Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

	Coloured covers / Couverture de couleur		Coloured pages / Pages de couleur	
	Covers damaged / Couverture endommagée		Pages damaged / Pages endommagées	
	Covers restored and/or laminated / Couverture restaurée et/ou pelliculée		Pages restored and/or laminated / Pages restaurées et/ou pelliculées	
	Cover title missing / Le titre de couverture manque		Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées	
	Coloured maps /		Pages detached / Pages détachées	
	Cartes géographiques en couleur		Showthrough / Transparence	
	Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)		Quality of print varies / Qualité inégale de l'impression	
	Coloured plates and/or illustrations / Planches et/ou illustrations en couleur Bound with other material /		Includes supplementary materials / Comprend du matériel supplémentaire	
	Relié avec d'autres documents Only edition available / Seule édition disponible		Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / Il se peut que certaines pages blanches ajoutées lors d'une	
	Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.	a	restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.	
V	Additional comments / Continuous p Commentaires supplémentaires:	agination.		

JOURNAL OF Apper

EDUCATION,

Canada.

Vol. XIII.

TORONTO: APRIL, 1860.

No. 4.

CONTENTS OF THIS NUMBER.

CONTENTS OF THIS NUMBER.

I. EXTRACTS FOR RECRIF SPEECHES DELIVERED IN UPPER CANADA—

(1) The Hon, Wm. H. Draper, C.B.: "Architectural Improvement in Upper Canada." (2) Rev. Dr. Ryerson: "Elements of Social Progress."

(3) Rev. John McCaul, LL.D.: "The Claims of the Deaf and Dumb." (4) Rev. Wm. Hincks, F.L.S.: "The Educational Advantages of Natural History." (5) Rev. J. Travis Lewis, LL.D.: "Education—What it involves. Expediency of State intervention." (6) Rev. George S. J. Hill, A.M.: "The object and mode of imparting Education." (7) A. Dingwall Fordyce, Esq.: "Teachers' Associations—Principles which should govern them." (8) James A. McLennan, Esq.: "The English Language—Its functions and power." (9) Bayard Taylor, Esq.: "The Phenomena of an Arctic Winter".

II. PAPERS ON A TRUANCY LAW—(1) Extract from Judge Hararty's late Charge. (2) visit to the Penetanguishene Reformatory. (3) Truancy. Institution in Brooklyn. (4) New York Truancy Act. (5) Truancy. Institution in Brooklyn. (4) New York Truancy Act. (5) Truancy of Studies. (4) Girls' Rights.

IV. PAPERS ON PRACTICAL EDUCATION—(1) Subjects too little taught in our Schools. (2) Necessity of Historical Knowledge. (3) Children our future Bulers. (4) Girls' Rights.

IV. PAPERS ON NATURAL HISTORY—(1) To Boys: Destruction of Birds forbidden in Germany. (2) Cause of Death among the Gold-Fish. (3) Sounding Shells. (4) Natural Compass (5) Agricultural Distribution by the United States Patent Office.

V. PAPERS ON PHYSIOLOGY AND HEALTH—(1) Purification of Foul Water. (2) Instantaneous Disinfection. (3) Necessity of Upper and Lower Ventilators in a School-room. (4) Single and Double School Desks......

VI. PAPERS ON COLOMAL SUBJECTS—(1) Colonial Possessions of Great Britain. (2) British North American Colonies. (3) The Popition of Canada. (4) The Progress of New Brunswick. (5) Capital of the Hudson's Bay Company. (6) French Colonization in America.

VII. SPATISTICAL AND GEOGRAPHICAL PAPERS—(1) The Popitation of the World. (2) The New Italian Kingdom. (3) Population of

EXTRACTS FROM RECENT SPEECHES DELIVERED IN UPPER CANADA—CHIEFLY EDUCATIONAL.

> I. THE HON. WM. H. DRAPER, C. B. Chief Justice of the Court of Common Pleas.

ARCHITECTURAL IMPROVEMENT IN UPPER CANADA-THE LAW COURTS, COURT HOUSES, CHURCHES, &c.

At the recent re-opening of Osgoode Hall, Chief Justice Draper spoke as follows :- "The unquestionable superiority, in every respect, of the buildings provided for the holding of our Courts, over every other devoted to a similar purpose that has Preceded them in Upper Canada, is no insignificant type of the character of the general improvement of the Province. Our early settlers-the hardy pioneers of improvement-were glad to be under the shelter of a rough log house, to find protection against the storm and tempest, the heat of summer, and the inclemency of winter. The necessity of a due administration of laws, without which no frame of human society can be held together, could only be supplied in proportion to their limited means; and the buildings for that purpose were inevitably of the plainest structure, of materials which were cheapest and most readily procured. It is within my own remembrance that the sittings of the Court of Queen's Bench for Upper Canada,

were held in a building within a quarter of a mile of this very spot, whose external appearance was scarce equal to that of any building which may now be seen around the dwelling, and forming part of the homestead of our industrious and successful farmers. But intelligence, industry, and integrity—the motto of our flourishing city of Toronto-were at work throughout the Province, and resulted, not simply in the accumulation of independent means, amounting in many instances to wealth; but produced also a desire for the acquisition and diffusion of knowledge, for the study of liberal arts and sciences, by the cultivation of which the thoughts and habits of the people might be elevated and refined; and in the fullest proportion to the increase of our material resources, has been the striking development of our educational system, together with an expanding and ennobling view of our social position, its advantages and its obligations. Thus, while comfort and even luxury have found establishment in the farmers' houses; while those engaged in commercial pursuits, and here and there some members of the liberal professions, have erected residences which ornament our principal cities and towns, and their environs, the religious feeling of the people has prompted and accomplished the erection of houses of worship to God, the Giver of all good; suited in many instances to supply the coming as well as the present generation; and their respect for law and justice, and for the authorities constituted to administer them, has displayed itself in the efforts of the various municipalities to erect Court Houses, ornamented in design, substantial in structure, and fitted up with a due regard to the dignity of their object and employment. And in that spirit has this building been completed. The Law Society, under the sanction of, and liberally aided by, the Government, undertook to provide for all time to come for the accommodation of the superior Courts of law and equity; and, in fulfilling that undertaking, have shown a determination on their part to keep pace with, not merely the actual, but the prospective advancement of the country; and not merely to follow, but to surpass the efforts so honourably made by the County Councils, to provide accommodation which the most fastidious could not help admitting to be abundant, joined to a display of architectural style and finish which makes not merely an ornament to the city, but reflects credit on Upper Canada at large. And it is impossible to deny that they have fully succeeded; that to this city, already deserving of notice for some of its ornate public buildings, they have added a new and brilliant decoration, worthy of the purposes for which it is set apart. To the Benchers, and especially to the building committee, we offer our congratulations on the completion of

their undertaking, accompanied by the expression of our very hearty desire, that by the continuance of that good understanding and mutual co-operation which has hitherto always existed between the Bench and the Bar, the interests of suitors may be duly and properly attended, to, and an unsullied character for purity of administration of justice be transmitted from generation to generation.

II. REV. DR. RYERSON. Chief Superintendent of Education for Upper Canada.

BLEMENTS OF SOCIAL PROGRESS. After stating how necessary it was to have mental repose, in order that the mind should be in a fit state to thoroughly digest those subjects which a person would desire to bring before an assembly, Dr. Ryerson proceeded to say that he would content himself on that occasion with laying a few practical suggestions before them. He remarked that the subject he had to deal with was alike important to all ages, all conditions, and all classes of the community. The question is, what does social progress assume and imply? It assumes the existence of society, the formation of that society by individual members, it means, in the large and more extensive sense, that which confers upon society advancement, both in an intellectual and moral point of view. In the larger agrades and classes of the community. In the larger sense society is made up of all

The rev. lecturer here noticed the constitution of the United States and that of Great Britain; and in referring to the British constitution, he remarked that it had now grown into a magnificent structure, which those who belonged to that empire and lived under its sway rejoiced in, a constitution which is a glory and an honour to the British nation, and in connexion with which the largest freedom is enjoyed. Now, a constitution of this discription required, of course, the punishment of the lawless and disobedient, those who refused to comply with its just and equitable laws and requirements; it is necessary that punishment must be awarded to those who violate the laws of the land. It is, therefore, necessary that there be properly constituted officers of justice, in order to carry out the executive, and it is also necessary that there be a class of persons for interpreting the laws. There are jurors, judges and magistrates for the proper anministration and carrying out of these laws, in order that peace, order, and harmony may be maintained. It is also necessary for the social compact that laws should be framed, and in order to the accomplishment of this, legislators are invested with this power, although they are selected in different ways in different countries.

Political economy is that by which the wealth of a country or nation is developed. The person in whom is invested the supreme power goes by different names or titles. In one country he is called a governor, in another, a president, in another, a king, and in another, an emperor, names which indicate that supreme power is vested in these individuals, who stand at the head of the social fabric. This may be termed social progress in the largest and more extended sense. It assumes the possibility of improvement and advancement in that which conserves to the benefit and advantage of these various

individuals who compose the social fabric.

What, it may be asked, does social progress imply? It implies the progress in the arts and sciences, the attainment of that knowledge which will tend to the elevation of an entire people. The reverend doctor then noticed the negative of the question for a short time. He said social progress did not imply exemption from labor. Many persons think of ease and enjoyment, freedom from labor, in connexion with social progress, but this is a great mistake—no one should assume the exemption from labor in connexion with it. Were the whole heavens dripping with dew, and the earth bringing forth more abundantly, so far from elevating man, apart from his own industrial exertion and activity, both bodily and mentally, so far from elevating him in the scale of human kindness and moral wellbeing, it would degrade him, it would enervate him, and morally enfeeble him. Labor is stamped upon the vast universe of God labor is necessary in order to gain the prize; it is required and absolutely necessary throughout life, and in accordance as it would be bestowed we would advance and reap the rewards of our labor. Instead of seeing young men of our own day, who should be the hope of the country, devising all means by which to escape their share of toil and labour, instead of seeing the most promising characters blasted, we would see them manfully bearing their part of honest toil and industry. It is a bad sign, in a country like this, to see our young men crowding certain professions; in the very course and order of things this will lead to very bad results. It is a bad sign when they shrink from labour, from honest toil and industry, and leave the country, to go elsewhere in search of that which they fondly hope to attain, and which they look forward to as the goal of all their ambition, to enjoy themselves in ease and contentment, to have freedom from labor. It does not imply the necessary accumulation of wealth. It is possible that this may come upon us, and lead to the indulgence of appetites and passions, which will curse rather than elevate our social as well as moral well-being in connexion with the social fabric. Large wealth does not beget large views. often see in the possession of the greatest wealth the smallest and most contemptible mind. It is incumbent upon each individual to cultivate his own mind, and to bestow culture upon these noble faculties of the mind with which God has endowed each one of us.

Parents who toil from Monday morning to Saturday night, it being their one, their chief aim, by the dint of frugality and economy, to lay up a competency for their children, so that they may throughout subsequent life enjoy themselves in ease and comfort, have acted a very unwise, a very injudicious part. Careful and attentive observation will show that such has been the case. It is only by the mental and moral cultivation of the young, by energetic and vigorous exercise, that we lay a sure foundation for the country's welfare and prosperity. They are the men whose characters are formed, while those who have to rely upon what their parents or others may leave them, without depending in any measure upon their own individual exertions, prove to be in too many instances a curse rather than a blessing to the country. There may be cases of persons following different professions and trades, that may reasonably have good cause to go from one place to another in search of employment, being driven by the force of circumstances, but that is a very different thing from that spirit of restless, worthless ambition, which is too often manifested in our own day.

As society consists of individuals, social progress implies the influence of individuals. We must aim at having each individual impressed, if possible, with the necessity of individual effort being put forth. Social progress implies, in the first place, the culture of the moral faculties, in order that we may do that which is right in the sight of God and man. It is indispensably necessary that the faculty of conscience should be maintained in good health in order that it may fulfil its important office, for the direction of the whole. It is necessary, if a man would answer the great end of his being, that he pay particular attention to that great faculty which Almighty God has placed within him, and that silent monitor that warns every man of his danger, and checks him when he goes astray, and to see to it well that he does not stifle the voice of conscience; then he can go with all the confidence it secures and inspires him, and manfully look

up and face his fellow man.

The first elements in individual progress is the culture of the moral faculties; the second the culture of the religious affections. This is a very important element in social progress. Our existence cannot be separated from that divine being "in whom we live, and move, and have our being." Other powers can be advanced when these faculties are cultivated. The rev. doctor here very eloquently referred to the heathen gods of antiquity, and showed the debasing influence they exerted upon the human mind. Can it be otherwise, then, that he who walks with the divine being must be elevated? Then it will be that the character of man will be laid upon the true, the permanent basis. When there is a being who rules over all, who watches over all, can it be otherwise, then, that a salutary influence will be exercised over the entire man. cannot be any prosperity, there cannot be any social progress, without the culture of the religious affections, and this he, the lecturer, would urge without any reserve.

Social progress implies a culture of the mental faculties. the affections of the mind and heart are placed upon the proper object, it is then that the whole faculties of the mind will be improved. One description of mental power, which should be specially impressed upon his audience, is the power of thought, in bringing forth its latent powers, its latent energies, and which will have the beneficial effect of enabling the mind to grapple successfully with the great question it may be called upon to deal with. It is often the case, that without this faculty of the mind being improved, that the mind is passive in reading, and the consequence is, that we read with little or no advantage and profit. The whole system of mental culture should rather have for its grand object the cultivating of that

which is within, than adding from without.

By what means may social progress be improved? First, by aspiring and having a due appreciation of individual importance. It is a common fault to think too much, rather than too little, of ourselves; but there is one sense in which we cannot attach too much importance to ourselves, and that is to attach a high value to the great powers with which we have been so highly favoured and blessed, and by which we can rise high in the scale of intellectual grandeur and excellence, being possessed with an immortal soul, that is capable of an inconceivable state of happiness throughout eternity. Another element is to make the most of the powers with which we are favoured. It is often the case that those who have the most opportunity to accumulate a large library, and other means at their disposal by which they have it in their power to gain a vast amount of information, make the least improvement. If we would excel, and become ornaments to society, we must make the most of the privileges we enjoy. If we would look at those celebrated individuals

whose names are handed down to us, we will find in many instances that external circumstances were against them, not only to discourage them in their efforts, to cast briars and thorns in their way, but to blast their reputation. It is the will that finds the way; it is the individual exertion that succeeds. Let none be discouraged on account of the limited means which they enjoy. What was it made such men famous, whose names are handed down to us on history's page; such as Demosthenes, Cicero, Aristotle, Pliny, and many others! What, but by improving the means they enjoyed, limited as they were, when compared with ours. While some of our powers are to be cultivated, and thus enlarged, others are to be kept under, or to be held in subjection.

