus. There are tissue soils in which the bacillus are in all probability killed at once—the seed has fallen by the way-side. There are others in which a lodgment is gained and more or less damage done, but finally the day is with the conservative protection forces—the seed has fallen on stony ground. Thirdly, there are soils in which the bacillus grow luxuriantly, destruction prevails and the day is with the invaders the seed has fallen upon good ground.

"OSLER."

POISONING BY ARSENIURETED HYDROGEN.

As the cases of poisoning by this gas are rare, I beg leave to draw your attention to the first one which has occurred in this country. The victim was the Professor of Chemistry and Mineralogy in the University of Chili (Santiago)—Dr. Hans Oscar Schultze—who for the last ten years had been engaged in the study of the conditions under which bodies take the colloidal state, having already succeeded in obtaining in this form the trisulphide of antimony.

On the 18th Nov., 1892, he was occupied in the laboratory of the University in making a solution of arsenious acid with

the purpose of obtaining arsenic in a soluble form. It seems that the gas generating apparatus was not hermetically closed, and let escape hydric arsenide in so small a quantity that its odor was not noticed by Prof. Schulze. One hour and a half after having commenced the operation this gentlemen felt sick, and realized that he was poisoned by Arseniureted Hydrogen. He left the laboratory, but before doing so he wrote in chalk by the side of the apparatus, "Take care, As H₃."

Five days afterward he was dead—all efforts having proved useless to counteract the action of the poison. Nothing could arrest the progress of the uraemia and the rapid destruction of red blood corpuscles and the fatty degeneration of the tissues.

Q. NEWMAN, in *Chemical News*, June, '93.

PRACTICAL MEDICINE APPLIED.

First they pumped him full of virus from some mediocre cow,
Lest the smallpox might assail him and leave pit marks on his brow.
Then one day a bull dog bit him—he was gunning down ot Guogue—
And they filled his veins in Pois with an extract of mad dog!
Then he caught tuberculous, so they took him to Berlin.
And injected half a gallon of bacilli into him;
Well, his friends were all delighted at the quickness of the cure,
Till he caught the typhoid fever and speedy death was sure;
Then the doctor with some savage did inoculate a hen,
And injected half its gastric juice into his abdomen;
But as soon as he recovered, as, of course he had to do,
Then came along a rattlesnake, and bit his thumb in two,
Once again his veins were opened to receive about a gill,
Of some serpentine solution with the venom in it still;
Now his appetite had vanished, and he could not eat at all,
So the virus of dyspepsia was injected in the fall,
But his blood was so diluted by the remedies he had taken
That one day he laid him down and died and never did awaken;
Yet his doctor still could save him, he persistently maintains,
If he only could inject a little life into his brains.

Independent.

MEDICAL BRIEFS.

CLEANLINESS is next to godliness. All students should keep their *Platysma myoides* clean and not exhibit a high water mark in class.

AN ambitious Freshman is anxious to take all the Primary exams. this spring. An appointment to the Hospital staff will probably be his next move.

Clinical Prof. (with a microscope and a field with air bubbles) "Now Mr. F. what do you see in that field?"

F.—"Oh! That is a beautiful clear cell with quite a large nucleus."

Clinical Prof.—"By George that is the first air cell that ever had a nucleus."

IT would be much better for his *ow(e)n* interests for a certain Freshmen not to attend the grocery shop and Ladies College so frequently, but to devote more time to Histology.

IT was with a light heart, an airy tread and an "At Home on April 1st," that J. C. walked down Coburg Road. It is said that he is yet in a quandry as to from whence the invitation came.

PROF. in medicine: This disease gentlemen is more common in males as they have to work harder than females. (Noticing violent gestures from one of the class.) This is a fact Miss H. Men have to work harder in this world than women.

AT a recent church sale a member of the class of '95 purchased a knight-hood, the ensignia of which he generously offered to bestow upon a lady. Failing in this, he clasped the glittering band about his own arm and stalked magestically forth—Sir Alexander of the Order of the Garter.

THE glove exchange seems to be the latest fad. But even though C. did receive two pairs for one, we fear he got the worst of the bargain, since he was seen shortly afterward with lacerated fingers (*h*)olding a delapidated pair of gloves which he vainly sought to repair with *brown* thread.

IT was his first night at his new lodgings. He studied 'till the wee sma' hours and then sought the dorsal decubitus. With lamp in his left hand and half an apple in his right (the other half in his mouth) he softly ascended the winding stair with the alacrity of a cat, but alas! Ere he reached the feathery couch he lost his reckoning. The primary aspirant, lamp, apple, etc., halted beside the bed of his new landlady and her fair daughter, arousing the gentle sleepers with the ejaculation *Great Heavens*—(Exit. primary man).

PERSONALS.

WE are glad to see in the lecture rooms again, MISS MATTIE BROWN of the class of '95, who was confined to her home for some days on account of illness.

AMONG the names of the graduating class of Rhode Island Medical College, we notice that of GEO. T. GRIERSON, a student of '91-92. He was one of eighteen to obtain honors. The GAZETTE extends congratulations to Dr. Grierson.

AT the close of his lecture on Friday, 7th inst., PROF. MORROW was made the recipient of an address accompanied by a field glass, as a slight token of the high estimation in which he is held by the students. Dr. Morrow made a suitable reply. It is a matter of universal regret that Dr. Morrow is about to sever his connection with our college.

ACKNOWLEDGMENTS.

Prof. McDonald, \$3.00. G. P. McLeod, John Blanchard, Hon. D. C. Fraser, \$2.00 each. W. R. McRae, D. D. Hugh, A. E. Chapman, A. K. McLean, F. Yorston, Dr. Pollok, A. M. Thompson, C. B. Robinson, S. Howe, G. A. Cogswell, W. T. Kennedy, Mrs. Baxter, Rev. E. M. Dill, D. F. Campbell, A. Smith, Miss E. McNaughton, J. A. C. Rodgerson. \$1.00 each.

Ten numbers of the GAZETTE are issued every Winter by the students of Dalhousie College and University.

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