It is highly essential and necessary to control our animal facul-All which we possess should be so cultivated, cultured, and restrained, as to be our servants, and not our masters. is a slave to sloth will slumber away, injuring himself both bodily and mentally, and cannot expect to excel. The speaker said, that

as far as relates to himself, he accummulated more knowledge between the hours of three and six in the morning, than he did during any other time, a practice which he commenced at twelve years of age, and had it not been for this he said that in all probability he would not now occupy his present position, never have appeared abroad, but would at the present time be laboring on the farm on which he was brought up. That which is intended as a means to refresh and invigorate the body should not be abused. should not be used as a means for stupefying it. Our appetites must be kept under. The reverend doctor here referred to the enslavement caused by the abuse of ardent liquors, where in all probability not only the poor drunkard is ruined, but his family also involved in

destruction and ruin. How many who would have shone in our own, as well as other days, if the abilities and talents which they possessed had been directed in the proper channel, but by the abuse of alcoholic liquors their characters have been blasted, they have been cut off in the flower of their days, and found a drunkard's grave. Sensuality is the grave of all social progress. A sensual man is a mere animal. Sensuality is the greatest enemy to social

Sensuality is the greatest enemy to social

In order to advance in the scale of social greatness, it is well to associate with individuals whose minds are further advanced than our own. Our engagements, and other reasons, may prevent this, but the facilities afforded us in the present day, to have access to great minds, by the establishment of public libraries, and also the ease by which private purchases can be obtained, will abundantly make up for it. As great care and caution are required in the selection of our society, equal care should be taken in the selection of our libraries. It is not the man who reads almost everything that comes in his way, does not pass over the light literature of the day, reads for the purpose of passing the hour, who will excel. In order to excel, there must be mental energy and activity, we must read books, not for the purpose of superseding thought, but developing it. The whole universe is divided into that which is material, and that which is immaterial. One may study the History of Greece and Rome, may fully master the facts and statements therein made, be able to pass any examination with reference to them, and not be really benefitted by so doing, not be able to read and grapple with the great truths and facts with which he has become conversant, not be able to contrast and compare so as to contribute to his advantage and profit. Mental activity and improvement lie at the foundation of our elevation. It is by our coming into contact with great ideas that the mind becomes great: on the other hand, he who is occupied with little things, his mind becomes little. Never yield to disappointment, until you master the object at which you are aiming. It is important that we look at what is transpiring around us in an intelligent manner. Let us act upon the principle of true social progress, let each individual act for himself, and let that be stamped upon each individual member of society. It is then that we shall excel in every sense of the word.

(We regret that time and space prevent our giving the report at fuller length of this exceedingly interesting lecture, which was warmly applauded throughout.)—Prototype.

III. REV. JOHN McCAUL, LL.D. President of the University College, Toronto. THE CLAIMS OF THE DEAF AND DUMB.

At the recent examination of deaf and dumb in this city, Dr. McCaul, after a few preliminary observations, proceeded to say: that at the time when the training of the deaf and dumb was first commenced the great point which those interested in them desired to develop was the lip language; that is, that the pupils by sight should be able to tell the words uttered by the formation or position and changes of the lip. This system has now very generally been abandoned; and instead of it the sign-language is used. Of this there are two kinds—

methodical and natural or imitative. The first of these was fully developed by de l'Epée and Sicard, but the latter is now commonly used, and the deaf-mute is taught the use of the vernacular language of his country-men. Heis thus enabled to communicate his thoughts to others, and receive knowledge through books and from others. Before he sat down he felt called upon to advert to what he considered the general claims of the institution upon this community, as well as upon the country at large. The first and the most obvious was that which would present itself to any mind—namely, the deplorable position of those for whose benefit the society had been established, the deaf and dumb of the Province. Would that he could have added the blind also, but he was sorry to have it to say that the funds of the Society had not permitted anything to be done for them. He trusted, however, that next year, if it pleased God to spare their lives, they would be able to show that the blind as well as the others had received benefit from their efforts (applause.) The deaf and dumb were peculiarly entitled to all the aid that could be given them, because, wanting the sense of hearing, they were deprived of the enjoyment of the moving melodies and the sweet harmonies that are a source of pleasure and delight to others,—of that sweetest of all music, the gentle tones of a mother's voice; but also because their privation was a barrier to their acquirement of knowledge, and at once a disqualification for society, so as to isolate them in seclusion from their fellow-creatures, and also an impediment to their earning their livelihoods (applause.) Such claims as these must force themselves upon the attention of all thoughtful persons; and when it was taken into account, that, as was the case with many, a mind was locked up, equal in intellectual power with most of those now present, they could then understand the force of the remark of that French gentleman, who, speaking of the mind of a deafmute, said that "it was like an eagle trying to soar whose wings were so clipped that it could not rise upwards from the ground" (applause.) He (Dr. McCaul) believed that it is Province there were between 800 and 900 labouring under this calamity, over 700 of whom had received no education whatever. To mitigate in a measure these evils, was the object in the establishment of this Society; and to enable them to carry on the work they had commenced they depended on the sympathy of the public.

When it was considered rather as a philosophical curiosity than as a

work of benevolence and duty, to train and educate a deaf-mute; but when it was proved by experience, that they could be educated, their intellectual faculties developed, and their minds stored with information, great interest was felt in establishing institutions for their institutions and the results of the examinary which their their instruction, and the results of the exertions, which have been made for the amelioration of their condition, shewed that this unfortunate class could be so cultivated as to render them valuable members of society; and it had been proved, too, that they could, if placed in any responsible position, discharge their duty with as much fidelity, intelligence and accuracy, as any one else (applause.)
There was another claim on behalf of the institution, which we, as descended from a good old stock, distinguished not merely for progress in arts and science and deeds of arms, but celebrated also for its great and enduring works of benevolence and love, should not fail to remember. In Great Britain and Ireland, he found there were thirty institutions for the education of the deaf, dumb and blind. In the United States there were twenty-one, and from these between 1700 and 1800 had been sent forth to the business of active life, fitted to maintain themselves in an honorable manner. He trusted that we in this country would not allow ourselves to be behind, and hoped we would yet be able in Canada to do something that might favourably compare with the efforts of any other country (applause.) But so far he had placed the claims of these unfortunates on comparatively low ground. He would conclude by pressing exertion on their behalf solely as a matter of duty, and he trusted they would look upon the duty expected of them in the light of that highest of all duties—a Christian one. He looked upon it that those suffering from this afflicting dispensation of Providence were placed among us to test our Christianity. While they remained without education they were literally without God and without hope in the world; and surely no sincere Christian would allow them to be ignorant while they had the means of revealing God's truth to them. It was not for them by means of a word to steady the palsied arm; they were unable by a mandate to restore the blind to sight or the dead to live; but they had the means, even although limited, of mitigating the sufferings of the large number in the Province of those suffering under the privation of speech, of hearing, and of sight. He did trust that these considerations would so impress themselves on the attention of those that heard him that they should yet have a national institution, not a local and limited one, which would be a blessing and an honor the Province, and upon which many benefitted by it would look back in after life with feelings of gratitude and affection as their alma mater, who had

qualified them for the efficient and faithful discharge of their duty.

(Applause.)

IV. REV. WILLIAM HINCKS, F.L.S.,

Professor of Natural History, University, College, Toronto.
THE EDUCATIONAL ADVANTAGES OF NATURAL HISTORY.

In viewing the domain of nature, we are pleased with the beauties which everywhere surround us, yet do not enquire into the cause of this beauty-do not recognise the fact that the harmony everywhere visible is owing to the adaptation of the various animals and vegetables to each other, that throughout the animal, vegetable, and even mineral kingdom there is a perfect adaptation of the individuals to the welfare of the whole. The distinctions of the animal and vegetable kingdoms were referred to. They both agreed as to possessing life and requiring food; but in the manner of appropriating this they differed—vegetables appropriated this in a gaseous form, or else dissolved in water, while animals by means of organs for changing it from the solid state, to one suited for their requirements. The common sponge was long classed as a vegetable, and even the corals suffered the same fate. The sponge of commerce was in reality nothing but the horny spicules of the compound animal, after the gelatinous matter had been removed by decay. It has been found, not even the lowest orders of animals have an approach to a differenciation of parts; some of them performed their part by removing organic matters from places where it might be offensive, even though it is effected by cilia which require the aid of a microscope to become visible. These minute animals become food for larger animals; showing that

"Where the pool stands mantled o'er with green (To some good end designed): invisible Amid the floating verdure millions stray."

The structure of vegetables, the means by which they increase in size, by food absorbed by a portion of the cellular fibre, uncovered by epidermis, forming the roots and rootlets, by means of the leaves absorbing carbonic acid gas, which, while fatal to animal life, if allowed to accumulate in the atmosphere to a comparatively small extent, and which is itself produced by the animals themselves at every exhalation from their lungs, is of the greatest importance to vegetables, by which it is decomposed into the carbon, which forms so large a part of their mass, and the life-sustaining oxygen which is thrown off into the air. The form of plants indicated a fixedness; while that of animals is especially fitted for locomotion; so these two great classes of living bodies, the one in a state of rest, the other in motion, and each mutually dependent on the other, either of which if left to themselves, would cease to exist, unconsciously as it were supports the other. A like connection exists between the herbivora vegetable eaters, and carnivora or flesh eaters; so that from the mineral to the plant—the plant to the herbivora, from this division to carnivora, and thence to man himself, there is a connection—a connection of the most useful nature. The fact that some prey upon others is no exception; if the stately oak in falling becomes the prey of lichens and mosses, as the jay seems to seize for its booty the ruins of some old castle. If the hosts of carnivora seem to delight in the wanton destruction of their fellows, it is only to carry out the same end for which the great author of nature has designed disease and decay which pervade both kingdoms, to check the too rapid increase of life, and prevent the earth from becoming to much encumbered for the safety of its inhabitants.

The contemplation of these ties, which bind all parts of the animate creation, must surely command our admiration, and lead us to exclaim, with respect to its auther, "How manifold are thy works, in wisdom hast thou made them all!" If we would find matters of interest, where can these be more easily found than under our feet—where they do occur whether we notice them or not. The professor here exhibited some drawings, illustrating various contrivances for meeting the particular wants of plants and animals. Amongst the examples given we may notice the various "fly-traps" which some plants possess. These traps are either like a rat-trap, (on the invention of which the lecturer made a very happy allusion), or like the common pitcher plant of our own locality as to shape. The flies and other small animals, on decomposing, furnish nitrogen to the plant, which it needs. Where animals were without teeth, their place was supplied by other contrivances. The ant-eater thrusts its long tongue into the ant-hills, when its mucilaginous covering attracts and holds fast a great number of ants, which are with the utmost coolness drawn with it into the mouth and disposed of, while its scaly covering protects it from the annoyance of the animals referred to.

to.

The wanton destruction of birds* which devote their lives to our interests, such as swallows, and others which only threaten us with injury for short periods, and by taking advantage of their natural timidity may be kept from doing us much damage; the best of their time is employed in destroying the farmer's worst enemies. By understanding the history and habits of those animals which destroy

• See page 58.

our crops and injure the domesticated animals, as well as the nature of the means to be employed in exterminating them, and by knowing the nature of the diseases which attack our vegetables, we are much better prepared to defend our property, less likely to be robbed of the fruit of our labours than if we continue to be the victims of our own ignorance, and are plundered without knowing how to help ourselves. Surrounded by so many beings, both animal and vegetable, which may be made, by ignorance of their properties, to become injurious to us, we should aim at acquiring a knowledge of these, so as to render them on the contrary beneficial.

In conclusion, if even without instruction, we feel the charm of natural scenery, we are delighted with the brilliancy, grace and beauty of the flower, in the elegance, the picturesque effect, or the majesty of the tree. The more we know the more these pleasures are increased by the perception of reason, and the appreciation of variety and conformity to a common type amidst its various changes. The ignorant are brutalized into indifference to the charms which affect the childish and even the savage nature; they even become wanton destroyers from the love of mischief which accompanies and marks want of intelligence and proper occupation for the mind. Cultivation brings our faculties into harmony with nature. Beauties before unthought of rise to our view. The various forms and colours around us, the relations of the vegetation to the soil and situation, the habits and instincts, the services and injuries of living creatures —all rouse our curiosities and engage our attention, exercise our ingenuity, and contribute to our gratification. Where the boor wanders along in listless indolence, or seeks excitement in destroying what others admire, or in degrading indulgence—he who has tasted the knowledge and imbibed the love of nature finds every changing scene and aspect a source of new pleasure. He has exercise and occupation for his faculties, perpetual variety and novelty, frequent opportunities of discovering and applying what is useful, an exhaustless field of interesting inquiry, an exhaustless spring of rational, refined, and innocent enjoyment. We do not think it possible for any one to consider the relations established by the author of nature, between the different beings he has formed, and between man, the chief of His works, and all the organized beings which surround and are subject to Him, without arriving at the conclusion that the knowledge of nature is one of our most interesting, ennobling, and useful pursuits; that there are few branches of study which contribute so much to cultivate our faculties and prepare us for the business of life; that there is no branch of knowledge which does more to counteract the evil influences to which we are exposed in the world, and to give a right direction to our thoughts and affections; and consequently that nothing can be more suitable or valuable as a general subject of study—nothing better fitted for the purpose of education, or forming a better preparation for the active duties and practical pursuits which must engage most of us in the world.—Barrie Paper.

V. REV. J. TRAVERS LEWIS, LL.D.

Local Superintendent of Common Schools, Brockville.

EDUCATION-WHAT IT INVOLVES-EXPEDIENCY OF STATE INTERVENTION.

I would call your attention to the fact, that great mischief has accrued to the cause of education by the misunderstanding of its meaning-its definition. Because education is derived from the Latin word "educo" to draw out, it is assumed that the process of education is one of drawing forth or developing certain seeds of knowledge lying dormant in the young mind. According to this view, education is the sunshine under the benign influence of which the "young idea shoots," and the phrase "he has it in him," is used to express the character of one in whom those seeds appear unusually likely to germinate luxuriantly. But the fact is, there are no arithmetical, nor geographical, nor grammatical seeds in any child's mind. Education is not the cultivation of a spontaneously growing crop; it is much more—it is preparing the soil, sowing the seed, and destroying the weeds. The best educator is one who possesses the best mode of laying facts before the youthful mind in such a way as will give evercise to the reasoning faculties. You may find many boys whose heads are crammed with facts and figures, and yet owing to the mode in which these were imparted to them, the facts profited them nothing; they were not taught to compare them, to infer anything from them, in short to reason upon them. Hence it is that I think the above the best definition of education so far as the intellect is concerned. The imparting of facts does not constitute education. By the repetition of certain acts and sounds, we may train a horse and teach a parrot, but if we educate a man, we must teach him the nature and process of reasoning from facts to facts. This, however, is only a definition of education considered as applied to the intellect: there is, besides, a power in the child's mind with which education is intimately concerned; I mean the will. That will has good and bad tendencies, and education as applied to it, 'may be defined as the development

of the good and the repression of the bad tendencies of the will. Who will deny that it is as much a part of good education to check and crush a tendency to lying and thieving, as it is to develop into active exercise a natural taste for figures, music and drawing. a curse will a taste for chemistry prove if it be possessed by one whose will is not checked as he is tempted to the crime of poisoning. A cultivated intellect may be a good security against the open crimes of murder by bludgeons, burglary, street-drunkenness, and open cruelty; but unless the will be cultivated also by the teacher employing the great motives of revealed religion, there will be no security against secret poisoning, forgery, arson, and all those detestable crimes which can be perpetrated most successfully by the clever and intellectual miscreant. In order to shew more fully that we can form no true idea of education without embracing in it the neutralisation of the perverse tendency of the will, or, in other words, that a good teacher will not only sharpen the faculties of his pupils, but also teach them how to use those faculties, I shall proceed to consider education as sought for by the rich and by the poor, and we shall find that our national system of education can on no ground of reason or equity be maintained, unless the moral training of our youth be considered of equal or even greater importance than the intellectual. Now, for convenience sake, we will divide society into two classes, those who have not their own fortunes to make, and those who have: the former seek after education for the sake of qualifying themselves for the society of the learned and intellectual, as a means of social and personal enjoyment, the latter (of course the vast majority of the world) seek after education for its practical, tangible results. To those who have to work their own way in the world, a good education is equivalent to a cash capital it is worth exactly so much money according to the trade or calling in which they embark. This may be readily seen if we suppose the case of a young man about to leave his father's house to begin life on his own account. Suppose him ignorant of book-keeping or unable to write a good hand. What would that young man give to be possessed of those essential qualifications for an office of mercantile employment? The knowledge would be worth to different individuals, according to their respective positions in life, a capital sum that may be set down in actual dollars. Now the State comes forward and actually offers this cash capital to all comersprovides that every young man and young woman shall start in life with certain literary qualifications, that are equal in value to so much ready money—nay of more value to many than a small capital. Why is this? Why does the government of the country enact such a law? Of course the State requires that some value shall be received for the taxation necessary to supply young people with intellectual capital. What then is the value the country expects in return for her expenditure? She expects two things. The security of property and the diminution of crime.

I set out by remarking that a good education included the direction and restraint of the will, and if we now bear in mind that the value expected from our nationl education is the diminution of crime, does it not appear evident that the moral training of our children is really more important to this end? It is said, Oh an intellectual young man, an educated person, will be ashamed to outrage decency by the commission of crime. True, shame will often deter him from open crime, but all that vast description of crime comprised under the terms, chicanery, swindling, forgery, poisoning, perjury, incendiarism, &c., will be as likely to be committed by the educated as the uneducated, with this difference, that it is more difficult to detect the one than the other. When the evil tendencies of the will break out into open crime among our juvenile population we send them to Reformatory Institutions. But, if half the same trouble were taken by our teachers to acquaint themselves with the moral tendencies of their pupils as is taken to ascertain their intellectual tendencies, our schools themselves would be our best and safest Reformatories. I have dwelt at length on this part of my subject, as I firmly believe that the education of the will is greatly lost sight of in our schools, and it is for us to consider whether the waywardness of our young people, the wide spread disobedience of parenis, and the impatience of controll that characterize our youthful population be not traceable to the want of moral and religious training in our Common Schools. The national character is very likely to reflect the national education.*

Time will not suffer me to do more than briefly allude to one more blessing flowing from education. It is undeniable that innocent amusement is a requirement of our nature. Although labour is the rule of life, yet the Almighty frowns not on necessary recreation. Relaxation then, man must have, and that too of a pleasurable description. Now amusement must be either corporeal or mental. And when we know that the uneducated—the illiterate, have no resource in intellectual enjoyment, how awful is the only alternative to the masses? Do we not see here the real attraction of the tavern, the circus and the Saloon. The uninformed man often does relish the conversation and society of the educated, but he seldom can

find his way into such society, and though he may delight in it, yet does not feel himself at home where his ignorance is made apparent. If unable to read, or if unaccustomed to feel a relish in reading, he is driven [especially if he be unmarried] to a society congenial to him—a society whose pleasures are of a debasing though exciting nature, and where they are to be found we all but too well know.

It is sometimes asserted that the inherent delight springing from the cultivation of those intellectual pursuits which education points out, is peculiar to some persons naturally so inclined, while others are quite incapable of that mental pleasure flowing from knowledge. This is, however, a serious mistake. True it is, that some men have a more literary turn than others, but the happiness derivable from the pursuit of knowledge—the enjoyment springing from a labour of love, a relish for science for its own sake, may to a great extent be acquired by all educated persons. Many of our appetites and tastes are acquired, and are by no means the less keen for that reason, and in like manner a taste and relish for letters, the arts and sciences, may be acquired so as to outweigh and overpower corporeal pleasures, however strongly we may be addicted to them naturally.

How immense, therefore, is the responsibility devolving not only on the philanthropist or the statesman, but on every one who can say with the Poet, "Nihil humani a me alienum puto," "I consider that there is nothing appertaining to humanity which does not concern myself." How great the duty to impart to our fellow men the means of intellectual enjoyment? It may not be had, except in extraordinary instances, without education, and should the time ever arrive when our national system should be so improved and developed, that while it enlarges the capacity and teaches the dignity of the soul, it forgets not to impress on the young its destination also; when duty to God and our neighbour shall be interwoven in the fibres of secular knowledge, when intellectual culture shall be promoted in humility and guided by benevolence, we shall have a system worth living for—aye, and worth dying for, provided that by any sacrifice we could secure its universal diffusion.

VI. REV. GEORGE S. J. HILL, M.A., Local Superintendent of Common Schools, Markham.

THE OBJECT AND MODE OF IMPARTING EDUCATION.

In opposition to those who defined education to be a means of defence against the impositions of the designing and unprincipled, or an instrument for promoting the schemes of self-aggrandizement of the ambitious, or for advancing civilization and multiplying the comforts and luxuries of life, Mr. Hill pointed out, that although these were some of the results of education, they by no means conveyed a proper explanation of the term, which could best be defined by examining the etymology of the word, Education signifying literally a leading out, or drawing forth into active exercise the powers of the mind. This idea being opposed to the commonly entertained opinion that education consisted simply in imparting knowledge, the pupil being supposed to sit the passive recipient of learning with which he is filled as an empty vessel is filled with water, thus making education appear as a mere mercantile transaction, in which a person with a certain amount of information is as competent to transfer that knowledge to others, as readily as a certain amount of goods can be transferred to any one on payment of a certain sum of money. Such persons, forgetting that there are two important conditions necessary to such a transfer, first the ability on the part of the Educator to impart his knowledge, of which his scholastic attainments is no proof whatever, and next that the pupil must be an active and not a passive party to the transac-tion, for if he is not possessed of industry, application and capacity, all the money in the world will not make him a scholar.

Education, he said, included the training and developing of the whole moral, intellectual and physical powers of a human being, with all the external influences which go to the formation of character, thus extending over the whole period of human life, commencing with the cradle and ending with the grave. Man should be educated in harmony with his whole mental and moral constitution; education did not give happiness, but it gave the power of attaining it under fixed regulations; and the youth who had been taught the lesson of application and self-dependence, had laid the foundation of an education far more valuable, than he who had acquired a superficial smartness, or been crammed with a few facts. To think deeply, read extensively, and to labor strenuously, were the requisite passports to

extensive usefulness and distinction.

The teacher, he said, ought to be a moral ruler, a mental physician, thoroughly understanding the complicated machinery of the human mind. We do not admit any one to administer to our bodily ailments unless we are satisfied that he has studied the anatomy and physiology of the human frame. How much less should any one tamper with the much more fragile machinery of the mind, who is ignorant of the best manner of controlling and directing all its desires, passions and propensities.

With regard to the advanced education imparted in our Grammar Schools, the lecturer answered some of the objections raised to what was called the study of words.—What, he asked, would our religion be, if it were not communicated to us through words? Our religion, our laws, our institutions, and all the wisdom and records of past ages, were only available to us through words. If the makers of our laws had always had a more correct notion of the value and import of words, thousands of quarrels and law-suits would have been avoided. The study of language leads to correct thinking and appropriate expression of our thoughts. We study the dead languages of priate expression of our thoughts. We study the dead languages of Greece and Rome, because one-half of our own is taken from them; they also are useful for educational purposes, from the fact that they are self-evolved languages, and have each an independent process of development, being emphatically etymological languages, while those of modern Europe are conventional.—All the wisdom and experience of past ages were stored up in these languages, and therefore ought to be studied by the historian, the lawyer, the divine, or the statesman, who is engaged in the organic development of our political institutions. The properly educated man has resources within himself of which the cares and troubles of life cannot wholly deprive him; he can call to his companionship the presence of the distant and the dead; he can roam at pleasure through the old field of knowledge and cull the sweets of poetry, or warm his patriotism by the noble exploits of heroes long passed away.

VII. A. DINGWALL FORDYCE, Esq. Local Superintendent of Common Schools, North Wellington. TEACHERS' ASSOCIATIONS, -- PRINCIPLES WHICH SHOULD GOVERN THEM.

After a few introductory remarks, Mr. Fordyce said: "Be fully impressed with the advantages of a sound education, and alive to every means in your power for qualifying you to impart it:—Be conciliatory to each other—considerate of each other's situations, circumstances, habits, and feelings—perhaps widely differing from your own:—Seek as far as possible to discard prejudice in your intercourse with them:—Cultivate self-respect at all times and in all places: and endeavor to be punctual in the fulfilment of all engagements." To the following topics he then adverted:

To the following topics he then adverted:

First.—"A good sound education will give its possessor in general, a vast advantage externally, over such as from indolence haveneglected as fair opportunities of making progress-or who have been less highly favored, from not actually having the means of mental enlightenment and culture within their reach. Remuneration for services rendered will generally be higher, and attainable with less diffi-culty by the class referred to,—who have steadily persevered in selfimprovement; and this will be the case whether we look at those practising any of what are called the liberal professions, or who pursue a mechanical or handicraft calling. The comfort and happiness in general of the educated, as compared with those of an opposite class, is commonly very observable in their homes. They have internal resources of pleasure which preclude the excuse, not to say the necessity, for resorting elsewhere for companionships by which many are led astray,—and they may experience the satisfaction of imparting, according to the measure of their attainments, to those who naturally look up to them with respect. The advantage to the possessor of a good education, of ability through its means to enter into and follow out intelligently any of the social questions which agitate and affect society, should not be undervalued-nor should the importance of the fact be under rated, that many who have had little or no early opportunities are frequently in danger through the specious and plausible reasoning of the designing, but in some respects better educated, whose powers have been misdirected. * *

SECOND.—Intercourse among the educated should certainly be carried on in no less kindly a spirit than among those whose advantages in this respect have been very limited, and this is taking a very low view of the case. A conciliatory disposition may be of particular consequence in such an association, because the members may have had very different opportunities of acquiring an education themselves; and those who are in a great measure self-educated may be as deserving of respect, although in many particulars deficient, as those whose advantages have been far greater, while at the same time their sensibilities may be the keener just by reason of their early disadvantages. If such are seeking to put themselves in the way of becoming good teachers, it will be matter for self-gratulation to those who have outstripped them in consequence of superior opportunities, that they have encouraged, not in a patronizing but friendly and social spirit, their laudable ambition.

Third.—Prejudice in exercise in a Teachers' Association might have

as injurious an influence on the individual, as bigotry in religion, or a furious and unreasonable party spirit in politics. Seek then to exercise impartially in your estimate of others, holding the scales of justice with so steady a hand as to prevent them from being swayed by a despicable prejudice. Many things, you are well aware, against which at first the strongest prejudice has existed, have

turned out, after experience and careful observation, far more worthy of commendation than the reverse. When prejudice does exist, it can scarcely avoid shewing itself. Those who with pain observe it, or experience its baneful effects, may, however, disarm it, perhaps eradicate it, or even wholly convert it into an opposite feeling, by the manifestation of habitual equanimity. This, no doubt, may be of difficult exercise, but it is certainly possible of attainment, and will prove of essential service to the individual, and to any association he is connected with.

FOURTH.—Teachers should cultivate and exercise a constant habit of SELF-RESPECT; and unless they do respect themselves, they cannot be respected either by their scholars, their fellow teachers, or

any others with whom they may be associated.

There are certain habits formed perhaps very gradually, having a direct tendency to lower men in their own and others' estimation,

and which should especially be shunned by Teachers.

To the investigation of any subject of importance, the full powers of the mind ought to be brought. All will allow this. If then, through the habit of intemperance the mind is weakened, the memory impaired, or the judgment or moral sense blunted or warped, which assuredly they will be, however unconsciously to the victim of this insidious and destructive habit, (to use no harsher epithet,) there is something wanting. I may allude to another equally common habit, the use of *Tobacco*, in one or other of its The habit induced by its indulgence is very often a growing one, and may lead, as I doubt not many have found it to do, to associations with others who are addicted to grosser forms of intemperance, and ultimately to a participation in the same ruinous habits, and the pursuit of a similarly destructive course.

The evil influence this habit may have on his scholars should also be well looked at by the Teacher. Not being in its effects so offensive as that formerly referred to, it is more likely to be copied, and some of these effects, even where the use is not indulged in by the young, will be apparent in the conduct at least of some, if not of many of them, and in such a way as to prevent the Teacher correcting or checking an evil of which he must be conscious he has himself to some extent been the procuring cause. In the least common and most offensive mode, chewing is probably comparatively rarely seen among us. This is well: but even habitual smoking occasions habits which are offensive to many whose regard is valuable, and which, for their comfort and the enjoyment of their unqualified esteem if for no other personal reason, it were well to

avoid.

I might further add, that carelessness in the matter of Dress is another point not to be lost sight of. A teacher dressed in clothes out at the elbows, will have a school of ragged urchins about him; a teacher who is not particular about his person, may have his scholars to have dirty hands and faces, uncombed heads, and other indications of slovenly habits in regard to personal appearance. Let the Teacher set a good example in this respect, and, despite untidy homes, and many drawbacks and disadvantages, he may generally count on the scholars striving not to be so very careless as they would otherwise be. He may even, by this means, lead to an improved state of matters through these very scholars in their own dwellings—The bearing of this subject on such an Association is obvious. "Like Father like Son," or "Like Minister like People," is a common proverb. "Like Teacher like Pupil," may not hold equally, but to some extent it will do so.

FIFTH.—Constant attention to Punctuality in the fulfilment of all engagements, is another point, by the observance of which such an Association may be greatly benefitted, and by the neglect of which it may suffer severely. "Better it is not to vow, than to vow and not perform;" and engagements, it may be safely affirmed, are more rashly entered into in a great majority of cases than they should be. We hold the doctrine of inspiration, that "he who is faithful in that which is least is faithful also in much," and the

converse of the proposition will hold equally true.

VIII. JAMES A. McLENNAN, Esq. Head Master of the St. Mary's Central School.

THE ENGLISH LANGUAGE,-ITS FUNCTIONS AND POWER.

After amplifying the first part of his subject by various illustrations, the Lecturer next noticed the utility of Language, ascribing to it four functions. It enables us to analyze complex impressions it records the result of this analysis—it abbreviates the process of thinking—and it is the means of communicating ideas.

After giving numerous arguments and familiar illustrations in support of the first three of these functions, he said regarding the fourth: I think it is sufficiently evident, that, without the power of interchanging ideas, man could never have attained that degree of moral and intellectual greatness, which is the legitimate result of the mutual influence of mind upon mind. For, even admitting that the simpler emotions and conceptions of the human mind, may

be communicated by cries and gestures, yet, how utterly inadequate would such means be, to express the refined emotions—the sublime conceptions which characterize the human intellect, and stamp it as divine! Of what avail would be the most ennobling sentiments of virtuous minds; of what utility the highest flights of human genius, if not allowed to go forth exercising those benign and elevating influences, which rescue man from the horrors of barbarism, and place him in his true position as a being little lower than the angels? I think, then, notwithstanding the assertions of certain metaphysicians, that language is as necessary to constitute man the being he is, as reason itself, and, that without language, he would indeed be less than man. For in the first place, I believe that thought itself cannot exist without language or its equivalent: I know that this is a disputed question, and one that cannot be decided by a priori reasoning, but by experience only. Let then any man, who wishes to satisfy himself upon this question, examine his own mental operations; let him attempt to carry on a train of reasoning mentally, without using words or their equivalents, and he will find it to be impossible. one can carefully examine the processes of his mind without perceiving how intimate is the relation between a notion and its name: so intimate indeed, is this relation, that a superficial examination cannot determine which is antecedent to the other. But again, even admitting that the intellectual processes are not dependent upon language, and that without its aid, the mind can attain the highest state of alacrity and vigor, still, without the language of words the profoundest researches of mind, the sublimest attributes of humanity could have no existence independent of the imprisoned soul which produces them, inasmuch as cries and gestures, the language of mere brutes, are entirely inadequate to express the workings of that divine principle of mind which constitutes man the arbitary sovereign of the universe, and allies him to his Omnipotent Creator. In speaking of the utility of language, as a means of communication, I include both spoken and written language, for it is manifest that it is by the latter only that the results of human thought can have a permanent existence. Without the aid of written language the holiest sentiments of minds of angelic leveliness; the most exalted conceptions of intellects of angelic brightness, would be forever lost to mankind, being as transient as the voice that uttered them; as fleeting as the lightning's flash : but, by the aid of written language, all that is noble and great: all that is lovely and good of every age or people, becomes the common property, not of one generation only, but of all generations throughout all time, and appears after the lapse of ages, exercising its benign influences with all the effect of its pristine vigor: thus it is, that we can hold familiar intercourse with the master-minds of all preceding times. The lecturer then proceeded to trace the growth of the "English Language,"—In regard to the power of the English Language, he said:—By the copiousness of our noble language the subtlest distinctions in the various shades of human thought may be clearly expressed. By its multitudes of synonymous terms, and grammatical equivalents the greatest possible variety of expression may be attained. By the force and vigor of its primitive words, the greatest energy of style may be secured. By its flexibility, the most infinite variety of poetic rythm may be formed in a manner that no language can surpass. At one time we find the verse rolling like the rush of a mountain torrent; at another, "falling gently like dews upon the green slopes of Hermon;" now sweetly persuasive, and again terrible with fierce denunciations, now "harsh, whistling, grunting, guttural," like the crash of elemental strife, and anon, swelling forth like enchanting melody.

In conclusion, he said, the English language, being spoken by the most powerful, the most intellectual and the most Christian nation of the world, must become the universal language; Before the close of the present century it will be spoken by 150 millions of people—already it is listened to as the voice of power by the unknown millions of British India; The time will come when the now silent and solitary places shall echo its harmonious sounds,—when the dark abodes of paganism, now the habitations of cruelty, shall utter forth in its expressive strains the praises of the World's Redeemer—when the whole human family shall possess the glorious productions of the English Language—productions as immortal as the intellectual principle from whence they sprung—and when the whole earth shall once more be of "one language and one speech"—the language of Liberty—of Science—and of Religion—The English Language.

IX. BAYARD TAYLOR, Esq., of New York.

Author of various books of travel.

THE PHENOMENA OF AN ARCTIC WINTER. -- A LECTURE AT TORONTO.

In order to observe the effect of the Arctic climate, Mr. Taylor directed his steps to the far north, by way of Lapland, whose rocky shores stretched like an immense wedge into the Arctic Ocean, beyond the 71st parallel. Here the gulf stream, whose warm currents came across the ocean, and, striking the North-west corner of Lap-

land, very much modified the cold in certain parts of that coast. The cold there never exceeded twenty degrees below zero, and the sea remained unfrozen all the year. This gulf stream went round the North Cape, hugged closely the shore of Lapland, and finally terminated all at once at the head of a deep bay, which divides the Norwegian from the Russian territories. Here it met with an opposing current from the North Pole, the effect of which was so sudden and marked, that, while the Norwegian side of the ports were open all the year round, on the Russian side they were frozen solid. For this reason Russia had been, and still was, very anxious to become possessed of a port on the Norwegian side of this bay, in order that she might have some outlet for her navy, during the long winter months. In one respect, the lecturer continued, the Arctic region was certainly more interesting than the tropical, for while the tropics had only their one unchanging summer, the north had two seasons of equal originality. The Arctic summer was had two seasons of equal originality. quite as remarkable a phenomenon as the Arctic winter. His first journey thither was made in the winter, as furnishing the greatest contrast to previous experiences. The journey northward might not inappropriately be termed a journey in search of cold weather; and, travelling northward, he found it growing gradually colder and colder, the thermometer falling lower and lower day after day, but still not fast enough for his impatience; and still, as he journeyed, the thermometer went down, down to ten below, a degree of cold he had felt in his own country—down to twenty below, a very fair approach to an Arctic cold; and still it fell, until, on Christmas Day, he was quite satisfied, on finding that the mercury and his nose froze at the same time.

During the winter, the thermometer fluctuated between twenty-five above and fifty below, a range quite as great as that experienced in this country, though, of course, graduated on a much lower key. Then commenced the wonders of the Arctic winter, and each succeeding day disclosed some new and unexpected experiences. Day after day, the sur rose later, and set sooner, and described a more depressed curve in the heavens; and in the same proportion did the white light of day diminish and give place to the many coloured tints of the morning and the evening. He lost sight of the face of the sun but for a few days, but even at these times, the gorgeous colouring of the sky could neither be described nor painted. Even the Aurora Borealis, with its fantastic dances of light, and its wondrous changes, impressed him far less than the splendid painting of the unclouded sky of day. On entering Swedish Lapland, the scenery presented no remarkable features, and in summer would be called tame and monotonous. The immense forests and the marshy plateaus were sufficiently uninteresting; but the winter, the bearded magician of the North, took these common objects and transmuted them into marble. All colours disappeared, and every thing became a spotless white. The snow freezing as it fell, covered every branch and twig, and the forests at last showed not a single speck of green, or any other colour, and forms the most suggestive were presented to the eye of the spectator. There were frozen fountains springing up among the leaves, immense candelabra, lace curtains, pendant from outstretching arms, marble pillars, plumes and palm leaves, all blended together in a dazzling confusion which bewildered the eye. No forms of life or vegetation were so exceedingly beautiful. And when his hearers considered how these forests reflected every tint of the sky, from the most brilliant pink in the morning, changing continually until noon, and then in reverse order, until the sun went down, they might form some faint idea of the magnificence of the scene. To him (the lecturer) the discovery of such exceeding beauty was solemn and touching. It was as if God had purposely designed it as a compensation for warmth and life. "Not for you," he says to his Arctic children, "not for you the warmth and life of southern climes, not for you the abounding vegetation of the tropics, but I will cover your desolation with the purity of Eden; I will spread the colours of the rainbow over the whole arch of your sky, and the marches of my shining armies shall make even your darkness beautiful." The speaker next proceeded to describe the effect of the cold. When the thermometer stood at 35° or 40° below zero, with a clear sun, and no wind, one might sit very comfortably in his sleigh, wrapped up in furs, and feels no unpleasant chilliness. But when the sky was overcast, and the wind blew strongly, at a temperature even many degrees warmer, the imagination could not conceive anything more dreary. The fine particles of snow almost cut through the skin; the moisture of the breath froze instantly; the cold attacked the hands and the feet, and if not vigorously repelled, gradually advanced its besieging lines towards the seat of life, and produced a sensation of drowsiness, which, if yielded to, ended in death, for there was no difference then between sleep and death. But there was still another degree of cold beyond all he had described, and that was when there was a strong wind blowing from the north ata temperature of 40° or 50° below zero, and the sensation with which it was endured, he could only describe as a struggle for life. The cold was not only felt, but actually seen. The sky, then, was like an arch of polished steel which had been breathed upon, and the wind was like a blast from the hell of the old Scandinavian mythology.

THE PECULIARITIES OF THE SWEDES, LAPPS, AND FINNS.

The lecturer, leaving the physical and climatic peculiarities of the North, gave a description of the people by whom it was inhabited. Between the Swedes and the Norwegians he would not attempt to draw any very minute description, as they were alike in most essential points, but the Finns and the Lapps presented more points of The first impression made upon him by the people was difference. that of splendid animal health, and those qualities usually connected with health, frankness, directness of character, cheerfulness, contentment, and a freedom from perverted passions. Without being actually handsome, either in face or in form, they were tall and athletic, with clear blue eyes, which seemed to reflect the color of their native skies, and complexions as fresh and as rosy as the morn. He had never seen a more simple, honest, and unsophisticated class of men. Perfectly honest, they were without mistrust, taking it for granted that everybody was equally honest; very kindly and friendly, were yet undemonstrative, and at first sight appeared cold; but they were no milksops, and beneath that cold exterior still sometimes blazed out the fierce passions which in the South were no stronger, but less under control.

On turning round the corner of the Gulf of Bothnia, they came into Finland, and instead of Swedish forms they had the shorter frames of the Finns. What particularly struck him respecting the Finns was a certain Orientalism shewn in their language, which is Asiatic in character, the only European language having any affinity with it being the Magyar or Hungarian. In other respects, too, they gave indications of being of Eastern origin, and it was curious to find so much of the Orient reproduced within the Arctic circle. The Finns were less frank and open-hearted than the Swedes, but more picturesque, with more light and shade of character. They were passionate, and therefore prone to excess; imaginative, and therefore prone to superstition; but the religious element seemed now to have become their only safety-valve for their imagination.

Drunkenness had now almost entirely disappeared, consequent on the exertions of the Swedish missionaries, who made temperance a part of their religious instruction. Their notions of propriety were curiously contradicted; for while both sexes made use of the vapour bath at the same time, and the usual form of salution was by a close embrace with the right arm, yet a kiss even from a husband to his wife was considered as an outrageous breach of propriety. Still further north than the Finns and the Swedes, were the Lapps, who might be considered as the natural and proper inhabitants of that inhospitable clime. Where they came from had not been satisfactorily determined, but to see them one would be very much inclined to say, with Topsy, that they never came from anywhere, but grew there. He found them neither so small or so ugly as he was led to expect. He found most of the men to measure five feet four inches, or even more, and some of them reached nearly six feet, and he saw in Stockholm the skeleton of a girl which reached the astonishing height of seven feet eight. In one respect, he found them loss interesting and picturesque than he expected. They had lost nearly all traces of their ancient mythology, which had disappeared before the advances of the Christian religion. The lecturer then gave a lively description of the animal upon whom the existence of the Laps actually depended, namely, the reindeer; its peculiarities, its adaptability to the various needs of a polar climate, and the great variety of the uses to which its bones and sinews, and skin, were turned; its wonderful sagacity in picking its way without the slightest hesitation across a trackless waste of snow, when the path lay several feet below the surface, and when the drifting snow instantly filled up all marks of previous travel. He then recounted his feelings during the long winter night of the Arctic region, and the delight with which he hailed the return of the sun and of the white light of the day; and then of the effect of the summer day, when the perpetual daylight produced, after a little, the feeling of chronic fatigue and sleepless restlessness, which were almost insupportable. "I never," said he, "experienced a more delightful sense of refreshment than when, after a month of daylight, the blessed old night came back again, and covered me up while I slept, as a mother covers up her restless child." The lecturer closed by saying that science and civilization would never receive any very Nevertheless, it important aid from beyond the parallel of sixty. was cheering to find even there, where men lived under such discouraging circumstances, that love for each other, trust in each other, and faith in God, were all vital among them; and their shortcomings were so few and so easily accounted for, that one could respect them, and feel that his faith in man was increased by knowing them. Those who spent their whole lives at home could not understand how much real good there was in the human race. God had created no race of men, as no individual, entirely bad. He neglected none of his child-

ren, and upon the frozen shores of Lapland, as well as the sunny lands of the South, rested alike his benediction, his mercy, and his infinite love.—Leader Report.

II. Papers on a Truancy Law.

1. EXTRACT FROM JUDGE HAGARTY'S LATE CHARGE.

I cannot omit alluding to a subject always brought most painfully to my mind on an occasion like the present. The streets of Toronto, like those of too many other towns, still present the miserable spectacle of idle, untaught children, male and female-a crop too rapidly ripening for the dram-shop, the brothel and the prison—and that too under the shadow of spacious and admirably kept school houses, into which all may enter free of cost. Most nobly does Toronto provide the means of free education. About twenty-six thousand dollars is annually raised by assessment, besides the amount levied for Roman Catholic Separate Schools. The Government grants swell the total to about thirty-two thousand dollars. Such an expenditure in a population of under 50,000, might be fairly expected to ensure the blessings of education to all. Every person accquainted with the worst classes of our poor is aware of the extreme difficulty in inducing them to permit their children to attend school. They will retain them to gather wood for fuel, to beg from door to door, in short for any thing in preference to the free education so liberally provided. Now as has been frequently repeated, it is from this class our young criminals often spring—it is this class we are chiefly interested in humanizing by education—and in this way we are supposed to receive more than an equivalent for our enforced contributions to the maintenance of schools. It is to be feared that the majority of persons content themselves with the assurance that as we devote a very large annual sum to provide free education to all, nothing more can be expected—and a still greater obstacle to improvement is the tendency of others to denounce every suggestion of a possible defect in the system in large towns, as emanating from a bigoted dislike of the Common School System, and as treason to the noble cause of Free Education. But year after year the great evil continues unabated, and those whose heavy responsibility it is to act as Judges or Jurors in Criminal Courts naturally ask if such things are always to be. It was a work of centuries to teach nations that their duty towards their criminals extended beyond punishment. The labors and lives of great and good men and women, and a wider knowledge of social economy, but above all a nobler appreciation of the spirit of that Gospel which preached deliverance to the pressmen and captives, have at last awakened us to the belief that the reformation of the offenders is at least as important to society as punishment. I trust there are many listening to me who will live to see the day when we shall cease to feel perfectly satisfied in having done all that was required of us in providing a very large sum to offer free education to all who voluntarily seek its blessings-leaving that unhappy class most in need of them to follow in vicious idleness their own broad path that leadeth to destruction, whatever may be the various opinions as to the true remedy. I may venture to express my hope that the Grand Jurors of these Counties will join in the earnest desire that means may be devised of extending to our long neglected juvenile vagrants some humanizing benefit from the many thousands of pounds which the public generously contribute for the purpose of education.

2. A VISIT TO THE REFORMATORY SCHOOL AT PENETANGUISHENE.

As one of the great disciplinarian institutions of the country, the Reformatory, besides its own local attraction, should be understood as being now in full vigour and active usefulness—thoroughly organized, and as far as the already limited accommodation admits, doing a good work towards regenerating the evil tendencies of the youth now incarcerated within its walls.

It is hardly necessary to state that the Reformatory, or old garrison, occupies a pleasant position on the east side of Penetanguishene Bay, at the foot of a picturesque slope, and in full command of an extensive view of the Georgian waters, with its numerous islands. The drive from the village of Pentanguishene, a distance of three miles, is such a one as readily calls to mind some of the more rural approaches to ancient fortresses in the old country, being thickly lined with the cottages of the pensioners, some of them very tastefully decorated, and all possessing that quaint appearance that in itself indicates the residence of the "old soldier." We were conducted to the grounds by W. M. Kelly, Esq., the Warden, who took the greatest pains to point out and explain what has been done, and what still requires to be done for the efficiency of the institution. The reserve consists of two hundred acres, now being fenced, and a portion put in order for

farming purposes. The prison itself is a substantial stone building, 111 feet long, 39 feet wide, and 24 feet high, which, with the office and grounds, occupy four acres, the whole enclosed by a fence 16 feet high. On entering we were conducted to the various workshops, which already consist of carpenters, tailors, shoemakers, and coopers, all carried on, with the exception of the latter, within the main building. It is indeed a hive of industry, each of the departments being presided over by a responsible man, and who, in addition to his mechanical duties, superadds that of keeper, or guard. Besides the workshops is a large dining room, school room, two chapels, Protestant and Roman Catholic, and sleeping rooms. The order of proceedings is as follows:—Rise at 5½ o'clock, muster at 6—school until 7—breakfast—after which told off to their different employments until 11.55—dinner at 12—the interval until 1 being filled up by play. Again muster and off to their different shops until 4, when the bell summons to school until 5.45, followed by supper, and closure of the prison at 6 o'clock. Two guards remain with the boys, who are allowed to read and study until 7½ o'clock, when all are ordered to bed.

Perhaps the most marked feature was the good order and apparent contentment of the boys, at present numbering 44, and varrying in age and size from the pctit to the "prodigious." We can testify to the zest taken by the boys in eating and exercise. The culinary department is conducted on a most economical scale; for while the best of bread and beef is given to the prisoners, the average expense of feeding each has averaged only eight cents a day. Religious exercise is provided twice a week, under the ministrations of Rev. Mr. Hallen, Episcopal; and Rev. Mr. Kennedy, Roman Catholic.—Northern Advance.

3. TRUANCY INSTITUTION, BROOKLYN, N.Y.

At the Truant Institution established three years since, children who refuse to attend the public or private schools, and who are so unruly as to be beyond the control of their parents, may be committed by a magistrate until they reform so far as to be willing to attend school, or be controlled by their parents. At the Truant School they are educated and taught some useful occupation by teachers provided for that purpose and who are perfectly competent to impart instruction to them. They receive religious instruction as well.

4. TRUANCY ACT, NEW YORK.

By this act, on the complaint of any citizen, a child between the age of seven and fourteen, found vagrant, may be taken before a police magistrate for examination; and the parent or guardian can be compelled to enter into an engagement to keep such child from vagrancy, and to send him or her to school "at least four months in each year." The act provides also for the punishment of the parent if this engagement be broken. It further makes it the duty of all police-officers who shall find truant and vagrant children, to make complaint as before described.

5. TRUANCY ACT, RHODE ISLAND.

An Act to prevent Truancy from School in the City of Providence, Rhode Island.

Be it enacted by the General Assembly as follows:

Section 1. The Board of Aldermen of the City of Providence, may, at any time after the passage of this Act, and annually thereafter, appoint one or more discreet and suitable persons in said city, whose duty it shall be to see that all children, truants from school, between six and fifteen years of age, residing in said city, who are without lawful occupation, and are growing up in ignorance, are placed and kept in some public or private school in said city. Said persons, so appointed, shall be called supervisors of schools, and shall have power to hear and examine complaints, and at their discretion to take such children to school; and in case of continued truancy, with the approbation of the Board of Aldermen of said city, as herinafter provided, may commit any such children to the Reform School in said city.

Section 2. When any superior cannot induce any such child regularly to attend some school in said city, he shall report the name of such child, with their parents or guardians, to be brought before them by said supervisors, and the matters shall then be, by said Board, fully investigated; and if upon a full hearing of the case, said Board determine that said child cannot be kept at school, and that such child is growing up in ignorance, having no lawful occupation, said Board may order said supervisor to commit said child to the Reform School for a term not exceeding the period of his minority.—Hon. E. R. Potter's Report. 1854.

III. Lapers on Practical Education.

1. SUBJECTS TOO LITTLE TAUGHT IN OUR SCHOOLS.

J. S. McColl, Esq., the Local Superintendent of Schools, Aldboro', in a recent address, recommended among other things the teaching of composition and practice of public recitations in our Schools. In consequence of their neglect, he shewed the difficulty that existed, even among our most advanced scholars, of composing, intelligibly, a letter on very simple business, and the incompetency that a man feels in rising to address an audience, tho' he may be quite conversant with the subject upon which he attempts to speak. The Superintendent concluded his excellent remarks by impressing upon teachers the propriety of giving their pupils occasional lessons on the constitution and Government of Great Britain, in connection with her colonies, and of calling their attention to the excellency of her institutions, thereby imbuing their minds with a love of country, and a loyalty for which Canadians are already so well known.

2. NECESSITY OF HISTORICAL KNOWLEDGE.

There is no department of human exertion, in which a preliminary historical knowledge is so necessary as in education. The education of a people bears a constant and most pre-eminently influential relation to its attainments and excellences—physical, mental, and moral. The national education is at once a cause and an effect of the national character; and, accordingly, the history of education affords the only ready and perfect key to the history of the human race, and of each nation in it,—an unfailing standard for estimating its advance or retreat upon the line of human progress.

3. CHILDREN OUR FUTURE RULERS.

The present childhood of the world is, under God, to control the destiny of the world. The ten millions of the youth of the land are to decide its character, for weal or for woe, either upward or downward. As surely as the sun hastes in its strength to the zenith, so surely will the world's youth course up to power, speedily occupy the inheritance of the presant generation, and impress upon America and the world their own individuality of honour or of shame. Who shall prevent this young man of fervid intellect and untiring energy, from making his mark in life, and from standing, instead of before kings, a very king himself before the people? Who shall hinder this educated daughter, if trained to the life of ball-rooms and theatres, from shadowing the life of heaven from her own soul, and the souls of her companions? If the tree lies as it falls, so ordinarily does life go on as it begins, influentially and irreversibly.

Now a large proportion of these youth are educated youth. Their minds have been trained to knowledge, and disciplined by its acquisitions. There are the three or four millions of common school scholars throughout the land, the hundreds of thousands in acadamies, and the tens of thousands in colleges. These are a strong host fighting their way for the kingdom of this world. They leave more than ripples upon the surface of society; they are the mighty waves whose power gains victory in the mysteries of the deep, and dashes up defiance upon the land.

It may be affirmed that it is characteristic of the age to respect the claims of youth, to honour it as a power among mankind, and to give it increasing importance in the affairs of the world. The recruiting officer has his standard of height, and enrols or rejects according to the degree of personal stature. Feet and inches go to make a soldier. But in our day, youth, influential by activity, becomes self-enrolled for positions of ascendancy. Youth is relatively more prominent than in old times, and in the future it will be, perhaps, in this country more so still. Under these circumstances of present and increasing influence in all the affairs of life, what momentous interests are wrapped up in the character of our young men and maidens, and especially of those whose education is qualifying them for the highest private and public stations.

4. GIRLS' RIGHTS.

There is a very important sense in which the rights of man and woman are perfectly equal, and perhaps identical. Girls have rights as well as women, and boys as well as men. With "Girls' Rights," for a watchword much more might be accomplished. Girls have inalienable rights to the same thorough course of mental culture with boys. What is the object of mental culture and mental discipline? Is it merely to prepare us to meet the force of physical necessities? to brace up against the contingencies of this present life? If this be the only design, then surely every argument must be in

favor of girls' rights in this respect? The storms of penury and adversity would seem less cheerless and dreary to the heart of woman, if her mind had been more thoroughly disciplined by the hand of right culture. If she had not been educated for some ideal mission, some field of ease and comfort, she would be far better qualified to meet the stern demands of real life.

But it is an unpardonable infringement upon the rights of girls, to deny them, by false notions of popular sentiment, the thorough, mental culture given to boys. The design of education is to strengthen as well as to refine, to mature as well as to cultivate. Can there be any reason then, why the right to thorough and practical, mental training should be denied to girls! Look at the picture of human misery. Behold the sufferings of woman. Ask yourself how much of this suffering might be palliated and perhaps avoided, were girls permitted to enjoy their natural and imperative rights. There is a sickly, popular sentiment, I am aware, which regards ignorance and indifference in regard to all the practical duties of life, as positive proof of female delicacy. This sentiment would have the course of study for girls, very delicately carved and very carefully pursued. Let them pay much attention to the "fine arts." Let them not be required to deal with the stern and diffcult in the pathway of knowledge.

Thus they rapidly advance to womanhood, plants of tender growth, fit only for the green-house of affluence and luxury, and not able to withstand one ray from the full orbed sun of life, or the tempests which ever and anon sweep through its dark ravines. No one must infer from this, that the "fine arts" can be pursed too attentively. The fault is not that the beautiful is studied too much, but the forms of beauty do not assume proper strength. Other things of equal importance are sadly neglected. The right to study the beautiful is the common inheritance of the girls and boys. If a thorough course of mathematical study is best adapted to call into systematic life the powers of mind, why should this be denied to the girls? And if music, painting, &c., are calculated to soften and refine human nature, why should it be esteemed a matter of indifference whether boys study them or not?

There are very few departments of science, which are of practical value to any body, improper for woman to be acquainted with. The legitmate province of education is to lead the human mind into all

the mysteries of art and science.

Another right may be mentioned. I am very certain that the right of girls to be educated with boys is "inalienable" and imperative. The home circle is very incomplete without brothers and sisters. There are deep and pure fountains in the human heart, which these relations alone can unseal. Social life would be a comparative blank, without the mutual influences of the race. Every department of life, most emphatically, establishes that old, antediluvian truth, that "it is not good for man to be alone." Yet in despite of this, you will find "boarding schools for boys," and colleges for boys all over the land. And that there are fashionable boarding schools for young ladies, female seminaries, &c. I would not speak disrespectfully of any school, but I know I speak the experience of many teachers in saying, that it is many times less trouble to manage one hundred boys and girls, than the same number of either alone. Many of the "boarding schools for boys," breed moral pestilence and imbecility. There is no restraining influence which female character always exerts, felt there. And the female seminaries of our land graduate a multitude of weak and inefficient characters, fit only to loiter in the velvety walks of life. Very much of the roughness and impetuosity of boys' nature might be overcome or modified, by associating, under proper circumstances, with girls. Nothing is more becoming in the circles of education, than a class of boys and girls, sitting, side by side, upon the same recitation seat, intent upon progress, and alive with mutual emulation. And the teacher who can not bring all such associations under proper regulations, is not a master workman to say the least.

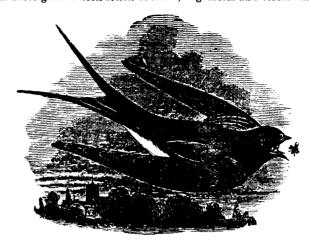
Let girls as well as woman, asert and maintain their rights.—
N. Y. Teacher.

IV. Zapers on Natural History.

1. TO BOYS—DESTRUCTION OF BIRDS FORBIDDEN IN GERMANY.

The destruction of all birds, except game to eat, has been recently prohibited in many of the small German states, on the Rhine, and in parts of Germany. The motives urged are these—wherever the farmers have killed the rooks, jays, and even sparrows, the crops have been less than where they had been unmolested. Very able naturalists have examined this, and have reported that the vast quantity of noxious vermin which the birds destroy, greatly exceeds the small quantity of grain they destroy in searching for the insects on which they feed. Investigation in this country has developed

the same fact. The destruction of the birds gives hosts of insect tribes a chance for life, and those feed upon the crops and cause a far more general destruction of fruits, vegetables and cereals than is



occasioned by the birds themselves. Now as the Spring approaches, and with it the time of the singing of birds, measures should be taken to protect these warblers from murderous attacks of boys.

—New York Com. Adv. (See page 52.)

2. CAUSE OF DEATH AMONG THE GOLD-FISH.

Whenever you meet with folks who keep gold-fishes in the old-fashioned glass globes, you will be sure to hear the melancholy complaint that they will die in spite of every care taken to preserve them. The water is changed most regularly, the glass kept beautifully clean, the vessel shaded from the sunshine; yet, alas! alas! death is always busy among them. Is it internal disease? Is it external fungi? No; the cause is starvation. Every other pet is expected to eat, but these gold-carp are expected to subsist onnothing! "But don't they eat the animalcule?" Nonsense! Give them a few small earth-worms, or anglers' gentles, twice a week, and to prevent the necessity of frequently changing the water, throw in a handful of Anacharis (water-weed); and, instead of floating in succession "on their watery bier," they will get plump and healthy, and grow as rapidly as in their native waters. Some of our gold-fishes have been in our possession seven years, and have increased in size three times what they were originally.—Recreative Science.

3. SOUNDING SHELLS.

There are few persons who cannot remember the childish wonder with which they are filled, when a sea-shell was first placed to the ear; and the still greater wonder they experienced when told that the strange resonance which they heard was the roar of the sea; this being the common explanation given to children. There are, doubtless, many adult persons who do not know the phenomena of the sounding shell. It is caused by its hollow form and polished surface; these enable it to receive and return the beatings of all the sounds which tremble in the air that surrounds it.

4. NATURAL COMPASS.

In the vast prairies of Texas, a little plant is found, which, under all circumstances of climate, change of weather, rain, frost, or sunshine, invariably turns its leaves and flowers to the north. If a solitary traveller be making his way across those wilds, without a star to guide or compass to direct him, he finds a monitor in this humble plant, and follows its guidance, certain that it will not mislead him.

5. AGRICULTURAL DISTRIBUTION BY THE U.S. PATENT OFFICE.

The Patent office has ready for distribution over 30,000 well-rooted tea plants; 12,000 foreign and domestic grape-vines; 900 rooted seedless pomegranate cuttings, and various foreign, medicinal, and ornamental plants. The delay in distribution has been owing to the reduced appropriation made by Congress for agricultural purposes for the fiscal year ending June 30, 1860.

V. Lapers on Physiology and Health.

PURIFICATION OF FOUL WATER—AN IMPORTANT DISCOVERY.

The London Builder says that Mr. Thomas Spencer, the discoverer of electrotype, has made another important discovery, ascertained that the magnetic oxide of iron, which abounds in rocky strata, and in sands, &c. attracts oxygen, whether it exists in water or in air, and polarises it—that this polarised oxygen is the salubrifying ozone—that this ozone, so formed, destroys all discolouring and polluting organic solutions in water, and converts them into the sparkling and refreshing carbonic acid of the healthful spring. Even sewage water can be thus almost instantaneously purified. More-over, Mr. Spencer has discovered that the apparently mechanical process of filtration, is itself magnetical, and it is now known that all substances are constitutionally more or less subject to magnetical influence: thus all extraneous matters suspended in water may be rapidly attracted in filtration, and so separated; and this may be done whether on a great scale or a small, either by the magnetic oxide or black sand of iron, by a mixture of this with ordinary sand, or by various other means; and Mr. Spencer has discovered a solid porous combinatiom of carbon with magnetic oxide, prepared from Cumberland hematite, which is said to have very great filtering power.

2. INSTANTANEOUS DISINFECTION—VALUABLE SUR-GICAL DISCOVERY.

The Paris correspondent of the New York Express gives the folloming account of a valuable discovery, destined to effect a great amelioration in the treatment of ulcers, abcesses, flesh wounds, &c. At the last sitting of the Academy of Sciences, the celebrated Dr. Velpeau demanded permission to make an important communication, and announced that two young practitioners in question, Messrs. Corme and Demeaux, had paid him a visit for the purpose of presenting to his notice their discovery and explaining to him its results. Messrs. Corme and Demeaux have found a process for the complete and instantaneous disinfection of animal matter. The action of the disinfecting agent arrests the progress of decomposition, and effectually prevents the generation of insects. The substance, prepared for use, costs here about one franc for a hundred pounds, and the expense in America would probably be stillless. The following is the formula, as given by the inventors themselves: Plaster of commerce, reduced to fine powder, 100 parts; coal tar, one to three parts. The mixture of the two substances is effected with ease by the aid of a mortar, or by any other appropriate mechanical means. The application of this composition to the dressing of sores and wounds requires a particular preparation. A certain quantity of the powder, prepared according to the formula, is diluted with olive oil to the consistency of a paste or ointment. This species of paste or salve is of a dark brown color, has a slightly bituminous odor, and may be kept in a closed jar for an indefinite period. The oil unites the powder without dissolving it, and the composition has the property of absorbing infectious liquids the instant it is applied to the sore which produces them. The application may be mediate or immediate. In the latter case, that is to say, placing the composition directly in contact with the sore, no pain whatever is produced; on the contrary, the salve has a decisive action, cleanses the sore and favors cicatrization."

3. NECESSITY OF UPPER AND LOWER VENTILATORS IN A SCHOOL ROOM.

It has commonly been supposed that the impure air (carbonic gas) which is expelled from the lungs, descended to the floor. This has been shown by Professor Dalton and other eminent chemists, to be entirely erroneous. It has been ascertained by repeated experiments that carbonic gas diffuses itself rapidly into every part of the room. This being the case, the impure air must be drawn off from the upper stratum of the room, as well as from the lower. Some have supposed that an aperture half way between the upper and lower one, would draw off the impure air as it escapes from the lungs, and thus retard its diffusion; this, however, has not yet been established by satisfactory experiments. The deleterious effect of impure air is no longer questioned, and the necessity of some more thorough and effectual means of ventilation is urged by the most weighty considerations. In a room of 50 scholars, from 200 to 500 cubic feet of air are vitiated every minute, and unless some effectual means are devised for expelling the impure air, the most serious consequences must ensue.

4. SINGLE AND DOUBLE SCHOOL DESKS, &c.

Single desks are generally to be preferred to double ones. The whole expense for room and desks is about twenty per cent more. When practicable, the house should be so placed that pupils as they sit, may face the north. In rooms to be used in summer as well as winter, it would be better that there should be no windows on the south. In all cases there should be outside or inside blinds. Outside blinds are to be preferred to keep the room cool. Inside blinds can be more easily managed to modify the light. The gable end should also be toward the south, since by this arrangement the roofs would be much less heated in summer.

On the ceiling of every school-room the four points of the compass might be painted in distinct colors, with letters designating the several points.

VI. Lapers on Colonial Subjects.

1. COLONIAL POSSESSIONS OF GREAT BRITAIN.

A blue book of 430 pages has just been published, full of statistical tables relating to the colonial and other possessions of the United Kingdom. It is drawn up in the commercial department of the Board of Trade, and bears strong evidence of the labor and skill with which that department is managed. From the abundance of its contents we are only able to notice a few of the most prominent articles of information which it contains. It apppears from this publication that the trade of the East Indies greatly surpasses in extent that of any other dependency of the British empire. In the last year of which we have an official account, the value of the the last year of which we have an omeial account, the value of the imports was £28,608,284, of which enormous amount £16,739,897 was from the United Kingdom. In the same year the exports amounted to £26,591,877, of which £10,635,607 was to the United Kingdom. The whole trade, therefore, of India, was thus of the value of upwards of £55,000,000. Next in importance was the color with the six solution of Australia namely. New South Wales trade with the six colonies of Australia, namely, New South Wales, Victoria, South Australia, Western Australia, Tasmania, and New Zealand. The united value of the imports of these colonies was £25,823,283, of which sum £16,282,022 was from the United Kingdom. The value of the exports of the Australian colonies was £22,954,033, of which sum of £14,653,370 was to the United Kingdom. Next in extent and importance was the trade with the five colonies of British America, namely, Canada, New Brunswick, Nova Scotia, Prince Edward's Island and Newfoundland. The trade with these extensive and flourishing colonies amounted to £13,412,-257, of which £5,743,962 was from the United Kingdom. The value of the exports was £9,807,084, of which £3,470,796 was to the United Kingdom. Next in importance was the trade with the 15 colonies of the West Indies. The value of the imports of these colonies was £3,716,892,of which £1,233,690 was from the United Kingdom. The value of the exports was £2,697,488, of which £2,306,618 was to the United Kingdom. In addition to these great groups of colonies, the trade of several of the detached colonies are very great. Thus, for instance, the value of the imports into the island of Ceylon was £3,106,664, of which £631,368 was from the United Kingdom. In the same year the value of the exports was co 522 460 of which £1.348.614 was to the United Kingdom. The £2,588,460, of which £1,348,614 was to the United Kingdom. value of the trade with the Cape of Good Hope was £2,637,192, of which £1,911,122 was from the United Kingdom. The value of the exports was £1,988,406, of which £1,426,614 was to the United Kingdom. The trade with the Mauritius and with Malta was scarcely less extensive, and that of the Ionian Islands was about half as much.

2. BRITISH NORTH AMERICAN COLONIES.

The two Canadas have an area of 350,000 square miles, with a population of 3,000,000; New Brunswick 27,700 square miles, with a population of 225,000; Nova Scotia 18,746 square miles, with a population of 300,000; Prince Edwrad Island has 2,134 square miles, with a population of 62,398; and Newfoundland 57,000 square miles, with a population of 120,000—total area, 553,446 square miles and an aggregate population of 4,000,000.

3. THE POSITION OF CANADA.

Canada is just becoming to America what England has been to the Continent. The only reliable abode, free from public oppression; Canada, of all the divisions of this broad continent, is the only land of true liberty—the only safe shelter and permanent asylum for the slave, and instead of the equality of our laws being subverted by the man-hunter, and the conservative nature of our institutions becoming eclipsed by the superiority of American inde-

pendence, we shall continue to attract the better feelings and secure the sincere friendship of our republican neighbours; and bind by laws of amity and chains of commerce, to our soil the best business habits and most trustworthy alliances, belonging to this continent, and eventually be the means of consolidating into one political union a large share of the northern United States with the destinies of British America.—Picton Gazette.

4. THE PROGRESS OF NEW BRUNSWICK.

One of the New Brunswick papers gives a condensed report of a lecture delivered at St. Johns, by the Hon. Mr. Tilley, on the gratifying progress of New Brunswisk. The lecture was replete with much valuable information, enlivened by several historical incidents in the early history of the Province; and in closing, the Hon. gentleman compared our present position with that of the Province when its wholy revenue was £1200; and with that of even a later period when a man was paid £20 to erect a habitation for the accomodation of a few travellers on the line of road where now our railway passes. The Hon. gentlemen thus summed up the result of his observations and experience:

1st. The population of New Brunswick had doubled itself in every successive 17 years, commencing in 1782 and ending in 1850; that it might be expected to double itself in the succeeding 30 years

2d. That the taxation of this Province is less than that of any other country in the world, being only 17s. 9d. per head, against 32s. in the States, and £3 in England.

3d. That individual wealth here is in the same proportion, being \$550 per head against \$403 in Canada, \$320 in the States, and £100 in England.

4th. That the returns of exports for 1858 are individually larger here than in England, generally considered the largest exporter in the world, being here £5 12s., against £5 there per head.

5th. That returns show that agriculture in this Province, with its long winter, its highly paid labor, and its adequate markets, can be made to yield a large profit

made to yield a large profit.
6th. That the grant for education in 1859 was £30,000, the exact sum granted by wealthy and populous England to the Privy Council of Instruction the first year the Council was formed.

5. CAPITAL OF THE HUDSON'S BAY COMPANY.

The capital employed by the Hudson's Bay Company is £1,265,068, and consists of stock standing in the names of the proprietors, £500,000; valuation of the Company's lands and buildings, exclusive of Vancouver's Island and Oregon—£318,884. The dividends from J847 to 1856 averaged about 10 per cent. The stock ranged at about 205 for the same period.

6. FRENCH COLONIZATION IN AMERICA.

A work has recently been published in Paris, by M. Rameau, on French colonization and the French in America, which contains some interesting statistics. The total French population in America probably reaches, according to the figures given, about 1,250,000 They are divided as follows :- Lower Canada, between eight and nine hundred thousand, Newfoundland, fifteen to twenty thousand; Nova Scotia, sixteen thousand; New Brunswick, twenty-five thousand. In the State of Maine there are four to five thousand Arcadian French; in the State of Vermont, fourteen to fifteen thousand; State of New York sixty thousand; Illinois twenty thousand; and at Green Bay, State of Wisconsin, twelve thousand French Canadians. The number in Louisiana is not given. The Journal de Quebec in noticing the work, remarks, that if France had desired it the French race would now be dominant over the vast heritage of Columbus. And that if Louis XIV. in the place of spending £165,000,000 in the embellishment of Versailles and its parks had employed the money in colonizing America, it might be said without exaggeration, that there would now be as many French in America as there are in France. "At the commencement of the 18th century, says M. Rameau, France possessed the whole of North America, on the ocean, and as far as California on the Pacific, with the exception of a narrow strip of land which, starting from with the exception of a narrow strip of land which, starting from Florida, ran along the Atlantic to the entrance of the Bay of Fundy, being limited in the rear of the Alleghanies and Alpalachas, and which formed the English colonies of Virginia and New England. The Gulf of the St. Lawrence, Canada, the interior lakes, the entire basin of the Mississippi and the Missouri, the North West, Oregon and all the territories porth of California and Marion, belonging basin of the Mississippi and the Prisonal, and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and all the territories north of California and Mexico, belonging to, and the territories north of California and Mexico, belonging to, and the territories north of California and Mexico, belonging to, and the territories of the territori and formed two immense Provinces, Canada and Louisiana. We occupied in the Atilles more than half St. Domingo, St. Louis, St.

Dominick, St. Vincent, Tobaco, St. Bartholemy, and finally Martinique and Guadaloupe, the feeble remains which we now possess of so many colonies. In South America, we possessed Guiana and Malouines, now known as the Falkland Islands. In Asia, we dominated in India, and we had treaties which answered as establishments in Cochin China. Finally, the factory of the Colles on the coast of Algeria, Senegal, and the factories on the coast of the Isles of France, the Reunion and the Surzerainty of Madagascar, in Africa, gave us great importance, in this part of the world." Of all this vast extent of colonies, as M. Rameau remarks, there remains nothing to France but the remains of Guadaloupe and Martinique.

VII. Statistical and Geographical Lapers.

1. THE POPULATION OF THE WORLD.

Classified according to Religious belief, compiled at the Statistical Bureau, Berlin, is as follows:

,, 15 16 10110 115 .	
Europe	272,000,000
Asia and I	655 000 000
Oceanica V	99 000 000
Atrica	000 000 000
America.	59,000,000
Total	1288,000,000
Protestants	89 000 000
Roman Catholics	170,000,000
Greek Church	76,000,000
Jews	5,000,000
Manonedans	180,000,000
Heatnens	208,000,000
Budhists, &c.	550,000,000
Total	1288,000,000

2. THE NEW ITALIAN KINGDOM.

For years the dream of the Italian patriots has been the unity of Italy. Such a combination of the various provinces into which that beautiful land has been divided, as would unite them under one government, powerful enough to maintain their liberties against all foreign invasion, and to give them an influential position among the leading powers of the world. That dream seems about to be realized. Under the lead of Victor Emanuel, King of Sardinia, a Kingdom has been organized with assent to an overwhelming majority of the Italian people, of a territorial extent and population such as Italy has not known since the days of the Gothic Kings. The following table will show the population of the new kingdom:

• •	KILL
KINGDOM OF SARDINIA BEFORE THE Population	WAR. 5,167,542
SARDINIA AFTER THE WAR. Piedmont and the Island of Sardinia Kingdom of Lombardy	2,866,395
Total	8,033,938
SARDINIA AS SHE IS AFTER THE RECENT AN Piedmont and the Island of Sardinia Kingdom of Lombardy Grand Dutchy of Tuscany Dutchy of Modena Dutchy of Parma Legation of Bologna. Legation of Ferrara Legation of Forli	5,167,542 2,866,396 1,806,940 604,512 499,835 375,631 244,524 218,433
Total	1,783,813 847,738
m	

Under a constitutional government, animated by liberal sentiments, as has been that of Sardinia under its present monarch, the new Italian Kingdom has the promise of a career, which will give it a standing and position in the first rank of European nations.—

Leader.

3. POPULATION OF CHINA.

An official census taken in China twice during the present century, at an interval of forty years, gives the following results:—The first taken in 1812, by order of the Emperor Kai-Ting, gave the number

of inhabitants at 360,278,597; and the second in 1852, under the reign and order of the present Emperor, Hien-Fung, 536,090,300. If these accounts be correct, and there is nothing to lead to the supposition that they are not, the Chinese population has, in forty years increased 176,629,703.

4. POPULATION OF CALIFORNIA.

The California State Register gives the following: The population of the State is at present 530,000; consisting of 395,315 Americans, 15,000 Frenchmen, 2,000 Englishmen, 10,000 Irishmen, 10,000 Germans, 15,000 Mexicans, 38,000 Chinese, 2,000 Negroes, 63,000 Indians, and 15,000 of other races.

5. POPULATION AND EDUCATION IN RUSSIA.

The population of the Russian empire was estimated at 65,200, 000 in 1850. In 1858 it contained, as officially stated, only 5432 schools, with 133,618 pupils, of which, 4982 fall to the universities, 300 to the lyceums, 22,270 to the high colleges, 28,358 to the provincial schools, 53,654 to the parochial schools, 24,036 to the private establishments, and 3538 to the Hebrew schools. Besides these schools were in the district of Warsaw 76,059 students and pupils, in 1451 schools. So that the entire number of pupils in Russia and Poland is 210,030, in 3883 schools.

6. TELEGRAPHS AND RAILROADS IN RUSSIA.

Russia is making great progress. Her railroads and telegraph lines, which are the chief works undertaken since the termination of the war with the western powers, are evidently designed chiefly to supply a want that was greatly felt by her during the progress of hostilities. There are now railroads from St. Petersburg to Moscow, 398 miles, and Pokoff, 170, besides the short lines, from the capital to Peterhoff and Pavlovsk, and that from Warsaw to Tshentokhoff, on the Russian frontier, and 25 versts beyond, the total length of which is 182 miles. Other lines are in course of construction, or projected, from Pokoff to Warsaw, 462 miles, completing the railroad communication between the capital of the empire and that of Poland; from Dunaburg to Riga, 145 miles, to be afterwards continued to Libau, 53 miles further; and from Moscow to Theodosia, 990 miles. Telegraphic communication already exists between St. Petersburg and Cronstadt, Abo, Libau, Kowns, Keyeef, and Simpheropol, and between Nicholaieff and Odessa. There is one feature that presents a peculiar interest for the United States, namely, the Russian government has just given its sanction to a grand scheme for connecting St. Petersburg and New York by telegraph, via New Archangel and Behring's Straits, having stations at the Amoor, Irkutsk, and other central points on the way, across the vast continents of Eastern Europe and Asia. The American section of the line will unite New York and San Francisco.

8. INCOME OF LONDON CHARITIES.

There are in London, twelve hospitals for general purposes, fortysix for special purposes, thirty-four dispensaries; giving relief to 365,956 persons every year Ninety-two hospitals, [income] £300,000; twelve societies for the preservation of life and health, benefitting 39,000, £40,000; seventeen penitentiaries and reformatories, £2, 500; tifteen charities for the relief of the destitute, benefitting 150, 000, £24,000; fourteen charities for debtors, widows, strangers, &c., £30,000; four Jewish charities, exclusive of twenty minor Jewish charities, £10,000; nineteen provident societies, £9,000; twenty-seven pension societies, benefitting 1,600, £58,968; thirtythree trade societies, of a purely charitable nature, exclusive of self-supporting societies, £113,467; a hundred and twenty-six asylums for the aged, benefitting three thousand, £87,630; nine charities for deaf, dumb, and blind, £25,000; twenty-one educational societies, £72,257; thirteen educational asylums, exclusive of schools supported by government, 1,777 persons, £45,435; sixty Home Missions, many of which extend their operations beyond the metropolis, £400,000; five miscellaneous, not admitting classification, £3,252; seven Church of England Foreign Missions, £211,135. The above represent a total yearly income of £1,768,945. To these may be added five other societies not susceptible of classification, making a total of £1,683,197. If we separate the societies of a purely domestic character from those operations wholy or in part conducted in foreign lands, the result will be as follows: Home charities, £1,222,529; foreign missions, £459,668. The amount spent in foreign missions, therefore, is just one-third of that devoted to the relief, instruction, and reformation of the poor, the ignorant, the unfortunate, and the vicious in London.

9. BUSINESS AT THE PORT OF LIVERPOOL.

A recent number of Chambers' Journal contained an article embodying some interesting facts regarding Liverpool, one of the great seaports of England and of the world. It appears that in 1857 nearly one-half of all the products exported from England were shipped from Liverpool. Out of £122,000,000 of exportation, £55,000,000 were exported from Liverpool, about half that amount from London, sixteen millions from Hull, and the rest from Glasgow, Southampton, &c. The population, within four miles of the Exchange, at the present time is about 600,000, and the rate of annual increase about 10,000. The property and income tax paid by the inhabitants in 1857 amounted to upwards of £7,000,000, or \$35,000,000. The amount of tonnage belonging to the port in the same year was 936, 022 tons, being greater by 76,882 than that of London itself. The amount of shipping which entered and cleared during the same year was upwards of nine million tons! Of the vessels which arrived from abroad, the United States sent by far the largest and most numerous, viz: 934 ships, of an average burthen of more than one thousand tons. There were from Italy 174 vessels, from Russia 102, and from France 317.

One great branch of the shipping business of Liverpool, is the shipment of emigrants to foreign and colonial countries. The tide of German emigration, even now, flows through England and escapes through Liverpool, in preference to Hamburgh and Bremen. Of the 212,875 British emigrants in 1857, nearly 156,009 sailed from this port. Of the above number, the United States attracted 126, 905, British America 21,000, and Australia 61,248. The number of emigrants who left the shores of Great Britain from 1815 to 1857,

was upwards of four millions and a half.

The pride of Liverpool is her docks, which cover a space of no less than four hundred acres of water along the Mersey. They extend on the Liverpool side of the river a distance of five miles, and two miles on the Birkenhead side. The sea-wall along the Liverpool side by which the shipping in the docks is preserved from wind and storm, is one of the greatest works of any age. Its length is upwards of five miles, its average thickness eleven feet, and its average height from the foundations, forty feet. Great difficulty was experienced in gaining a stable foundation for this great structure, and thousands of piles were driven and many great beams of timber sunk to secure a firm bottom. Upwards of eighty pairs of gigantic gates have been put up within the last thirty years, and some of them reach to the unparalleled width of one hundred feet.

9. THE GULF STREAM.—IMPORTANCE OF THE PANAMA ISTHMUS.

The Gulf Stream, where it quits the Gulf of Florida, has a velocity of from three to five miles per hour (varying with the season), a breadth of only a few miles, and a temperature of 83 deg. Thence it follows the coast of America to about the 36th degree of latitude, where it still possesses a temperature of 76 deg. Fahr., and where it quits the coast about Cape Fear, and, encounty and the Azores, spreads itself in wide diverging streams over the basin of the Atlantic, between the coasts of America and Spain, forming a vast eddy, overgrown with the "saragasso," or gulf weed. The main stream, however, continues to run northwestward, directed full towards the British Islands, to about the 46th parallel, on the 40th degree of west longitude, where its force is much weakened by subdivision. The surface water, however, continues to flow onwards in the same direction, and its presence on our western shores is evinced by the warm vapours of the southwest winds wafted from above it, and by tropical plants and seeds thrown ashore on the west coast of Ireland, on the Hebrides, and even on Norway. [See page 55.] Were the Isthmus of Panama broken through, there is no doubt that the whole climate of our islands would undergo a most notable deterioration.—Encyclopædia Britannica. New Edition.

VIII. Miscellaucous.

1. SPRING.

It is the resurrection time. The earth Hath put on a new raiment, and stands forth, Bidding her children look upon her face. The towering maple and the spreading elm Lift up their emerald banners, and the moss Creeps silently o'er the gray rock, and spreads A velvet cushion o'er the fallen oak, A tufted carpet underneath the trees. Up in the interlacing branches, choirs Of singing birds utter their bursts of song,

And pour upon the spell-bound worshipper,
Floods of glad melody. The sunlight looks
Through the green boughs, and charms the forest flower
From its most secret haunts. The grand old earth
Seems like a glorious temple, and each tree,
Each sheltered nook, a holy shrine, where souls
May pause to render homage.

On the bank

There are sweet clusters of blue violets
Which look so lovingly into my eyes,
That I would take them from their wildwood home,
To my own garden. And along the path,
The little white flowers peep to catch the light
Spring gives them with her glances. Bending shrubs
Are wreathed with stainless blossoms, and the marsh
Keeps in its damp recesses, flaming blooms,
That gleam like gems of fire.

You clump of thorns Hath thrown on its white garlands, and the lambs Lie in quiet shadows. Winding paths Chequer the hill-side, where the flocks have sought The murmuring stream, which, like a singing child, Goes gently through the meadows. The soft air Stirs gracefully the pliant willow twigs, And wakes to fresher life the drooping grass. Spring hath a myriad elemental hands
Which "cease not, night nor day," their mystic work.
Morn hath its dew; noon-day its tides of light; Eve hath its million starry beams, and night Its spreading veil of darkness; and the hills And lowly vales, the flashing lakes and streams Are putting on their rarest festal robes, To greet the laden summer. Her warm breath Even now is on the air, and her soft voice Speaks from the waterfall; her magic tones Send a new thrill through every living thing, And make the season a triumphal day, Grand with its bright processions, resonant With trumpet notes. It is a new earth, And a new heaven were spread before our eyes, And through the open portals we could look
On jewelled pavements, and inhale the life
From all life-giving things. Each soul may find A wondrous revelation, strange as that Which blessed the tranc'd Saint on Patmos isle. -Mary A. Ripley.

2. THE NEW GREAT SEAL OF ENGLAND.

The new Great Seal of England has been submitted to Her Majesty in council, approved, and delivered to the custody of the Lord Chancellor. The old seal, by the Queen's command, was defaced. Like the Great Seals for the last 200 or 300 years, it is made of silver, being actually composed of two seals, upon one of which the obverse and on the other the reverse is engraved, and both are used in sealing documents, the wax being squeezed in a soft state between the two, the impression presenting thus the appearance of a medal in wax. With the exception of the seals in use in time of the Commonwealth, the Great Seals have always represented on the obverse the Sovereign on horseback, and on the reverse the Sovereign on the throne, each being accompanied with such other figures allegorical or otherwise, as the taste of the engraver may suggest and the Sovereign may approve. In the present seal the obverse represents a page leading Her Majesty's horse, and on the reverse Her Majesty sits on a throne under a handsome canopy, supported on either side by a figure of religion and another of justice.—Court Journal.

3. THE VARIOUS SILK FABRICS.

Silk is woven into curious fabrics, plain and figured, by the Jacquard loom, and also into velvets. The fine soft pile of velvet is produced during the process of weaving, by inserting short pieces of thread doubled under the shoot or weft, and which stand upright in such a way, and so close together, as entirely to conceal the interlacings of the warp and shoot. In the production of every yard of velvet, six yards of pile at least are used. The loops of the double threads intended for the pile are afterwards divided by running a sharp instrument, called a treval, along the groove. This is done by the hand, and of course requires great dexterity, as the slightest deviation from the proper line would infallibly injure, if not wholly destroy, the silk. Damasks of the most exquisite and elaborate patterns are produced by the Jacquard loom, and in some instances

as many as twelve hundred or fourteen hundred changes or cards are required for their completion. Satin and satinet are peculiar kinds of silk twill, and exhibit in a most perfect manner the lustre of the material of which they are composed. Brocade is the general term for tissue of silk with gold or silver threads—a fabric of exceeding richness. Lutestring, Gros de Naples, Persian, &c., are names given to plain fabrics of silk, differing little from each other except in their thickness, or in the quality of silk. Tabberet, tobine, serge, levantine, etc., are twilled fabrics, occasionally relieved with satin stripes and cheeks, and are to be found of all qualities and colors. Crape, crisped or smooth—gauze in all its varieties—ribbons of multitudinous sorts—bandanas, &c., &c.—are two well known to require description. In fact, it would be almost impossible to enumerate the various stuff woven from silk, either for the purpose of clothing, upholstery, or ornament; but an idea of its cheapness and universality may be formed from the fact that, at the present time, there is scarcely an individual, even in very humble life, but uses it to some extent, either for the purposes of dress or of ornament.

4. MANUFACTURE OF PENNY POSTAGE STAMPS.

The London journals report that the annual demand for penny postage stamps in Great Britain is little short of 500,000,000. Supposing the year to contain 200 working days, that gives for every working day about 1,600,000 stamps to be manufactured.

IX. Short Critical Actices of Books.

The Missing Link; or, Bible Women in the Homes of London Poor. By L. N. R. author of "The Book and its Story." New York: Carter & Bros. The work contains a most interesting account of the labours of the female Bible agents among the "London heathen." Many of the ancedotes and sketches are painfully touching. They exhibit the unrenewed human heart in some of its worst and best phases. The female agency employed has been for many reasons highly appropriate and successful.

Wightman. New York: Carter & Bros. This is a kindred book to the foregoing. It gives a graphic detail of the labours of the kind-hearted authoress, in seeking to stem the torrent of intemperance and vice among the working men in the neighbourhood of her husband's parish, St. Alkmond, Shrewsbury, England. The book contains a preface by Miss Marsh,—the perusal of whose soul-stirring "English Hearts and English Hands," had incited Mrs. Wightman to the missionary work which she now records in her "Haste to the Rescue."

THE COTTAGE AND ITS VISITOR; By Miss Charlesworth. New York: Carter and Bros. Few who have read Miss Charlesworth's "Ministering Children" will be disappointed in perusing this abridgement of a new work from her pen. It details with great sweetness and interest varied labours of the writer among the poor. "Its counsel (says the preface) to those who desire to benefit the poor, but who feel the drawback of personal inexperience, is the result of long and intimate acquaintance with them; its narrative illustrations are strictly true, and the subjects of them were personally known to the writer."

ARCTIC EXPLORATION: the United States Grinnell Expedition in search of Sir John Franklin; a personal narrative. By E. K. Kane, M.D. Philadelphia: Childs & Peterson. This work records a series of personal privation and exposure, in search of the lost Franklin, which none but intrepid men like Dr. Kane could have had the courage to face. The American expeditions, although nobly undertaken, were, as in the case of Dr. Kane's second voyage to the Polar Sea, singularly deficient in many of the conveniences and comforts which experience had shown to be absolutely necessary in prosecuting a successful search. These privations unnecessarily exposed Dr. Kane and his companions to severer trials than those encountered by the English navigators, but they served to illustrate the endurance and devotion of that heroic man. The first American expedition under Lieut. De Haven, as recorded in this book, had less of stirring incident than the second, under Dr. Kane, but it furnished an abundance of other information of the deepest interest.

LIFE OF DR. KANE. By Dr. Elder. Philadelphia: Childs & Peterson. As a fitting sequel to the life and labours of so distinguished an Arctic traveller as Dr. Kane, it was proper that a biographical sketch of his career should soon follow after his decease. This has been prepared by his friend, Dr. Elder. It is full of incident and of the more striking events in Dr. Kane's life. It also contains an extended account of the honors paid to the memory of Dr. Kane during the passage of his remains

from Havanna to Philadelphia. This and the preceding work are well illustrated by steel engravings and wood cuts.

— LIFE IN SPAIN; Past and Present. By Walter Thornbury. New York: Harper and Bros. As a book of travels this volume is rather amusing than instructive. It is chiefly filled with narratives of personal adventure, and is illustrated with several wood engravings.

— MODERN HISTORY; from the time of Luther to the Fall of Napoleon. By John Lord, A.M. Philadelphia: C. Desilver. Although an American History of the various European nations, it is more free than usual from those objectionable passages which so often disfigure American historical and geographical works. The type is clear and the paper is good.

—— Compendium of American Literature. By Charles D. Cleveland. Philadelphia: E. C. & J. Biddle. This is in admirable compendium of American Literature. It is chronologically arranged, and contains biographical sketches of the one hundred and sixty-eight authors cited, with selections from their works. The specimens of American literature, given by the author, are admirably chosen. They embrace nearly the entire field of American literature, and include the names of all the distinguished authors of the United States, beginning with Jonathan Edwards, and ending with Bayard Taylor—an extract from whose recent lecture in Toronto, we give on page 55.

[Other works have been received from various publishers, and will be noticed in our next.—Ep.]

X. Educational Intelligence.

CANADA.

— School Lands in Upper Canada.—Grammar Schools. 5.247½ acres of those lands were sold during the past year, leaving 67,312½ still on hand. The price of the lands sold is \$9,447 92. The gross receipts of the year \$13,185 62. The net proceeds, deducting commission, (\$1,062 32) is \$12,128 30. Common School.—The sales during the past year of the bilance of the million of acres set apart by the 12th Vic., cap. 200, for creating a Common School Fund, amounted to 5,852 acres, leaving 19,736½ acres undisposed of. The purchase money of the lauds sold during the year is \$13,392 20. The gross receipts \$50,167 45. The disbursements for commission and refunds \$3,611 22, leaving a net income for the year of \$46,556 23. The total net amount realized from these lands is \$563,914 01.

—From the Report of the Commissioner of Crown Lands, 1859.

LAW EXAMINATION. - UNIVERSITY OF TORONTO. - The following are the results of the recent examinations in the Faculty of Law: -

MATRICULATION .- GREEK AND LATIN-Class I-Selby, McCaul, Rolls. Class III-Burnham, McKellar, D'Aubigny, Idington, Freel, Smith. MATREMATICS. -Class III. -Selby, D'Aubigny, Rolls, Burnham, Smith, McKellar, Idington, Freel, McCaul.—English.—Class I.—Selby, Rolls. Class II.-McCaul. Class III.-Smith, Freel, D'Aubigny, Burnham, Idigton, McKellar. FRENCH.—Class I.—Selby. Class II.—Rolls. Class III.-McCaul. HISTORY.-Class I.-Selby. Class II -Burnham, McKellar, Class III .- Idington, Rolls, Freel, D'Aubigny, Smith, McCaul. First Year. GREEK AND LATIN.-Class I.-McCabe, Sutherland, (eq.) English-Class I .- Sutherland, 'Class II .- McCabe. FRENCH .- Class II .- McCabe, Sutherland. HISTORY .- Class I. - Sutherland. Class II. McCabe. Logic, ETHICS AND CIVIL POLITY.—Class I.—Sutherland, Class II.—McCabe. Second Year. Class I .- Hamilton. Class II .- Meredith, Kerr, W. J., McLennan, Scott, Osler, McGlashan, Smith, J. F., Stewart A. H., Moore, Begue. Class III.-Upper Cross, Marling, Read, Joseph, Duggan, Penton, Stewart, H. P., Wood. Third Year, Class II.-Miller, Smith, R (&q.) Douglas, Boys, Robertson, Stephens, O'Gara, Bull, Denison, English, Bethune, Stayner. Class III.-McMahon, O'Brien, McIntyre. Candidates for LLB. Class I.—Spencer, Livingston. Class II.—Foster, Haucock. Class III .- Wood, Benson, Bowlby, Blair, J. George Hodgins, Papps, Cochrane, Ham, Cronyn, Currau, Special examination for LL.B.-Rev. A. Wickson. Scholarships. Marticulation.—Selby, first year; 1st Sutherland, 2nd McCabe, second year, J. C. Hamilton. Silver medals were awarded to Spencer and Livingston of the fourth or LL.B. year.

— VICTORIA COLEGE.—J. Campbell, A. M., having resigned his appointment in the College, the students presented him with a complimentary address, and gave him a dinner on leaving. Mr. Campbell has been appointed Master of the Bradford Grammar School.

WOODSTOCK BAPTIST INSTITUTE.—The Rev. Dr. Fyfe, late of this city, has been appointed Principal of this Institution.

GREAT BRITAIN.

- Oxford University.—The Oxford Calendar for 1860 (recently published) shows an increase in the number of students, members of Convocation, and members on the books, which, following upon a considerable increase in 1859, is very satisfactory. The matriculations have advanced from 399 in 1859 to 419 in 1860, an increase of 5 per cent. The Bachelors of Arts have risen from 277 to 300, an increase of 8 per cent.; and the Regent Masters from 234 to 258, an increase of 10 per cent. The members of Convocation are now 3,828 against 3,659 in 1859, an advance of nearly five per cent.; and the members on the books are 6,297 against 6,194 in 1859, an advance of 1# per cent. The colleges in which the increase is most remarkable are Christ Church, which has risen from 793 to 840, an increase of 6 per cent.; Exeter, which has risen from 524 to 545, an advance of 4 per cent.; and Queen's, which has risen from 240 to 256, an advance of almost 7 per cent. The only college in which the numbers are seriously diminished is Worcester, which has fallen from 345 members to 321, a decrease of seven per cent. Among the halls the chief increase is at St. Mary-hall, which has 71 members against 61 in 1859, an advance of nearly 17 per cent.; while the chief diminution is at St. Edmund-hall, which has 64 members against 72 in 1859, a decrease of 11 per cent.-Colonist.

- The Origin of Harrow School.-In the time of the Stuart's, a certain farmer, in the neighbourhood of Harrow, named Lyon, died, and left part of his property for the foundation of a school for the education of poor lads born in the vicinity. This was the root from which the great national academy of Harrow sprung. Lyon's property, not of very great value when he died, has now grown so great, that it is thought that in a short time the trustees will not know what to do with the money. Of course, very few of the poor lads of the neighborhood find their way to this very aristocratic school; and it his very much to the honor of Dr. Vaughan that, during his head-mastership, he has supported a school for the purpose of giving a plain commercial education to the true objects of Farmer Lyon's charity; we only hope that his successor will follow his example. It must not be supposed, however, that the almost princely income which the head master of Harrow enjoys is derived from the trust-estates; on the contrary, his salary under Lyon's will amounts to no more we believe than £40 per annum, and yet it is believed that Dr. Vaughan has made out of the school not less than £8,000 per annum. This large sum is derived partly from a capitulation fee of something like £10 per head for each boy in the school, and partly from the sums paid by parents for the residence of their sons in the house of the head-master. All the Harrow masters enjoy, we believe, the privilege of taking inmates in this way; and we believe that the second master has even a greater number of inmates than Dr. Vaughan .- The Critic.

— MONUMENT TO REV. DR WATTS.—The monument to Dr. Isaac Watts is to be placed on a natural mound in those fields which, it is said, the poet had in his eye, when composing the beautiful hymn on immortality, with the line:

"Sweet fields beyond the swelling flood."

The place will hereafter be called "Watts' Park."

THE IBISH NATIONAL EDUCATION SYSTEM.—A meeting has been held in Derry for the purpose of co-operating with the Ulster National Education Society in upholding the principle of united education, and opposing denominational grants in Ireland. The Bishop of Derry and Raphee declined to take part in the proceedings, because he is a commissioner of national education, but he expressed his approval of the "good and righteous cause," for he said he was thoroughly persuaded that the national system has already been productive of great good to the country at large, and that it is founded on the righteous principle of "doing to others as we would they should do unto us."

UNITED STATES.

- MUNIFICIENT.—Mr. J. H. Brown, who supports fifty-two young Baptist theological students at Howard College, in Alabama, at an annual cost of \$13,000, has recently endowed a theological chair in that college by a contribution of \$25,000.
- ---- SOUTHERN UNIVERSITY.—More than half a million in money has been subscribed in one or two of the Southern States to the fund now being raised for the purpose of founding a University of the South. The last meeting of the Board of Trustees was held at New Orleans, and presided over by Bishop Otey, of Tennessee.

- CHOCTAW SCHOOL FUND.—The far west correspondent of the Boston Journal writes that the Choctaws have permanent fund of more than \$1,000,000 in the hands of our government, including \$1,000,000 set apart for school purposes. The interest is paid annually, affording them a revenue of \$60,000, which meets all their governmental and educational expenses and obviates the necessity of taxes. There are ten "mission" boarding schools in the nation, at which, in addition to the common and higher English branches, the boys are systematically exercised at farm labor, and the girls initiated into the manifold mysteries of housewifery. The Methodists have charge of most of these institutions, but several are conducted by the Presbyterians. Some six hundred children are receiving instruction in these schools.

XI. Departmental Actices.

POSTAGE REGULATION IN REGARD TO GRAM-MAR AND COMMON SCHOOL RETURNS.

All official returns which are required by law to be forwarded to the Chief Superintendent, or a Local Superintendent, and which are made upon the printed blank forms furnished by the Educational Department, must be pre-paid, at the rate of one cent, and be open to inspection, so as to entitle them to pass through the post as printed papers. No letters should be enclosed with such returns. A neglect to observe this regulation has repeatedly subjected this Department to an unnecessary charge of 14 cts. and 21 cts. on each package, including the Post Office fine of nearly fifty per cent. for non-payment.

PRE-PAYMENT OF POSTAGE ON BOOKS.

According to the new Postage Law, the postage on all books, printed circulars, &c., sent through the post must be pre-paid by the sender, at the rate of one cent per ounce. Local Superintendents and teachers ordering books from the Educational Depository, will, therefore, please send such an additional sum for the payment of this postage, at the rate specified, and the new Customs duty, as may be necessary.

INDISTINCT POST MARKS.

We receive, in the course of the year, a number of letters on which post marks are very indistinct, or altogether omitted. These marks are often so important that Postmasters would do well to see that the requirement of the post office department in relation to stamping the post mark on letters is carefully attended to.

SCHOOL REGISTERS SUPPLIED THROUGH LOCAL SUPERINTENDENTS.

School Registers are supplied gratuitously, from the Department, to Common and Separate School Trustees in Cities, Towns, Villages, and Townships by the County Clerk-through the local Superintendents Application should therefore be made direct to the local Superintendents for them, and not to the Department. Those for Grammar Schools will be sent direct to the head Masters, upon application to the Department.

PUBLIC SCHOOL LIBRARIES.

"Township and County Libraries are becoming the crown and glory of the Institu-tions of the Province"—Lord Elgin at the Upper Canada Provincial Exhibition, September, 1854.

The Chief Superintendent of Education is prepared to apportion one hundred per cent. upon all sums which shall be raised from local sources by Municipal Councils and School Corporations, for the establishment or increase of Public Libraries in Upper Canada, under the regulations provided according to law. Prison Libraries, and Teachers' County Association Libraries, may, under these regulations, be established by County Councils. as branch libraries.

PRIZES IN SCHOOLS.

The Chief Superintendent will grant one hundred per cent. upon all sums not less than five dollars transmitted to him by Municipalities or Boards of School Trustees for the purchase of

books or reward cards for prizes in Grammar and Common Schools. Catalogues and Forms forwarded upon application. Where Maps, Apparatus, Prize, or Library Books are required, it will be necessary to send not less than \$5 for each class.

SCHOOL MAPS AND APPARATUS.

The Chief Superintendent will add one hundred per cent. to any sum or sums, not less than five dollars, transmitted to the Department by Municipal and School Corporations on behalf of Grammar and Common Schools; and forward Maps, Apparatus, Charts, and Diagrams to the value of the amount thus augmented, upon receiving a list of the articles required. In all cases it will be necessary for any person, acting on behalf of the Municipality or Trustees, to enclose or present a written authority to do so, verified by the corporate seal of the Corporation. A selection of articles to be sent can always be made by the Department, when so desired.

NO PENSIONS TO COMMON SCHOOL TEACHERS. UNLESS THEY SUBSCRIBE TO THE FUND.

Public notice is hereby given to all Teachers of Common Schools in Upper Canada who may wish to avail themselves at any future time of the advantages of the Superannuated Common School Teachers' Fund, that it will be necessary for them to transmit to the Chief Superintendent without delay, if they have not already done so, their annual subscription of \$4, commencing with 1854. The law authorizing the establishment of this fund provides, "that no teacher shall be entitled to share in the said fund who shall not contribute to such fund at least at the rate of one pound per annum." No pension will be granted to any teacher who has not subscribed to the fund.

MRS. SIMPSON'S ESTABLISHMENT for the BOARD & EDUCATION of YOUNG LADIES, 4 & 5, Inkerman Terrace, Montreal.

In the system of Instruction adopted, a high Educational Standard is aimed at, and no pains are spared to ensure proficiency both in the solid branches and accomplishments. All the arrangements of the School are are made with a view to the health and comfort of Pupils. For Prospectus apply to Messrs. B. Dawson & Son, 23, Great St. James Street, Montreal,

or at the School.
Montreal, April, 1860.

[pd. 3t. amj.

LOVELL'S SERIES OF SCHOOL BOOKS.

NEW BOOKS JUST PUBLISHED.

THE NATIONAL ARITHMETIC, in theory and practice (in decimals.) By J. H. Sangster. Price 60 cts.
NOTES AND EXERCISES IN NATURAL PHILOSOPHY,

including Statics, Hydrostatics, Pneumatics, Dynamics, and Hydrodynamics. By J. H. Sangster. Price 75 cts.

THE CLASSICAL ENGLISH SPELLING BOOK, comprising

all the important Root words from the Anglo Saxon, the Latin, and the Greek, and several hundred exercises in derivations and in verbal distinctions. By Geo. P. Vasey. Price 20 cts.

ENGLISH GRAMMAR MADE EASY, and adapted to the capa-

city of children; in which English accidence and etymological parsing are rendered simple and attractive. By Geo. P. Vasey. Price 20 cts.

THE BRITISH-AMERICAN READER, for the use of Schools, on the History, Geology, and Botany, Natural History and Productions. Climate and Scenery of British North America. By J. Douglas Borthwick. Price 50 cts.

For sale by R. & A. MILLER.

87 Yonge Street. $[np\ 3t.fma\ 10d.$

Toronto, February, 1860.

OHN ELLIS, ENGRAVER and LITHOGRAPHER, 8, King Street West, Toronto. Trustees supplied with School Seals at \$2 each; also Lever Presses and Dies for Corporations or Notaries, at \$8. Arms or Crests on Eavelopes.—Visiting and Wedding Cards.

Toronto, February, 1860. ADVERTISEMENTS inserted in the Journal of Education for twenty-

five cents per line, which may be remitted in postage stamps, or otherwise. TERMS: For a single copy of the Journal of Education, \$1 per annum; back vols., neatly stitched, supplied on the same terms. All subscriptions to commence with the January Number, and payment in advance must in all cases accompany the order. Single numbers, 12½ cents each.

All communications to be addressed to Mr. J. George Hodgins,

Education Office, Toronto.

TORONTO: Printed by LOYELL & GIBSON, corner of Yonge and Melindu Streets.